

Connections

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a fresh look at **entertainment technology**

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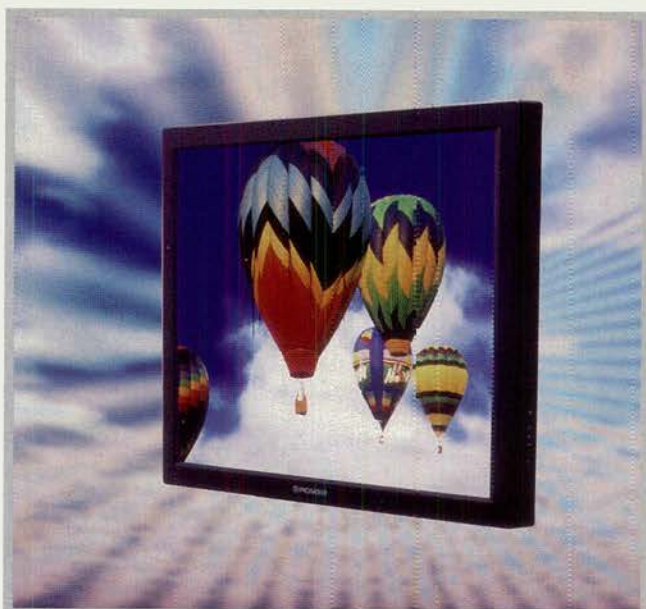
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Connections

THE ENTERTAINMENT TECHNOLOGY MAGAZINE - AUGUST 1998 #57 - 6th year of publication



Big, flat & bright plasma screen

NEW: Pioneer introduce a new large screen Plasma Display for public places, events and home theatre. This new model is said to produce the highest brilliance level of any panel yet released, at 400cd/m². Viewing area is 160° vertical and horizontal, while

the contrast ratio is 150:1. "The PDP-V401E represents the finest Plasma Display on the market, its resolution and detail are simply breathtaking" says Richard Bragg from Pioneer. Weight is 31.5kg, and depth is 88mm.

• www.pioneerelectronics.com
or call! 1-800-338-439.

Music industry debut new trade show

MELBOURNE: AIMS is no more, as the Australian Music Association announces a new industry event for 1999. The new format revolves around a convention style event to be held at Jupiter's on the Gold Coast. The event will focus on industry issues, and be restricted to trade attendance.

A change in timing to late April will also position the event to better capitalise on

new product and technology trends which are typically introduced earlier in the year at the NAMM and MusikMesse trade shows overseas.

The convention will have table top exhibit space for about 100 exhibitors, with many expected to also take hotel suites to further display products.

Dates are April 29 to May 2nd.
• More details from Rob Walker. +61 3 9867-4222.

TREND

MIXING & RECORDING: the products merge

The constant of recording since 4 track valve days is the need to mix onto, and from, a recording device. Now the trend is to integrate mixer and recorder. **Roland** and other Japanese manufacturers already do it well.

Mackie have finalised key design aspects of the Digital 8 Bus mixer, showing a final production version in Singapore last month. The final version differs in that the CPU and power supply are now officially housed in an case.

The real design intent in removing the CPU from the desk is not strictly related to heat and space issues. Because Mackie have written their own operating system for D8B, the

desk itself is actually a platform for future firmware applications, with the Mackie operating system embedded. Diverse third party licensing agreements announced in recent months leads to speculation that the D8B may later end up with an inbuilt hard disk recording system option. Taking the CPU out of the desk opens up possibilities for future expansion of the mission statement of the D8B.

DigiDesign's ProControl surface for ProTools is on show in the region this month, and again draws the mixer and recorder into one processing environment. **Fairlight** of course have already done this with FAME.

-Connections

HIRE & PRODUCTION INDUSTRY REVIEW

BUSINESS: Capital expenditure on production rental inventories over the past six months has remained very strong in Australia and NZ.

Research for the Hire and Production Directory feature in this issue of Connections has confirmed that rental companies are positioning themselves for an expected boom until 2000, with almost

all older inventory written down - but still held in stock. Little mid life term rental equipment has found its way onto the second hand market this year.

Purchase trends show video projectors, moving yoke automated lighting, and concert audio equipment the star performers. Managers are also enjoying record low interest rates.

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CONNECTIONS PUBLISHING

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We operate under the journalists code of ethics, as detailed by the Australian Media Entertainment and Arts Alliance. **Respect for truth and the public's right to information are over-riding principles for all journalists.** In pursuance of this principle we have always committed ourselves to these ethical and professional standards:

1. We shall report and interpret the news with scrupulous honesty by striving to disclose all essential facts and by not suppressing relevant, available facts or by distorting by wrong or improper emphasis;
2. We shall not place unnecessary emphasis on gender, race, sexual preference, religious belief, marital status or physical or mental disability;
3. In all circumstances we shall respect all confidences received in the course of their calling;
4. We shall not allow personal interests to influence us in our professional duties;
5. We shall not allow our professional duties to be influenced by any consideration, gift or advantage offered and, where appropriate, shall disclose any such offer;
6. We shall not allow advertising or commercial considerations to influence us in our professional duties;
7. We shall use fair and honest means to obtain news and documents;
8. We shall identify ourselves before obtaining any interview for publication;
9. We shall respect private grief and personal privacy and shall resist the compulsion to intrude;
10. We shall do our utmost to correct any published information found to be harmfully inaccurate.

Contents AUGUST

Our cover: We continue with our current theme of using basic text for the cover. Reason? To defeat the notion that Connections is in some way limited to one genre, be it Lighting, Theatre, Studio, AV, PA, Staging, etc which is where a photo can/may mislead a potential reader. Last month we failed to note here that Sharon Miceli did the design. This month it is Cat Forcer's turn.

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~ Publishers note ~

I've typeset the code of ethics under which we have always operated here, on the left - at the bottom of the Publisher's Panel. It's timely to restate that ethics are important in print journalism, and indeed in business. I'm very proud that we have never accepted payment or an inducement for an article to appear in print, and that we have operated under these ethics for our whole time in print - almost six years. Do you have a code of ethics which you operate by in your job or workplace? Why not send us a copy - on or off the record - so we can see how others view 'ethics' in 1998. A time when perhaps 'ethics' means less than before?

This month: 92 pages.

September issue mailed to subscribers on Friday August 28th, and on sale in newsagents on Wednesday 2nd Sept.

POWERED MIXERS

NEW: EVI Audio announce the Powermate 1000 and the Powermate 1600 powered mixers. They offer more power, more effects and more extras.

Providing 6 or 12 Mic/Line channels and 4 Mic/Stereo Line Inputs, these two Powermate models deliver 2 x 500 watts at 4 ohms.

Two separate, built-in 18 bit stereo effects sections offer 99 presets each.

One of the best features is an integral metal cover, to protect the mixing surface. It is included for those who don't really require a roadcase.

Another good idea: a feedback filter on the monitor auxiliary output.

Weight 20 kg & 24kg (1600), cost A\$4,499 and A\$4,899.

• **Details:** EVI Telex Audio
+61 2 9648-3455.

NEW: Peavey intro their XR Series Powered Mixers. The XR886 features a 2 x 300 watt at 4 ohm power amplifier, 8 mic channels, 4 stereo line channels, 4 sends, built in Digital effects and dual 9 band EQ with Peavey's unique Feedback Locating System.

The XR2012 is similar to the XR886 but with 12 mic channels, 4 stereo line channels and a 2 x 600 watt at 2 ohm power amplifier using the same lightweight, high performance technology as found in the best selling CS800S amplifier. Both models feature Peavey's DDT speaker protection circuitry as well as a versatile amplifier/mixer patching facility. Speakon outputs are standard. The XR886 retails for A\$3,838 inc tax. The XR2012 retails for A\$4,898 inc tax.

• **Details:** Audio Telex
+61 2 9647-1411.



POWERMATE 1000

AWA details new distribution

SYDNEY: The merger of AWA Distribution and Audio Products International is in place. Headed by **Ken Dwyer**, the new firm called AWA Audio Products Pty Ltd (AWAAP) covers an enormous depth of product. AWAAP is divided into two divisions, Consumer and Professional.

The Consumer Division, headed by **Anthony Birtles**, promises to be a major player in the home theatre arena. Brands include: Denon, NAD, Metz, Mirage, Richter, Energy, Sound Dynamics, AKG, Niles and Tara

Labs.

The Professional Division, headed by **Adrian Wackwitz** continues with its strong traditions in this area with proven brands of Denon Pro, AKG, Aiphone, TOA, HHB and DNH. Pro audio specialist **Rob Harris** has also joined. Mr Harris was previously employed at ASC, and prior was the Dolby specialist at Syntec International.

AWA Distribution staff have moved to the AWAAP offices at Alexandria.

• **Contact:** +61 2 9578-0174

GREATER UNION ENTERTAINMENT TECHNOLOGY, NEW NAME FOR GUVT AS VILLAGE MOVES OUT

SYDNEY: Greater Union's joint venture organisations - Greater Union Village Technology and International Theatre Technology - have changed their name to Greater Union Entertainment Technology.

For many years, Greater Union and Village's entertainment technology division has been trading under two different names - Greater Union Village Technology (GUVT) in Australia and New Zealand, and International Theatre Technology (ITT) in Asia.

From 1 July 1998, the division will be 100% owned by Greater Union and will also be moving into Europe with offices opening in Germany and Poland. In line with the change in ownership and global expansion,

GUVT and ITT will be known internationally as Greater Union Entertainment Technology.

Greater Union Entertainment Technology are sight and sound specialists. With over 300 cinema and audio/visual installations a year in Australia and the Asia-Pacific region, they will continue to represent the world's leading manufacturers and provide the same high-level of service and professionalism in consultancy, design, installation, upgrades, maintenance and turn-key solutions.

• Greater Union Entertainment Technology, contact +61 2 9420-4888.

♦ **Village are also thought to be selling their stake in Australia's largest AV rental company, Staging Connections.**

Eight DSP's for HVD Malaysia

PERTH: KOSPRO International has been commissioned to supply and install eight networked Australian made DSP (Digital Studio Processing) Systems to the large HVD Film Production company in Kuala Lumpur, Malaysia.

This will make HVD the biggest single DSP site in the world. The eight 32 & 16 track systems all include DSP's famous Non

Linear Video (NLV) and all are networked and include the latest OMF Connect software, which imports and exports OMF1 standard files.

HVD is also the premier producer of TV dramas in Malaysia. It has a staff of 800 (full time) and 1,500 on contract, a hefty production output of more than 2000 hours a year and turnover of RM50million (A\$22,000,000).

"The first two 32 track Poststations are already installed, training has been completed and the Malaysians are revelling in the latest Australian technology", says Rob Scott, Manager of KOSPRO. Rob (pictured right with Danny Leong, GM of HVD) has made 36 International flights in the last financial year!

• **Contact KOSPRO:** +61 8 9242 5999



What claims?

Industry leads in OHS efficiency, so why should we pay more for workers comp?

By OHS writer, Anthony J Muzik

This is increasingly a legislation driven world. Folks in the construction industry will tell you, that come the year 2000, no-body will be able to walk onto a site without the appropriate Workcover ticket.

Last month we revealed that some production companies were faced with paying double workers compensation insurance premiums, because of lack of a suitable rating category for the industry.

We surveyed several hundred production companies and performing arts centres, to try to gauge what premium rate people are currently paying, and what the claims history actually is.

The answers appeared to be mixed, which was reassuring given the differences in classifications and categories between states. But it would appear that the entertainment industry as a whole is a notoriously safe place in which to reside, and there don't appear to be career victims out there putting in claims every other week.

A possibility for this exceedingly low accident rate is that show folks are professionals and also that they love their work. Something about letting the creative juices flow and dealing with the muse within. Pride in ones job in seeing a production or event come from an idea to realisation has its role to play.

Mick Auckland, Production Manager for Showboat agreed that their show has been engineered to death whereby every movement of the cast, crew and staging moves like a Swiss watch - but he says "if anyone from Workcover stood backstage during the show they would be appalled by what they saw" meaning that what might seem to be haphazard and reckless actions are in fact part of the territory. He added that every new member (including understudies) goes through intensive orientation and a complete run through. Auckland goes further:

"We would rather stop the show and fix the problem rather put someone in jeopardy ... and you know the audience doesn't seem to mind, in fact they get a kick out of having something special happen on the night they went"

Tiny Good of Show Tech rigging in Melbourne has over 120 casual crew members with no

claim history to speak of - although he identified a emerging OH&S concern pertaining to smaller crews, less load in time and less experienced crews on tour.

The survey revealed concern about lack of consultation with increases in premiums in various job description categories, Mick of A.C.P. in Brisbane has an audio production business that has never had a claim. But last year his premiums for 10 staff took a hefty increase.

Neale Mace of Entertainment Installations with 5 employees said that "We used to be under Electronic Equipment Manufacture - now we are listed as retail at a higher rate"

Entertainment accountant Bruce Rowland, with many hundreds of clients, knows of only two claims in 20 years.

No doubt some of these concerns will be raised at the Showsafe annual general meeting in Sydney on August 9th.

30 years of entertainment technology '68 - '98

1968 The tungsten halogen lamp was introduced - brighter lighting was born! Cadac make their first mixing console.

1969 Grand Funk Railroad build the first concert PA in the USA, which was basically a lot of column PA's, but behind the band. They discovered stage monitoring by accident!

1977 The Roland Space echo was the most popular effect of the 70's. Sony introduce the worlds first consumer digital audio player, the PCM 1, a 13 bit 15 inch digital audio disk read by a laser.

1978 The 12" box truss was first invented by Rock Industries with the winchup stand. Rock groups quickly found the load limits for both, much falling metal hit polished dance floors in 1977. Lasers became an effects device.

1983 The video wall appeared, but slides were still the main medium for audio visual presentations.

• These are random and fractured events from The Connections Archives. Email us your historical highlights or corrections now, to- mail@conpub.com.au or fax to 'Historian', +61 2 9876-5715.



MAJOR TRADE SHOWS



Contemplating a study trip, possibly tax deductible, to any of these overseas shows? Feel free to call the editor if you need further information. Email julius@conpub.com.au, or call +61 2 9876-3530.

- **PLASA 98**, 6 - 9 Sept, London. Call +44 1 323 410-335. web: www.plasa.org.uk
- **AES 105th**, Sept 26-29, San Francisco. Fax +1 212 682-0477. web: www.aes.org
- **REPLitech Asia**, Oct 19-22, Singapore. Fax +1 914-328-2020
- **IES 42rd**, Lighting Convention Nov 9-11 '98, Brisbane. www.iesanzq.asn.au/light98
- **LDI**, Nov 13 - 15 '98, Phoenix. Ph +1 212 229-2965 web: www.etecync.net
- **NAMM**, 28-31 Jan 1999. LA. www.namm.com
- **AES 106th**, 13-16 Feb, Munich. Fax +1 212 682-0477. web: www.aes.org
- **REPLitech Europe**, 23-26 Feb, Vienna. Fax +1 914-328-2020
- **MusikMesse**, 3 - 7 March 1999. Frankfurt. www.messefrankfurt.com
- **Music Convention**, 29 April - 2 May. Gold Coast QLD. web: www.australianmusic.asn.au
- **NAB**, 19 - 22 April, 1999, Vegas, USA. www.nab.com
- **PLASA SHANGHAI**, 13 - 15 April 1999. Ph +44 171 370-8231. web: www.eco.co.uk
- **NSCA**, April 27 - May 1, 1999. Nashville. Ph +1 904 273-2760, web: www.nasca.org
- **InfoComm**, June 10-12, 1999. Orlando. Info fax +61 2 9531-6777, www.icia.org
- **SMPTE**, July 13-16 th, 1999. Sydney. Ph. +61 2 9977-0888.
- **LDI** November 19 - 21st, 1999. Orlando. Ph +1 212 229-2965 web: www.etecync.net
- **NAMM**, 3 - 6 Feb 2000. LA. www.namm.com
- **ENTECH 2k**, March 5th - 7th, 2000, Sydney. Fax + 61 2 9876-5715. web: www.conpub.com.au
- **MusikMesse**, March 15- 19th 2000, Frankfurt. www.messefrankfurt.com
- **SIB**, March 26 - 29th, 2000. Rimini, Italy. Ph +39 541 711711. web: www.fierarimini.it
- **NAB**, April 8-13th, 2000, Vegas, USA. www.nab.com
- **NSCA**, April 27 - May 1, 2000. Las Vegas. Ph +1 904 273-2760, web: www.nasca.org

~ NEWS ~

TURBOSOUND has been sold to a management group - including Michael O'Flynn and Alan Wick. The company was previously part of the Harman Pro Group, who own Soundcraft, JBL, AKG and other brands.

MACKIE DESIGNS has purchased Radio Cine Forniture (RCF) - the Italian makers of loudspeakers and systems. RCF is a brand on the rise, and Mackie say the fifty year old firm is a great fit. "The pro market knows quality when they hear it" says Greg Mackie. It is an interesting situation, with RCF thought to be likely to continue as a brand in its own right. Clearly the USA market could be opened up to RCF by Mackie, whose intentions regarding the purchase are not yet clear. Expect a lot of new Mackie Sound Delivery products sooner, rather than later.

TJA UPGRADE HOCKEY: Trevan Johns & Associates have completed the Olympic Hockey Upgrade at Homebush Bay in Sydney. The spec called for multi-use paging, background music to internal areas and full range music to the grandstand and pitch.

Two AMX consoles control the University Sound US690 microphones in the managers office and officials enclosure. It then communicates direct to a Merlin ISP100 (Integrated signal processor) via its R5232 data input. The system was configured to provide a 4 x 6 matrix, the ISP 100 also controls EQ's delay and compressor limiting on all six outputs.

Kuala Lumpur: Glantre Engineering has completed the installation of the world's largest plunger ceiling in the Concert Hall of the world's tallest building, the Petronas Towers in Kuala Lumpur. The inaugural concert, held on June 19, made full use of the intricate acoustic design of the hall. The complex, which was built for Kuala Lumpur City Council and incorporates conference facilities and offices, stands at an amazing 451.9 metres.

Glantre Engineering, working in conjunction with Theatre Projects Consultants USA and the acousticians Kirkegaard Associates, supplied and installed much of the equipment in the Concert Hall, which incorporates many unique features, chief of which is the 150 ton plunger ceiling. The seven section ceiling, together with some 130 acoustic panels in the walls, allows the acoustics in the venue to be adjusted for different forms of music.

Gareth Davies, Director of Glantre Engineering, explains:

Two main clusters of EV MH Series horns were arranged to cover the pitch and terraces, SX100's and EV P series amps complete the spec.

Trevan Johns of TJA comments "We believe it is better than our previous installation at the Woodchop arena, which was excellent!"

• **Trevan Johns & Associates**, call +61 2 9838 4622

"The acoustic principle of enlarging the volume of an area to increase reverberation time is well accepted. Indeed, the International Convention Centre in Birmingham is a classic example of the effect in varying the volume of a hall. Petronas Towers is a much larger version, very different in design and the auditorium has the best acoustics possible for different types of music. The plunger ceiling, combined with the adjustable wall panels, allows complete control of the acoustics."

To achieve very smooth operation, the ceiling has been mounted on 56 alternately rotating screw jacks which impart extra rigidity and stability. Divided into seven sections it has a vertical travel of 8 metres and incorporates a sprinkler system within its acoustic panels. Constructed from precast, glass reinforced gypsum with a steel framework, the ceiling is hidden from view by an acoustically transparent aluminium decorative grill, which also encompasses the house lighting and fixed sprinkler system. In addition

to the moving ceiling, fabric and glass fibre acoustic wall panels can be moved in or out of storage pockets to alter the surface of the walls from a hard to an absorbent finish. All the acoustic devices are controlled from a computerised system, supplied by Glantre, which can be programmed with pre-set locations for different forms of music and is interlocked with the performance lighting and point hoist control systems.

To further improve the sound quality, the Concert Hall is completely isolated from any movement or noise from the rest of the complex by a "box within a box" structure. Anti-vibration mountings are located under the floor and at points where the building services connect to the hall to help reduce the intrusion of outside noise even further.

Glantre also supplied and installed all the stage equipment, projection screen, stage decking and a piano lift - together with stage lighting systems.

• **Glantre Engineering**
+44 0118 964-0000

PUN REJOINS PHILIPS:

Michael Pun (right) has rejoined Philips as National Product Manager for Philips Audio. He was with Philips for 14 years, before working with Sontec more recently. Contact Michael +61 2 9888-0476. In New Zealand, **Dennis Mawhinney** has been appointed Key Account Manager for all Philips CSS products. Call +64 9 815-4006.



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~ NEWS ~

MOVES:

NEW address for **AUSTAGE**. Now at Unit 3, 2 William street, Beaconsfield 2015 NSW. New phone: +61 2 9318-1700, fax +61 2 9318-1711.

Also a NEW address for **BSS LIGHT & SOUND INNOVATION**. Now at 334 Port Road, Hindmarsh 5007 SA. Call +61 8 8340-3100, fax +61 8 8340-4177.

SALES:

An **AKAI** DD8 digital dubber is now installed at Soundfirm's new Fox Studios facility in Sydney. It replays OMF files while locked to a film projector. Supplier: Australis.

Across town, the **ABC's** Gore Hill TV studios have upgraded the monitoring system thanks to 16 x EV Sx300PI loudspeakers, supplied by Focal Point Productions. These are a weather proofed version of the popular Sx300.

The **PLAYHOUSE** Theatre in Brisbane has new Meyer Sound loudspeakers, while Aus-Wide Cinema Supplies have provided QPAK with a new Klark Teknik DN3600 real time analyser and slaves.

WEDDINGS:

Chameleon Touring Systems (Sydney) mainstay **Sacha Rooney** tied the knot recently. Across town, Anything Audio owner **Walter Gerin** did likewise, with the business's bookkeeper - Val. Congrats all.

INDUSTRY NIGHTS:

That monthly **Jands Industry Night** moves up a gear with Radio Mics and in-ear monitoring the subject of the *September 1st* (Tuesday) gathering, while Jands Production Services present a session on Tour Sound Systems on *Tuesday 6th October*. The venue is The Globe, at 379 King street Newtown. Free entry at 6.30pm, but enrol by calling Jands on +61 2 9582-0909 first. So they can make enough snacks and things.

DSP EXPAND IN ASIA

The Australian firm **dSP (Digital Studio Processing)** announce the appointment of Digital Media Technology as its exclusive agent for China, Hong Kong and Taiwan. They have offices in Beijing, Taipei and HK.

GREAT MARKETING AWARD:

Goes to **FACTORY SOUND** in South Melbourne, for the best small newsletter. At around 8 pages, it looks great and has a well thought out mix of products - and prices. Call them on 1800 816-244 for a copy.

Pro Tools 3.4 Free is ... ProTools at no cost

A GREAT OFFER: Pro Tools 3.4 Free is essentially Pro Tools PowerMix v3.22 software. Pro Tools 3.4 Free is a non-copy protected CD-ROM version of the software provided free of charge to customers who order through Digidesign's website.

The CD-ROM provides fully functioning Pro Tools software to customers using a Power Macintosh without requiring additional hardware.

Using the analog inputs and outputs of the Macintosh, PowerMix provides two simultaneous record tracks and up to 16 tracks of playback, 64 virtual tracks, and 2 bands of digital EQ per track.

All of Pro Tools' editing features are available. Fully compatible with the Digidesign product line, Pro Tools Free allows custom-

ers to graduate to hardware-based Pro Tools systems as more sophisticated features become desirable.

Naturally a PCI-based CPU is required; you can find a list of compatible CPUs and hard drives on both the Digidesign web site and the CD-ROM.

The idea is to allow as many people as possible to experience the ease, flexibility, and creative power of Pro Tools for themselves.

To order: log onto Digidesign's website (www.digidesign.com), click on the attention-grabbing Pro Tools 3.4 Free icon directly from the homepage, and complete the order form. The CD-ROM will be sent directly to you (allow 6 to 8 weeks for delivery).

• Phone Asia (Japan) 81.3.3505.7963 or Pacific (Australia), 61 2.9568-1711

Philips Plug & Play sound management

The SM 25B is a true 'plug-and-play' system, demonstrated by the unique 'daisy-chain' configuration used for call stations. It makes modular call routing and input mixing cost effective for small to medium sized public address applications.

Functions such as priority inputs and chime tones are combined with advanced features like dual tone control and amplifier supervision in a two-channel system with automatic zone selection for up to 12 zones. Up to nine SM 25B call stations can be 'daisy-chained' in series or branch configurations, greatly simplifying cabling. Each call station can be individually configured. Software to assist configuration is available. •Philips +61 2 9888-0476



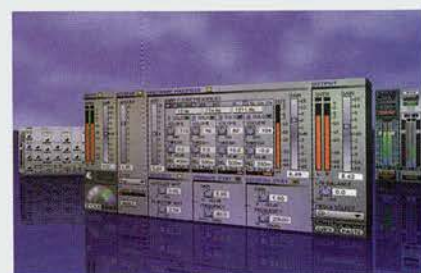
CUBASE MASTERING PLUG IN

NEW PLUG IN: Steinberg are pleased to announce in close conjunction with the Cubase 4.0 release, the shipping of one of the most exciting VST Mac PlugIns ever, The Prosoniq Dynasone.

Dynasone is a extremely high-quality product aimed at the mastering market and provides more than six different PlugIns put together into one high-performance unit.

This is an ideal tool for professionals and hobbyist alike, who want to create a high-quality master directly from within the VST environment.

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Prod Manager, Maryland Sound

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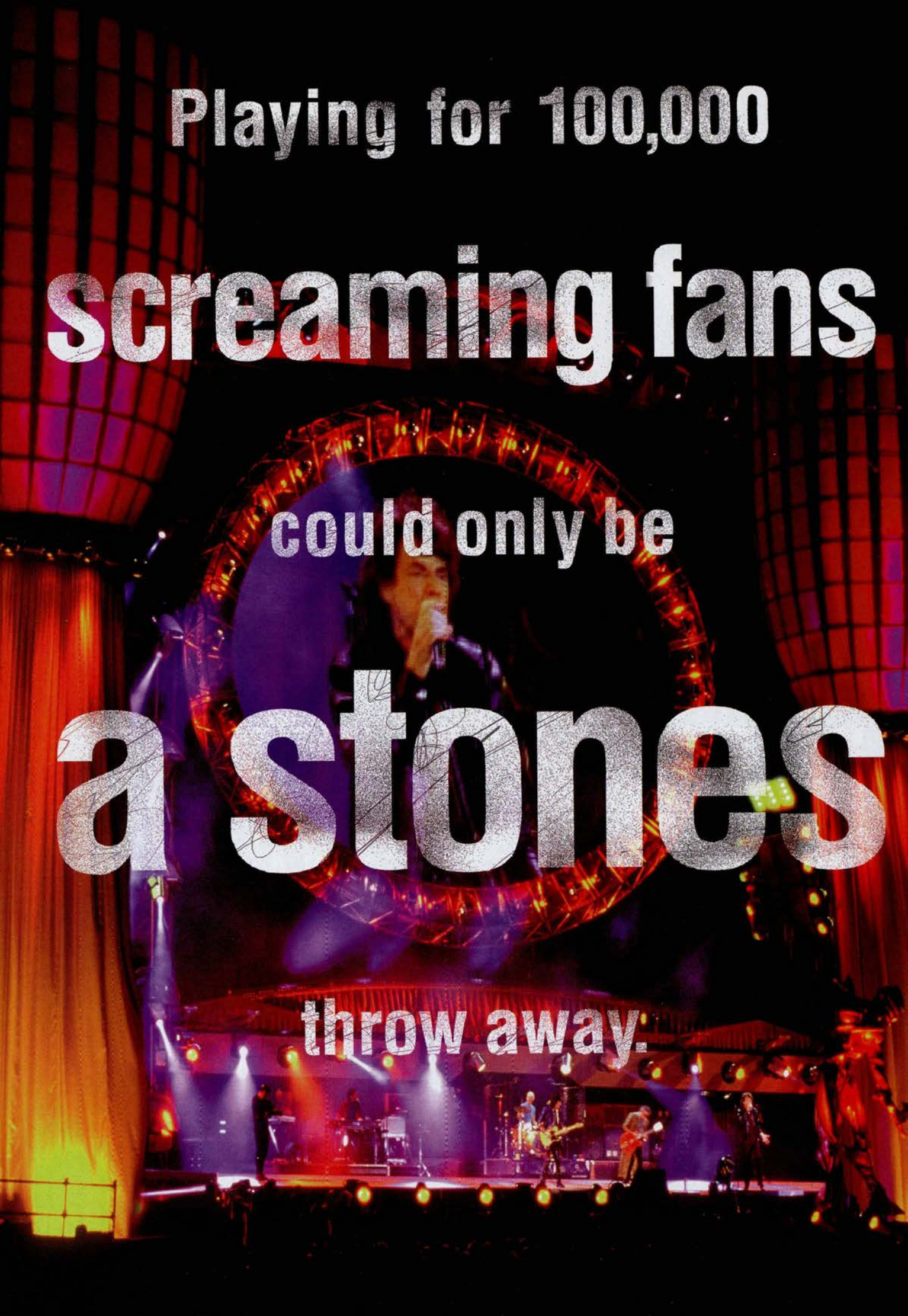
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Write in Reader Service Number: 128

Correction

Post was NOT done at Grevillea

I refer to your 'review', page 14 May '98: "Octavia: SADie gets a big brother". I received numerous calls from various colleagues regarding some inaccuracies in this article and upon reading the same have decided to bring these to your attention.

It leads the reader to believe that all the post production was completed at Grevillea.

For the record, the vision post production was performed by The Cutting Edge and the audio post production by Digital Sound & Vision. Grevillea recorded the music which was composed by The Music Department.

- Vic Kaspar, Digital Sound & Vision, Mudgeeraba, QLD

**I apologise on behalf of Connections for these omissions. The completed story was sent back to Grevillea once written for verification, and I obviously relied on what I was told. -Editor*

Music Agents

I would like to know if other musicians suffer payment problems, with excuses like these:

- We are waiting for a cheque from the venue;
- Our finance person is chasing it up;
- Haven't we sent that cheque?;
- The cheque is in the mail.

Performers have little pull when demanding payments, but we are not stupid. We want the industry regulated and fair to all.

- name withheld, Brisbane

** Let us know. -Editor*

Event producers

Re: "accreditation for event producers" (July), the International Special Events Society (ISES) runs programmes for members, they have a web site at <http://www.ises.com> & the Australian President (a "Certified Special Event Professional") is: Glenn Lehman, call +61-2-9281-2555

- Justin Knox, QLD.

Master Blaster!

Re Date With Disaster in the July issue.... Loved It!

I was the minder/Audio/whatever guy with Sebastian Hardy at the gig - and have dined out many times over the years on the tales of Paddo Town Hall, the explosion to end all explosions, and watching Toivo Pilt (the keyboard player) go backwards over his Mellotron. (Very big at the time was the old Mellotron....)

As I remember it, the 2 John's (Sweeny and Brewster, roadies for The La De Da's) arrived, were told that the gig was over, and sloped off for drinks.

Someday I will tell the tale about the pyro efforts of my young brother with HUSH. These include singeing Howard Page's moustache at an outdoor gig in Canberra, and denting the roof at the old Festival Hall in Melbourne opening for AC/DC.

- No names no pack drill, SA.

** It's scary what happens when older people recollect those carefree days of their youth. Our writer, aka The Master Blaster (or The Egg Roll) is still afraid of being identified, after 24 years. -Editor.*

Love them fubar's

Ah Connections. I enjoy reading the mag late at night whole waiting for the Exabyte to finish backing up the day's sessions. Then I play 'spot the mistake', July was a good month for them.

First, congratulations to Shirley and Murray, who now have a new *grildchild*. I prefer them potboiled myself!

Then there is that delicious Solidtube microphone, conveniently pictured upside down.

Of course there are all the usual mangled words, misplaced or plain missing apostrophe's, and some good old tautology too. But, you keep me thinking about home every month, without The Bulletin and my monthly Connections I would probably go insane. Thanks!

- Amanda McKenzie, Supreme Edits, Singapore.

** What can we say? -Editor*

Safety & ENTECH

I feel the need to comment on one ENTECH seminar that I attended which leads into comments on rigging observed.

The rigging seminar (was) on the whole a good seminar and good to get a whole bunch of people together to talk about this subject. However, I was appalled by the comment from a person from (a rigging company) who commented that his riggers wore climbing harnesses, and if they fell they would probably fall out of the harness. The upshot being that they (the company) would deal with the consequences at that point. I can not understand for one moment any company exposing themselves to this kind of hazard.

I am not aware of the details of the Australian Health and Safety Act, but here in New Zealand, if you allow those sorts of practices to occur you will face the full force of the law.

This leads me to comment on the rigging that I observed in the show halls. With all of the trusses flown in the halls, I didn't see any evidence of secondary suspension of the trusses, every one was hanging on the chain hoists. I can't guarantee it for the hoists I am not familiar with, but the two brands I know, state clearly on the hoist "not for suspension over people, use for lifting only". Here we make a point of having secondary suspensions with chain hoists for this very reason.

In addition to this I noted that at least half of the fixtures hanging off the trusses didn't have safety wires. Some of those fittings that did have them had the wire around the plastic carry handle, not the "hard" fixing point that the manufacturer has designed into the fixture.

- Chris McKenzie Kenderdine Electrical Ltd New Zealand

**The rigging at ENTECH '98 was contracted through the venue who retained control. Chain hoists are allowed as sole support in Australia to the best of our knowledge. Chains SHOULD be fixed to lights properly. Good issues, thank you. -Ed*

Rider Info Backlog

I work in a large regional venue in W.A. which is hired by a large and varied clientel both professional and amateur, Australian and International. We do everything from the local rep. club to the famous music acts. The variety of hirers we get is what keeps us going, what keeps the job interesting in an otherwise pretty boring town.

The one thing that never seems to change, and I'm sure my colleagues will agree, is the amount of time I seem to spend chasing technical information from promoters and tour managers.

Our hire contract has a specific clause which states a deadline by which we must receive all technical information and more often than not it is ignored.

That is all good and well if the hirer doesn't require anything but on too many occasions I have had tour managers and technicians walk in on the day of the show and get upset because specific audio, lighting, staging requirements have not been pre-prepped.

We almost invariably trace the info blockage to promoters' offices or act managements.

In an effort to maintain our profile on the touring circuit we strive to be as professional and helpful as we can to make shows as successful as possible. We all have experience in city venues so we know how to operate in the business.

It's simple guys: read the contract, fill in the technical requirements pages, send it back by the deadline - or tell us if there is problem.

The venue will be ready for you when you get here and the crew can leave their nerves back in the motel.

-Anton Hubble, Technician, Goldfields Arts Centre, Kalgoorlie

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SHOWS WE'VE SEEN LATELY A PUNTER'S PERSPECTIVE

DISNEY ON ICE IN SEARCH OF 101 DALMATIANS

Firmly established on the national entertainment calendar, *Disney On Ice* brings quality family entertainment to more than 300,000 people in Australia every year. On its seventh consecutive season, the 1998 *Disney On Ice* \$10 million theatrical musical is *In Search of 101 Dalmatians*. Four Disney classics are wrapped into one production - *The Jungle Book*, *The Little Mermaid*, *Cinderella* and *101 Dalmatians*.

The foyer of the Sydney Entertainment Centre was a scary, seething mass of young children. (*I want porcorn, I want a wee wee, where's Mickey? where's the doggies?*). Several hundred children were all being asked at the same time if they want to go to the toilet before the show. Unfortunately I needed to go - but I know the secret toilet - hah!!

I took my three year old boy who was thoroughly entranced by the first half which was an hour long. *The Jungle Book* was bought to life in a sea of green foliage lighting effects and the giant inflatable snake didn't appear to psychologically damage too many young children. *The Little Mermaid* was our favourite, you could almost believe it was underwater.

Unfortunately a tantrum at one of the many souvenir stalls during intermission changed his majesty's mood somewhat. One mother I met had spent over \$100 on souvenirs for her two kids and you wouldn't get much for that. I spent \$20 on a stick which has a Dalmatian's head on either end, plays a very irritating song (much to the delight of fellow passengers on our train trip home) and lights up. A must for every hire department!

The second half started with *Cinderella*, the weakest of the segments and a bit too poofy for a little boy. By the time we got into the *101 Dalmatians* segment his majesty had had enough and wanted to go home. This is despite having asked me at least 600 times when the doggies were coming on. Never try to understand a three year old, it just results in despair and frustration. So if there was a corking finale, I don't know about it.

The huge production includes 43 skaters and 13 trucks to transport sets, lights, costumes and sound equipment between cities. The sets are quite beautiful and ingenious in their design. A simple mountain scene is transformed with different set elements, inbuilt lighting and colourful projection. Colour spills out from the set over the expanse of the ice joining the two into a large performance area. The ice is a useful projection surface used to its full potential.

The rig is large and also incorporates several bubble machines (for *The Little Mermaid* under the sea scene), as well as large monkeys which 'bunty' jump down for the *Jungle Book* 'I wanna Be Like Yooooooc' number. They were very effective and caused a few children to jump. The costumes were stunning, particularly the horses in *Cinderella* and I liked the prawns in *The Little Mermaid*.

The skating was good, not that I'm an expert. No one fell over - bummer - except for Goofy but then I think he was supposed to.

A sprinkling of pyro effects guaranteed a few spoiled nappies.

The sound wasn't too bad but the character's words were not always clear. I think this had a lot to do with their accents too.

One thing that is very useful with Disney stories is that there is always a baddie. Toddlers who insist on straying from their seats come screaming back with one whisper of 'watch out for Cruella De Vil'.

Overall it was a stunning production but I wonder if the standard is too high for such young minds. A little bit of imagination is a powerful tool and would be better encouraged. Next year it's *Toy Story*...yeah!!

• Cat Forcer



Theatre Backstage News

Compiled by Jacqueline Molloy, Andy Ciddor and Mandy Jones

◆ **Burswood Showroom**, part of the Burswood Island Resort in Perth, WA, is currently undergoing major multimillion dollar renovations. The most significant is perhaps the addition of an 80 line counterweight flying system to replace the previously inadequate 22 line electric winch system. Burswood Management plan to include longer running bigger productions in their schedule of events and have also bumped their seating capacity up from 2,000 to 2,300 in theatre mode. The theatre consultant for the upgrades is Mort Clarke from Melbourne company Key Largo.

◆ The Victorian Government has given **Melbourne Theatre Company** \$4 million towards the establishment of a new theatre to house the company. The 500 seat theatre will be built on the corner of Sturt Street and Southbank Boulevard at a cost of \$12 million. The theatre is to be operational by the end of the year 2000, at which time the MTC will take up residency. The new theatre will be used for the majority of productions in the MTC program however larger scale productions such as musicals will continue to be staged at the Playhouse at the Victorian Art Centre. The University of Melbourne have also contributed \$4m towards the project, while the remaining \$4 million will be raised through fundraising and commercial developments on the finished site.

◆ It didn't take long for the complaints to start, but Canberra's new **Playhouse Theatre** is taking flak about its sightlines. It seems that some patrons in the stalls have been complaining about seeing the backs of heads instead of the stage whilst some of the balcony seats see almost as much balcony as stage. One of the biggest complaints is that restricted vision seats are no cheaper than those with uninterrupted sightlines.

◆ A co-operative of Sydney performing companies went public recently with another outburst of the actors favourite sport: demeaning production values. In launching their new co-op venture of actors theatre, actor **Jeremy Cumpstone** claimed that 'There's been far too much concentration on directors and designers to the detriment of actors and the work. The essence of theatre is the actor first and foremost. An actor in a black box can create worlds for you'. Try quoting Jeremy to the next actor that complains that they couldn't hear themselves in the foldback or that someone else has a longer wig or a more ferocious-looking spear.

◆ **Gladstone Entertainment Centre** have been upgrading their facilities lately. They are very pleased with their new radio mics, having recently replaced their unreliable old system with 10 Shure beltback units and 4 hand held mics. The 120 seat Basement Playhouse has been extensively refitted and is now sufficiently acoustically isolated from the main auditorium that both venues can be used simultaneously.

◆ The idea to build a **new theatre in Perth** has once again raised its head. Over the years it has been a proposal that has risen and fallen more often than the dollar and one that just won't quite go away. The early part of the nineties saw the push for a 2,000 seat theatre but now it seems that what local companies are lobbying for is a 500-600 seat space. Theatre Consultant Graham Walne is preparing yet another report for the state government.

◆ The **Tasmanian Symphony orchestra** is to get a new home in a concert hall and convention centre on the waterfront site of the Grand Chancellor Hotel Hobart. Guaranties of a ten year occupancy by the orchestra were part of the deal between the hotels owners, the Tasmanian State Government, the Hobart City Council and the ABC.

◆ An unusual relationship has been established between the mining industry and musical theatre. **Rio Tinto Australia** have just

continues after advertisements >

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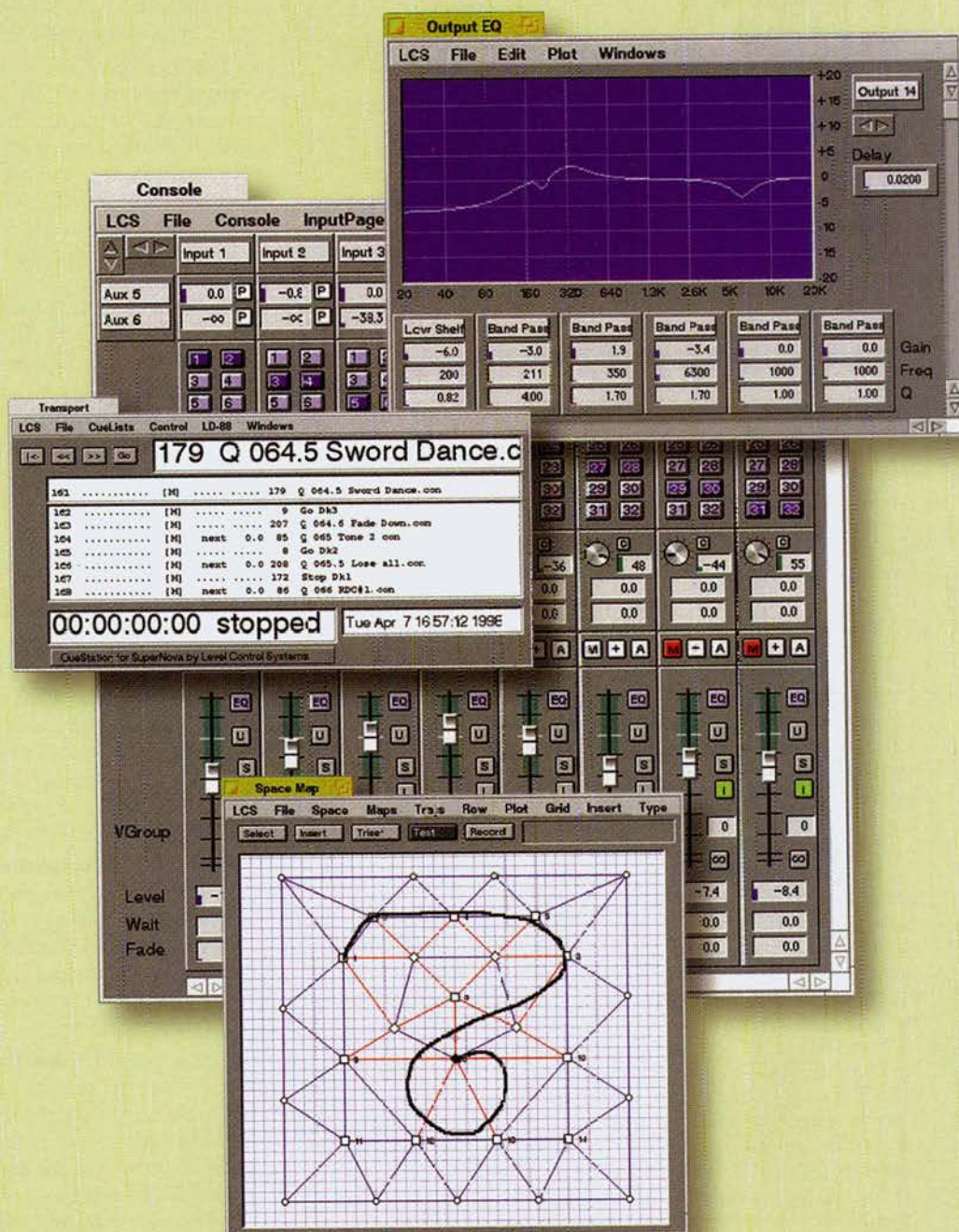
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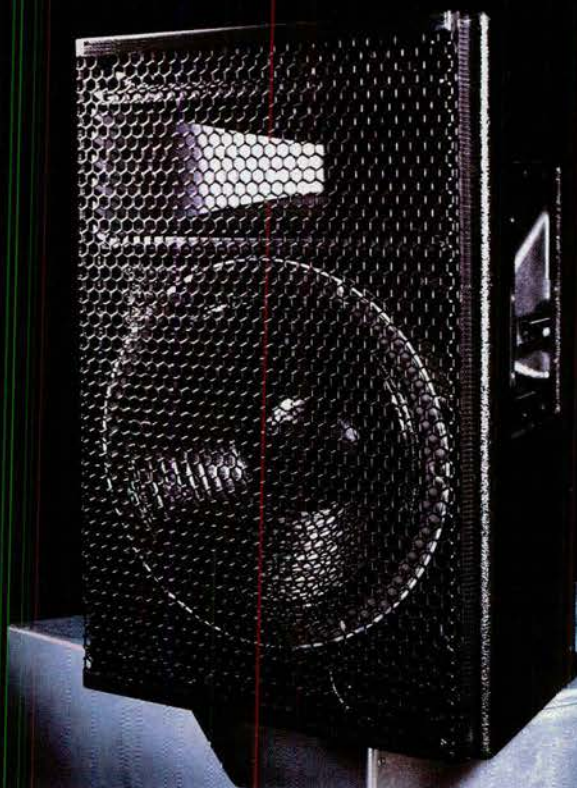
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Backstage News (continued)

provided funding of \$10,000 for six chosen groups to develop an idea for a musical to treatment stage by the end of 1999. Rio Tinto are the single largest corporate sponsor for the Victorian Arts Centre and have been involved in sponsoring the arts for many years.

◆ The government-funded **Perth Theatre Trust** is to be abolished and the venues it runs including, His Majesty's Theatre, Perth Concert Hall, Subiaco Theatre Centre and the Playhouse are to be managed privately. The four short listed tenders for the venue management were examined by a five member panel in July and a decision is expected shortly.

On The Move

◆ **Dein Perry's** latest tapping extravaganza **Steel City** heads to Melbourne for a season at the State Theatre, Victorian Arts Centre, opening in early August. Directed and Choreographed by Perry with Music by Tim Finn and Production Design by Brian Thompson. The Steel City Lighting designer is Trudy Daglish.

◆ **Phantom of the Opera** is finally being laid to rest after eight years on the road. The final season opened in Perth in early July and will finish there in early September, never to be seen again! Perth Entertainment Centre has been converted to a 2,400 seat Lyric Theatre for the season and has had a facelift with a lick of paint and new upholstered seats to keep the audience happy and comfortable. As expected the season is selling well and the buzz around town is that it sounds great with credit due to the team at System Sound (particularly Sound Supervisor Kelvin Gedye) who are the keepers of Martin Levan's sound design.

Openings

◆ The musical **Chicago** recently opened at Her Majesty's Theatre in Melbourne. The production team includes John Scandrett: Sound Design, Ken Billington: Lighting Design, John Lee Beatty: Scenic Design and William Ivey Long: Costume Design.

◆ The Victorian Council of School Organisations is presenting **Mechtron**, a new theatre work, at the Brunswick Mechanics Institute in August. It promises to be a complete sensory experience created by a team that includes Writer/Director Stefo Nantsou, Production Designer Peter Mumford, Sound Designer David Franzke with Lighting Design by Liz Pain.

Web Site Review:

◆ Porkchop's 'On Stage' technical theatre humour collection. <http://www.nic.com/~porkchop/onstage/> 'In is down, down is front, out is up, up is back, off is out, on is in and of course left is right and right is left. A drop shouldn't, a prop doesn't and tripping is OK' is a quote from one of the dozens of pieces of Techie Humor on this web site. Porkchop is a US high school student (as it seems, are about 95% of World Wide Web users) who loves theatre, computers and produc-



ing web pages but who for some reason hasn't yet conquered the spell checker on his web editor. There is a variety of theatrical humour ranging from pieces bagging actors (perish the thought) to the Techie's Gospel and collections of funny production disaster and accident stories. The sources are various and the quality is varied but worth a few cheerful minutes of your web browsing time.

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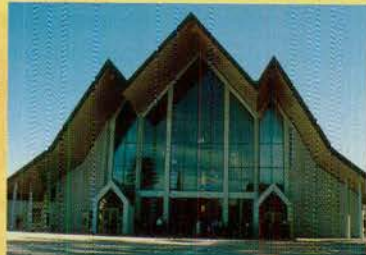
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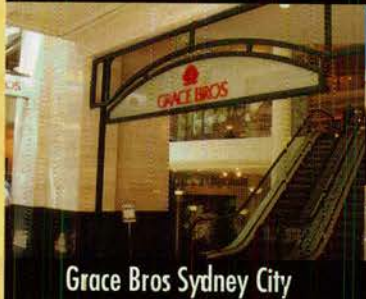
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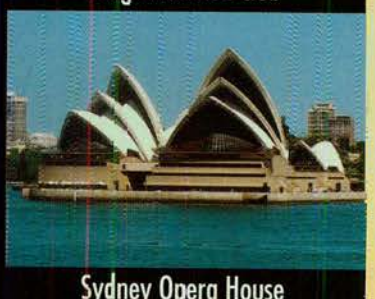
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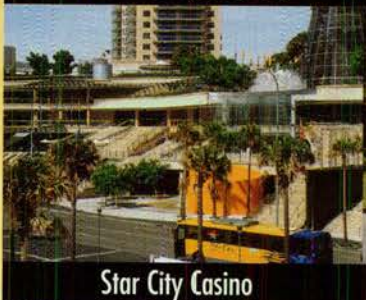
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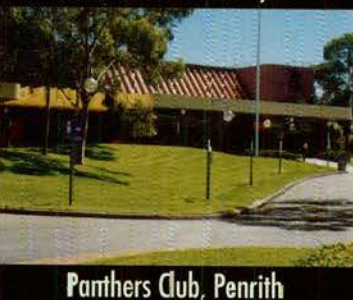
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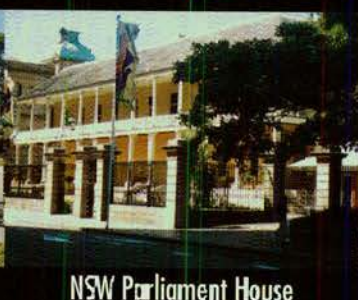
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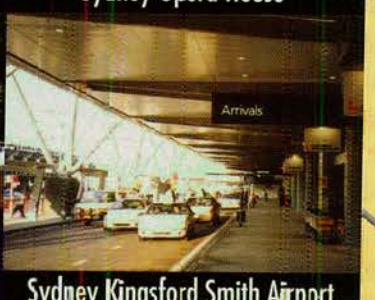
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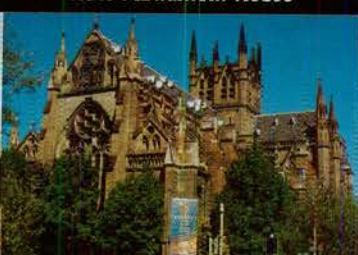
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CHICAGO

THE MUSICAL

Chicago has opened in Melbourne. Unlike other recent musical productions, *Chicago* places less emphasis on the set and staging, and more emphasis on what audiences really want to see - talent. But that's not to say that *Chicago* is in any way small. Clever design in set, lighting and costumes have combined to create a visually striking show that works on many levels.

This new production of the 1975 musical was originally developed as a four night concert in New York as a tribute to the great choreographer Bob Fosse. When it became such a huge success the creators took it to Broadway for an extensive season, making very few changes to that original 'concert' design. With productions in London and New York as well as American touring productions, the Australian division of the International Management Group decided to stage the \$3 million musical in Melbourne.

The action moves between a seedy 1920s nightclub and a prison with simplicity through the use of atmospheric lighting, and the versatility of the minimal set.

David Miller, Production Manager and Technical Director for the International Management Group in Australia, describes working on the show as "a delight". He was involved with the project from the initial planning stages.

"We got the rights 15 months ago at which time we started to budget and look at venues, lengths of seasons and all those options. I started getting design packages November last year and at the same time we started auditioning. We had the American Production Supervisor out in December and obviously I went through a lot of work with him. I went to New York early this year to see it and to meet everybody, discuss how we were going to do it, meet their workshops and their costume shops and discovered all the problems I was about to encounter. Tenders went out mid-march, including lighting and audio, and we started to build early April for an early June bump in. We had 8 - 10 week builds for costumes and sets."

Her Majesty's theatre in Melbourne was chosen because of its size, being a rather intimate piece they didn't want it to get lost in a huge auditorium. The set design calls for a false proscenium created through the use a huge gold border over the stage. Due to the narrow proscenium of Her Majesty's, the border was made to be adjustable so that when the production tours, it can be expanded to suit other venues.

The feature of the set is a huge bandstand which takes up most of the stage and holds the 15 or so musicians. The design of the bandstand looks simple - a big black box with a gilt border - but what you don't see, until someone jumps out of them, is the many trapdoors incorporated into the design. The actors use the band area as a courtroom scene and a press conference, they slide down the side of the bandstand like a banister, and even interact with the musical director.

David explains that the acting area is cut down to 34 feet x 12 feet because of the prominence of the bandstand, but being in vaudeville style, it works.

"There has been this trend over the last 15 years in musical theatre where the sets get bigger and bigger and bigger and suddenly the chandelier is more interesting than the actor! That's why this show has done so well around the world because it comes down to the raw talent of the cast.

"The tricky part is the less there is, the more precise it has to be. If there are 400 people on stage all in lavish costumes and there are a few mistakes you really don't notice. But when there are twenty people on stage all in one costume all night and the costumes are all black, the designers are very fussy. Its the precision and exactness that has been the biggest challenge."

To give the all-black costumes texture, David explains that 112 different black fabrics were used, and the handmade shoes all have 5 or 6 different types of black leather in each shoe.

"The performance licence is exactly the same as the American show. We had to bring out all the American designers and creative team. The only designer we appointed out of this country was the sound designer."

LIGHTING

The lighting for *Chicago* was designed by Ken Billington who created a beautiful and 'active' design. In many scenes the lighting is the set creating not only the atmosphere and focus, but the physical dimensions of the space.

Boxed footlights (Altman Mini-strips) define the perimeter of the space running around the bandstand. Gobo effects such as prison bars covering the entire front performance area create a fantastic effect, especially in the seamless registration of the patterns thanks to some pretty precise focussing.

"I think the lighting is an incredibly beautiful and precise design - its certainly the most precise focus I've ever seen. When all your lighting is basically air, because you can't light a black backdrop, the only lighting effects you see are on the people or in the air. The precision of that design - the prison bars, the exact symmetry of all the lights is so vital."

The overall style of the production is very much black and white, yet the lighting design features a lot of colour. Dark washes complemented by stark splashes of colour bring the feel of



vaudeville to life.

"Ken's use of colour is sensational, and the way he moves the action from one side of the stage to the other with such minimal lighting changes are clever. And its not lights flashing in your eyes the whole time which is one of my great hates in theatre these days. Theatre is becoming more and more rock'n roll in its use of Vari* Lite's and moving lights. I think moving lights are fine, we've got four of them in this show - he just uses them very well. In Melbourne we're using a VL5B and 3 VL6s.

"The three VL6s are used as back lights to move with the actors, so obviously its a close relationship between the director and the lighting designer because the actors have to move at the right pace. Its locked into that pace every night. It helps that 90% of that is done to choreography so its easy to get the timing right, dancers will always follow music. It looks like it should be an Autopilot but they're never that accurate."

David explains that 80% of the rig is ETC Source Fours of varying beam angles. There's the odd special - HMLs for backlight, lightcurtains, strobes and mirrorballs, but on the whole, its just a matter of clever and simple design.

AUDIO

John Scandrett from System Sound in Melbourne was the only Australian Designer involved in the Australian production of *Chicago*. The Producers and American designers all agreed that sound design was the one area that needed a local expert to design and spec the system rather than working from the original concert design.

"The Producers came to us to design the show. The American directors came out and basically auditioned us and we convinced them we could do it. It meant we could come up with our own concept for the sound design, which was pleasing and extremely rare."

John described designing sound for *Chicago* as "an exercise in restraint. There was to be no over-amplification of music - the only loud music in the show was the overture, interval and play-out music, the rest of it was kept as natural as possible."

John worked closely with the Production Musical Supervisor Rob Fisher and Musical Director Guy Simpson. While he had a free hand technically, they were very strict about the treatment of the music.

"All of the American crew were very firm about the sound of the show and we've given them what they wanted."

John used System Sounds' Yamaha PM4000/48 modified to support automation run off two IBM computers, and a Yamaha 03D.

The Meyer speaker system uses UPA-2Ps for Vocals and MSL-2s for band reinforcement, driven by five Cyberlogic 8 channel amplifiers.

John also used LCS SuperNova computer controlled EQ, delay and localisation system, MLSSA time aligning and EQ, and an Akai DR8 hard disk 8 track recording system for sound effects.

John explained that with so much computer programming and computer power behind the sound of the show, and with only two operators, they had to be quite adept in the computer technology as well as the straight music and audio requirements.

23 Sennheiser UHF radio mics were

used for the cast, and a vast variety of mics were used for the band.

"We had lots of peculiar mic requirements because of the make-up of the band - upright piano, piano accordion, banjo, fiddle, and then the brass section and the other instruments. And we had to keep the mic'ing very low key because the visual aspect was very important. We used lots of miniatures to keep them out of sight."

Designing for the venue was a challenge in itself. "Acoustically its a real challenge because Her Majesty's is three rooms in itself - the stalls, and then the overhanging circles, and then dealing with the reverberance of 'the Gods'."

Chicago is currently playing at Her Majesty's Theatre in Melbourne. National Australian and New Zealand seasons are planned.

• By Mandy Jones

Chicago Crew Credits:

Production Manager: **David Miller** Stage Manager: **Sue Benfer** Head Technician: **Gary Senior** Head Mechanist: **Dave Clark** Lighting Designer: **Ken Billington** Associate Lighting Designer: **John McKernon** Australian Lighting Assistant: **Jillian Judges** System Sound - Sound Designer: **John Scandrett** Assistant Sound Designer: **Julian Spink** Head Sound Technician: **Don Eickhoff** Sound Operator: **Gillian Cowie** Light-supplied by: Bytecraft

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BRETT BOWER'S ICIA COLUMN

The ICIA **International Institute for Professional Development** comes to Sydney again this January. Tentative courses scheduled include

- Basic Staging Skills for Technicians;

- Perfect Image: video and computer interfacing for large screen display;

- Professional Sales Skills for A/V Hire and Staging.

The institute will be in Sydney 18 - 22 January 1999, we are still finalising details with the venue and we will be able to announce more details in September.

This year's Institute attracted a lot of interest from staging and rental companies across Australia, New Zealand and Singapore and the 1999 Institute is sure to do the same. Make a mark in your diary to attend now!

Certification for AV Professionals

Every student that attended the ICIA Institute at the Sydney Gazebo this year received "The Essential of the A/V Industry", One of ICIA's Academy Online courses. These are an interactive adult educational CD Rom, that includes courses on technology and AV sales.

You simply connect to the ICIA Internet Web site and log onto your course for the textual information, quizzing and tests, while pulling the graphics and video from the CD. This makes it quick as you don't need to download the high-bandwidth images. At the completion of the course you then have the option to sit for a separate exam to earn you CTS or CAVSP.

Since January this year more A/V rental and staging companies in Australasia are enrolling their technicians, sales staff and managers in Academy Online courses.

ICIA Academy OnLine courses set the standard for the A/V and Presentation industry throughout the USA, ASIA, NZ and Australia, especially with A/V staging and rental compa-

nies.

Having both technical and sales staff that are certified means clear advantages whether pitching for the business or staging the event. There are two levels of certification offered (General and Specialised) to establish entry-level and senior level credentials in various facets of the audiovisual industry.

Examinations are either

online or on-site depending on the level of certification you desire. You can become a Certified Technical Specialist (CTS) or a Certified Audio Video Sales Professional (CAVSP) from your office - online. For specialised designations - CTS: Installation, CTS: Rental, CTS: Design and CAVSP Advanced - These courses require classes and examination on-site at ICIA in Fairfax Virginia.



There are also introductory courses designed for support staff who may not need to become certified, but do need a basic knowledge of the industry. Call me at the ICIA in Sydney for more details on certification and information kit about ICIA courses - +61 2 9531 6777.

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Write in Reader Service Number: 130

New Event Management and Theatrical Production Company Formed

Eighteen experienced freelance production staff, designers and industry managers have collaborated to form an event management and theatrical production team with the most experience yet seen outside an institution.

public event group (Sydney) boasts more than 200 years combined experience in the entertainment industry - spanning musical and repertory production, large scale events, arena production and corporate presentation.

The company has been formed in response to the growing need for project based event management and theatrical production.

public event group offers full service management of projects and can deliver specialised services such as technical installation, design, CAD, logistics among many skills that can be integrated to deliver a highly cost effective service.

For further information and company profile please contact Don Gunn or Gina Hall on +61 2 9399 3400.

Philips announces ISP3004 Solid State Video Player

Melbourne: Philips Business Unit Mastering & Duplication (M&D) announce the ISP3004, an MPEG video player which is based on the use of PCMCIA memory card storage. The ISP3004 is the latest development in the ISP3000 series of solid state products.

The ISP3004 is a standalone plug and play rack unit which is intended for applications such as video presentations in museums, theme park entertainments, exhibitions, point of sale displays, video Kiosks - and any situation where high quality video clips need to be played repeatedly.

The advantages of using PCMCIA cards for storage instead of disc or tape are that there are no moving parts, so the system is very reliable and can withstand shocks and extreme environmental conditions. It also means that the video clips in the card are easily updated and there is no degradation of quality over time.

The ISP3004 can be connected to any TV set, monitor, video wall or projector with a composite or S-Video input (PAL / NTSC, 16:9 / 4:3) to display the

recorded video clips. It also supports stereo playback of audio associated with the video.

A wide range of playback control features are supported for example a simple push-button keypad or as sophisticated as automatic remote control from a PC.

With a 350mbyte flash PCMCIA card, typically around 20 minutes of video material can be stored with the quality of a double-scan wide screen TV Picture, however, hard disk type PCMCIA cards of 750 Mbytes or more allow longer storage time.

PCMCIA cards are programmed with the MPEG1 / MPEG2 encoded video clips, which can be generated using Philips encoders and workstations.

With MPEG1 bit rates selectable from 1.2 to 4.6Mbit/s, the video quality and playback duration can be carefully balanced for optimal results. The ISP3004 can also play variable bit rate encoded MPEG2 material where the highest video quality is required.

ISP3004 has undergone evaluation in numerous locations worldwide and has a tax list

price of AUD \$ 3,800.

• **Contact Bryan Nokes, Philips Mastering & Duplication, 0412-363-621**

INFOCOMM ASIA UPDATE

Plans for ICIA's INFOCOMM ASIA are well under way, I visited Singapore in July and took a tour of Suntec City where Infocomm Asia will be held. More than 80% of the floor space has been sold already and although the economic climate in south east Asia could be better.

There is a strong commitment from the industry to make this show bigger than ever.

Showcasing up to 250 international exhibitors, we expect up to 7000 regional and international trade visitors to the event. Connections Magazine has a stand booked, for example.

If you work in the presentation industry and want to find out more about ICIA, INFOCOMM ASIA or ICIA education, check out the ICIA Web Site for more information, at www.icia.org -Brett Bower

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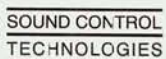
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G-SHOCK! Indoor Snowboarding Spectacular

Held at the Sydney Entertainment Centre in June 26-27, this event combined state of the art technology and production with the world's best snowboarders for the first indoor snowboarding event ever held in Australia.

It was organized by Lance Beetar and Mark Buczynski of Intense Entertainment, an Australian company based in Sydney. Tim Wortin, Managing Director of the Sydney Entertainment Centre said, "Indoor snowboarding has never been tried in Australia at anything like this level. The set up is arguably the largest and most complex in our 15 year history."

The G-SHOCK Intense Air is based on a vision of the next generation of sporting events. Video screens were used in combination with laser projections to project sponsor compilations of animated logos, CGI promo

pieces, and shorts edited from some of the most radical snow, skate, surf videos available.

The overall design for the arena, directed by Mark Buczynski, was based on creating and composing visual elements around the best still and motion camera positions for capturing the snowboarding action. Laser projection screens, video screens, ramp design, and stage design were all located with television and photographs in mind.

Scott Pulkinghorne was brought in as production manager, and he soon assembled a team of some of most talented technical artists in the business. Tony Moffat, as technical director, orchestrated the vast array of technology to keep the chaos of snowboarders, bands, DJ's, and MC's on time and on cue.

The ramp design utilized a 3D CAD model of the interior of the

Entertainment Centre as the base for creating the snowboard ramp. Butler's Hire were critical to the success of the 17 metre high ramp and stage assembling the huge project in record time and taking it down twice as fast.

The Australian invented snow making technology combines liquid Nitrogen, compressed air, and water and forces it through a special nozzle to create snow.

Fox Sports, and Big Pictures Productions all captured the event from a variety of cinematic perspectives. Big Pictures Productions, led by Dennis Murphy, were responsible for all event replays and real time coverage. Animations of company logo's, and rider profiles were replayed via computer hard disk to project the appropriate com-

pany and rider information through the ever changing line up of each evening.

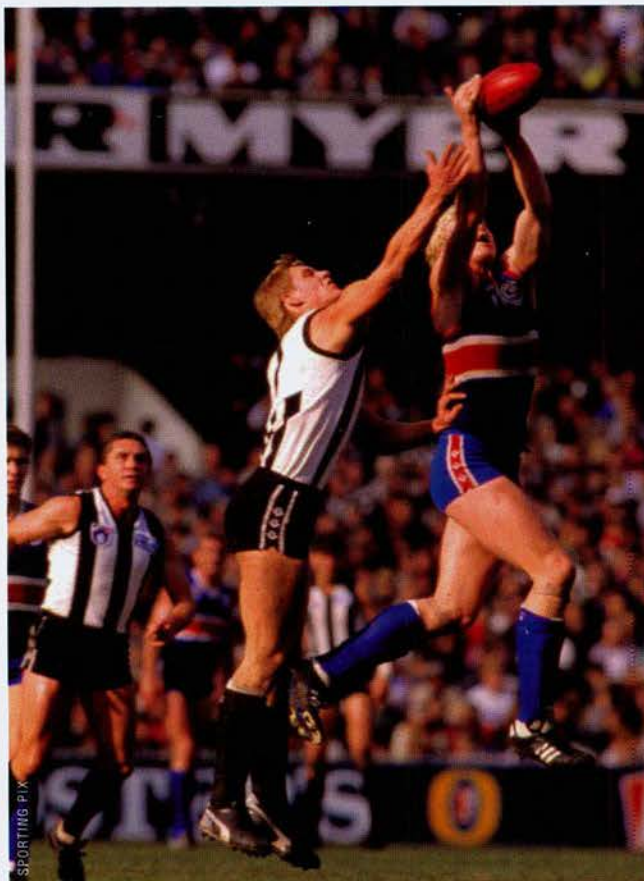
Numerous betacam SP players, multiple live camera feeds, scoring graphics, and hard disk feeds were all programmed though the video routing system and projected on the nine video screens. The projectors were a combination of Barco 9100's and the latest DLP technology, with technical crew and video equipment supplied by Gearhouse.

The Lighting Designer was Alan Stone, Chameleon lighting supplied the technical staff and equipment. Paul Mazlin of Oracle Laser Productions used every laser they had and then some.

An EAW concert PA was supplied by Norwest Productions.

What a gig!

15 pages of Hire & AV Production Companies: starts page 39



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- > AC Power Requirements: US - 120V, 50 Hz/60 Hz
Europe/Asia - 230V, 50 Hz/60 Hz
- > Dimensions (H x W x D): 68 x 44.2 x 36 cm
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SOUND PRODUCTS

Mackie HR 824 active studio monitors

Sid Kidman appraises these compact monitors

I've just spent a fortnight or so playing music through the MACKIE HR824 Active Studio Monitors. This is my first loudspeaker assesment for Connections, and it is the prototype of how we intend to handle the extremely subjective issue of Reviewing Loudspeakers for the future. Before I go on, I would appreciate your comments (as would the editor) on this review format in particular. You can call me on +61 7 3808-3319 or email mail@conpub.com.au

VISUAL

Standing 400mm high, 250mm wide, and about 300mm deep, the MACKIE HR824s are compact enough to fit comfortably into even small studio/mixdown spaces. The appearance is charcoal in colour, with a stippled moulded front, wood grained sides with a small radius rounding on the front side corners, and square top, bottom, and rear edges.

The front panel is dominated by the 200mm low/mid frequency driver, and the wave guide tube above (shallow conical exponential horn) with the 25mm domed tweeter at the centre of the wave guide tube. On the right, there is a neat on/off rocker switch. Above the on/off switch are two red led's for power on state and overload.

The rear panel mounts the 150mm x 305mm flat piston passive radiator, covered by a black powder coated steel chassis which houses the bi-amp. In a horizontal row just under middle position are an input attenuator, and four, three position switches. In order they are for acoustic space, low frequency and high frequency roll off, and power mode. There is copious bold white printing, giving useful instruction for all functions, and identification of the inputs, for either a TRS phone or XLR type, and the mains plug, which are each recessed under the lower end of the chassis. All neat and very business like.

STRUCTURAL

Each speaker weighs in at 15.25 kg, and this weight contributes to the sound characteristics of the monitors. It is difficult to get great sound out of lightweight boxes: but these are virtual heavy weights.

Six hexdrive screws hold the amp chassis to the rear panel. Removing these reveals the passive radiator, mounted on an impressively moulded rubberised steel frame. The passive radiator has a quite stiff springiness. It appears to be a high tech

development. Two more screws hold this plate in place.

Removal exposes the internal structure of the box. This is solid, well crafted, and properly sealed. Two blocks of an open structure latex type acoustically absorbent material occupy a little more than a quarter of the internal volume, controlling unwanted internal resonances.

The toroidal transformer, power supply, crossover, E.Q.

sections, and two amps are built on to the steel chassis, which is slotted on the sides and top for passive ventilation. The circuit board is densely packed, and visual inspection revealed no weaknesses. No problems here.



FUNCTIONALITY

The HR824s score well in this department. Considering their power output capabilities, they are quite compact. Each box requires two connections; the signal, and the power lead, which plug in from underneath the amp chassis, for which there is adequate room. The passive radiator can still push air via the generous slots of the amp chassis, and there are no protrusions from the back to interfere with placement. The weight and sturdiness of construction will allow the speakers to function well, even on a flimsy shelf, provided the shelf won't collapse.

Set up is as fast as unpacking and plugging in, apart from deciding about placement.

THE MANUAL

It does pay to look at the manual, and this one is no exception. It is full of useful detail. Adequate explanations are given of the use of the quarter, half, and full space switch, the three positions of low shelving filter at 80Hz, 47Hz, and 37Hz, and the -2dB, flat, and +2dB high shelving.

Also the off, auto on and on modes of power are explained. The auto on mode is a useful device for saving power in this ecologically sensitive era. In this position, the amp goes into a low power consumption state if no signal above the level of -45dBu is detected. The low and high pass amps respectively produce 150WRMS and 100WRMS at maximum output.

Each monitor is also supplied with its own certificate of calibration. Generally, flat specs are guaranteed, from 40Hz to 20kHz. (But there is an issue about what constitutes 'flat', which we will go into another time. If every speaker was 'flat', then they would all sound The Same - and actually quite dull, at that! -Editor's note)

LET'S TASTE THE CAKE

The MACKIE HR824s were set up in open studio space well off the walls, and set without attenuation of input, and with the 'normal' position on all switches.

The first test was for power. Whilst not reaching gut hitting levels, they are adequate for mid field monitors in a room of up to 100 or so cubic meters. This means that they would be more

Please turn the page



This shows scale

i About our reviewer Sid Kidman:

Sid studied A.M.E.B. Piano/forte, did human and physical sciences at QLD Uni, then spent 15 years as a keyboard player. In the 1980's he bought a large touring PA & became a sound engineer. Sid is now in his third year of the Design Science Audio program at Sydney Uni. Sid hopes to complete a Masters degree.

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• And speaking of stereo, you can work in stereo with True RMS Power Summing™ for phase-coherent tracking, or in dual mono mode, without the two channels interacting at all, making the DDP a great processing value.

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• The DDP works right out of the box. It comes with 50 factory setups that are guaranteed to knock your socks off. There are presets for every application you can think of, and then some. dbx engineers are musicians and recording engineers. We know what a compressor is supposed to sound like, and we know it better than anyone else. We invented compression. We eat, sleep and breathe compression.

• Want to duplicate that perfect compressor set-up? Each processor in the chain has all the parameters you would expect. After you set the parameters the way you want them, save it as a processor preset, available to be recalled any time. These building blocks allow you to save entire setups just for the way you like to work. It doesn't matter that you are doing a live gig one night, then mixing the tracks in the studio the next night, the DDP will be there, just the way you left it.

• When you save a preset, you also save the information that makes it work behind the scenes, too. Digital output (optional), sample rate performance, MIDI setup, as well as any of the other utilities, like sidechain setup and monitor, EQ settings, and SysEx functions.

• When you make changes to any parameter, you can see where your adjustments are affecting the signal, simply by looking at the Hi-Res graphical display, which shows the processing curve in real time as you make your adjustments.

Check out the DDP at your local pro audio outfitter, and experience DIGITAL performance you'll never forget.



Start with the gate. Set parameters for threshold, ratio, attack, hold, release, and output gain. See the effect of your settings on the graphical display, as well as on the gain reduction and audio level meters, they all interact in real time with your manipulation of the parameters. Start with a threshold setting of about -60dB to clean off the noise in between the vocal takes. You can save your final gate settings as a "gate preset" building block and recall it into any other setup you do.

Then move to the compressor. The effects of the gate settings are still visible on the graphic display, so let that help you determine where to set your compressor threshold. The parameters you change here will also affect the curve on the graphical display in real time. Move through all the regular parameters, like threshold, ratio, attack, release, and output gain. For vocals use a threshold of about -25dB, a ratio of about 3:1 or 4:1, and a slow attack and fast release for the most natural sounding effect. Your compressor settings can also be saved off as a building block to be called up into any other preset.

On to the limiter. Change you make to the limiter settings are also seen on the graphical display. Adjust the level up or down to suit your needs. The flat top line of the display moves up and down as you adjust the level. You can also set the speed at which the limiter lets go of the signal as it goes below the threshold. This is truly smooth limiting, with patented PeakFlow™ algorithms, so rest assured that where ever you set your threshold level, your tape will not distort, and your signal will not get butchered as it goes across the threshold. And like the other parts of the processor, your limiter settings can be named and saved for later use.

De-essing works the same way: see the effects of your settings displayed on the graph. Parameters here are the common ones: threshold in frequency, 800Hz to 8kHz, and amount in percent. Other available processing includes EQ both in-parallel and sidechain, for special effect types of processing. When you are editing any of the building blocks, its icon is visible on the display, and the parameters are shown on the graph, as it's always easy to know where you are. Parameters are easy to see in this page driven operating system. When it's as complex as this, it's nice to know somebody was thinking when it was put together.

You can also work in stereo, or set up a completely different and independent processing chain for the other channel. Also, notice that the audio meters are capable of showing both peak and average levels for input and output. Optional digital output with the TYPE IV™ Conversion System with TSE™ (Tape Saturation Emulation) provides up to 24-bit output in either AES/EBU or SPDIF formats with the trademark digital processing of TYPE IV™. The DDP also has full MIDI/automation capability, with separate MIDI in and thru jacks. Entire processing setups may also be saved into one of 50 user defined presets, or use one of the 50 factory presets.



Focusrite Platinum Series

Zenon Schoepe auditions two new signal processing tools from Focusrite, the Voice Master and the Tone Factory

Voice Master

Yet another voice recording channel but this one carries the F word and pretends it's got valves in it. The new Platinum units enjoy excellent build quality with none of the design overkill that accompanied the arrival of the Green series. The sole concession on the Voice master, like the Tone Factory, is a subtle but tasteful subliminal legending of a large Focusrite logo on the brushed aluminium front panel.

Despite competitive pricing the Voice Master sports a phenomenal number of switches and pots for the money but then it attempts a lot. Dedicated to the provision of a single channel direct to tape recording path predominantly for vocals its skills extend well into the area of line input processing. Distinct sections provide an expander, a vocal saturator for valve effects, an opto-compressor, EQ and an opto-de-esser.

At the end of the chain sits a master output level pot with corresponding output level meter. This passes out through two balanced XLRs - for pre and post de-esser - and an unbalanced jack output. Inputs are provided for mic on XLR and balanced line on jack plus a TRS insert.

You kick off with the same discrete mic preamp as that found in the companion Tone Factory with sweepable high pass filter that goes up to 320Hz, phantom power, phase reverse and line selection. Gain ranges from 0dB to +60dB with signal present and overload LEDs. The expander section offers expander and gate modes working together with variable threshold and depth pots. Each section can be bypassed separately.

What Focusrite calls a vocal saturator section is said to emulate valve and tape saturation effects. This it attempts with a drive pot - graduated from clean to unclean - which determines how much saturation occurs and has a corresponding LED which glows longer the more processing is involved. A Tuning pot meanwhile adjusts the centre frequency of the saturation with a full-bandwidth switch making the effect broadband. What we're adding here is valve-style harmonic distortion.

The opto-compressor section is close to that found on the Tone Factory but adds a treble pot for boosting compression-related high-end in the processed signal. Pots are provided for threshold, release and output with switchable fast attack and hard ratio values.

EQ is an altogether different matter with the naming of parameters reflecting their effect rather than their function. Thus Breath equates to a 10kHz shelf and Presence a 4.5kHz peak. Warmth appears to be a broad bell that can be tuned

between 120Hz-600Hz and an Absence switch claims to remove 'harshness' and would seem to be a gentle voice-band broadish mid cut. Despite its enthusiastic claims the Absence switch is pretty damn subtle.

The last block of processing takes care of de-essing and combines a nicely tuneable centre frequency pot covering 2.2-9.2kHz, threshold pot and a 'something happening' LED. This is a powerful little channel's worth of processing that belies its cost.

There are some peculiarities which become apparent when trying to balance the channel with most of its constituents in place. This comes down to a matter of comparing the contribution of sections. The order of processing is not quite as the front panel flow would suggest because the vocal saturator is actually post compressor. This becomes apparent when you whack up the saturator circuit and set the compressor in a way that lets the odd blast through as the former section's overload LED starts up. It's one you have to watch but max valve simulation circuit followed by floored opto-compressor does equal king retro mic sound. And you can tune it so you only get the effect in part. It's very good and shades of the excellent Studer Multivalve.

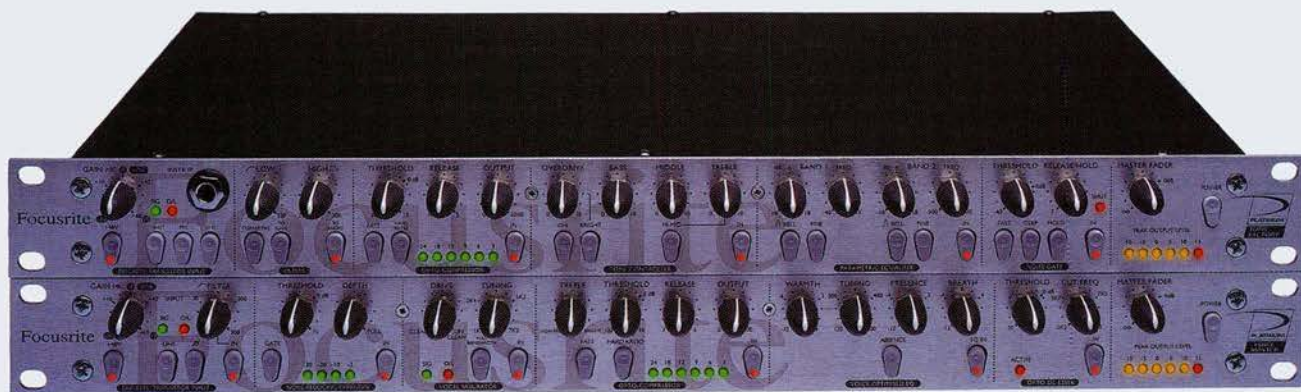
With the price it's a shame that some Voice Masters will only see dynamic mics but the unit's performance on these is quite remarkable and certainly nudges the results well into the realms of acceptability. You can give a dynamic mic more backbone, definition and class with this channel but it's still a waste of its talents. The better the mic the better the results and while it is too far fetched to suggest that it can make a dynamic sound like a condenser or to add virtual valves to condensers via its processing sections, there can be no denying that the preamp front end is extraordinarily good. It's wide, clear and clean and out of this price league.

What the channel does from then on is allow you to contour what goes in gently - there is no really dramatic hoodlum shaping available on the Voice Channel. You're offered restraint. The compressor is probably the most brutal block but even this is intensely musical on the limit, the vocal saturator doesn't get offensive at full throttle and the EQ encourages you to work a band at a time emphasising treble, pulling up definition and adding or subtracting thickness. And you can apply this to the miking of instruments, such as acoustic guitar, just as comfortably as you can to vocals.

It's a very, very good voice channel. Best of all it's a bit different from the rest and knocks spots off its similarly priced competition.

- Voice Master sells at A\$1,599 retail inc. tax.

(please turn the page)



Mackie HR824

than adequate for smaller studios.

For listening enjoyment, first impressions were of highs, too predominant in the 8kHz to 12kHz region. Also there is a slight amount of the coloration typical of most little cabinets, which effects the response from 100Hz to 400Hz, and is commonly called boxiness. Very pleasing however is the genuine levels of 30Hz to 50Hz, which is rare, indeed, in most boxes. (Hence the need for subs with some smaller monitors).

The overload leds are useful, because, without low frequency roll off, it is easy to get carried away and ask too much of the power handling. Otherwise the low frequency drivers could easily suffer over excursion and ultimately damage. The overload protection cuts in, reducing power, but it appears MACKIE have deliberately timed this with a small delay in order to give the monitor a good transient response.

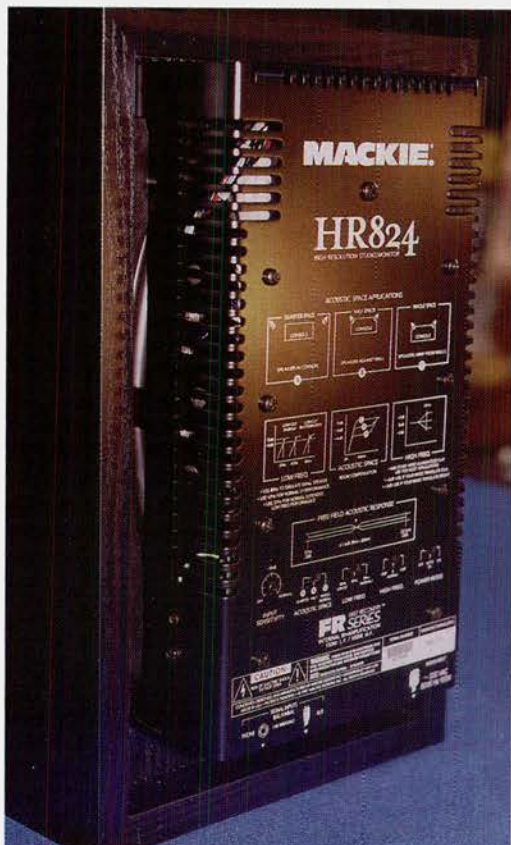
At full power, there is some vibration of the side walls. There must be a trade off between the cost of producing more rigid walls, and the degradation this mode of vibration will produce. In quiescent mode, there is no audible noise, and switch on is silent, but switch off produces a quiet thump.

The half space and quarter space switch positions reduce the output of the passive radiator by small noticeable amounts, successively. This is to compensate for the increased impedance coupling the low frequency into the air at a wall (half space) and at a corner (quarter space). The 37Hz filter produces a just noticeable reduction in the lows, while the 80Hz filter produces a clear reduction in bass, and is useful if much dB SPL is needed. It should be possible to set them up to suit most spaces.

The performance of the passive radiator is interesting to observe. A sine wave signal swept from 20Hz to 80Hz shows the driver and radiator both working pretty inefficiently at 20Hz. At 30Hz it is possible to both hear the radiator, and see the reduced movement of the driver, as the passive radiator takes over the work load.

This action is maximal around 40Hz and by 50Hz is diminishing rapidly.

(Please turn the page)





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Focusrite Platinum Series

Focusrite Platinum Tone Factory

That Focusrite should choose to aim the first two boxes in its new Platinum entry-level series of outboard processors so blatantly at specific user profiles bodes well for the new range.

Placed bottom of the stack and substantially below the still not quite affordable enough Green series, the Platinum's weigh in with the Tone Factory instrument recording channel being looked at here and the Voice Master vocal recording channel.

Whereas the Greens were a distillation of ideas that already existed in units like the Reds, the Platinum approach is altogether more specific and clearly targeted at users looking at high quality signal chains to go to hard disk with. Admittedly the Greens did also address this territory but I'd argue that these cheaper boxes hone in in a more specialised manner and do so by combining diverse blocks of processing and less academic descriptions of what the blocks do.

An instrument level input appeared for the first time on a Focusrite with the arrival of the Greens but the Tone Factory has gone for this far more aggressively and could be regarded as an instrument channel first and foremost with mic and line capability thrown in as an extra.

It combines a discrete transistor input, with filter, opto-compressor, tone controller, parametric EQ and noise gate sections culminating with a master output level pot.

This may be a cheap box but you get an awful lot of pots and switches for your money with each processing block bypassable individually.

Rear panel connections give an extraordinary range of possibilities with phantom powered mic input, balanced line input and balanced and unbalanced line outputs complemented by compressor sidechain access, gate key and insert plus, of all things, a guitar amp level output.

That's a rare inclusion even on dedicated guitar pres.

Instruments are plugged in on the front panel. A wide ranging gain control works in conjunction with signal present and overload LEDs and the input stage is far better equipped to cope with the spurious dynamics that an electric guitar can generate than the overly sensitive instrument input that appeared on the Green Focus EQ's back panel.

High and low pass fully sweepable filters can be switched into the gate sensing circuit while the opto-compressor has threshold, release and output pots. Switches access two attack speeds and a 'hard' ratio compression setting.

A Tone controller block attempts to reproduce the sort of tone shaping found on a guitar amp with bass, mid and treble pots, the last of which is switchable to act as more of a high mid. It's preceded by an overdrive control with defeatable speaker simulation. It's not bad at all and capable of some fine variation but it's unlikely to fool a player used to having his flares flapped by a selection of cardboard cones on a regular basis. It'll stretch to a fair degree of overdrive, manages excellent crunch tones and very pleasing cleaner sounds that can be forced to the edge of dirty through playing dynamics. I'm sorry but I didn't think Focusrite could do this sort of stuff.

A 2-band parametric offers +/-18dB over 40Hz-1kHz and 500Hz-20kHz with shelf/bell switching and two Q values on both. This section does most for the Tone factory's versatility beyond the instrument input as it's here that you'll tune mics passing through.

You're then into the noise gate with variable threshold, switchable release or hold pot, two attack time constants and two attenuation ranges.

It's all rather natty and clearly well thought out to create an extremely flexible single channel.

Don't dismiss the box's mic handling abilities because while they are not as elaborate as the Voice Master Platinum unit, the

Tone Factory is no slouch and it shares its mic pre front end. A touch of excellent compression - better I believe on vocals than it is on guitar - and some refined EQ on the broader bell setting and you have a nice quality direct feed.

Keyboards also benefit from the treatment, particularly the overdrive section and its tone controls. Predictably, it's a corking bass guitar channel with the 2-band parametric able to step in and iron out any of the resonances that can occur.

In fact I could see Tone Factories bought in bulk and relegating so-so mixers to monitoring duties in conjunction with hard disk systems.

If I have any reservations it is that you cannot alter the order of the processing. It's not a major point but being able to juxtaposition the tone, EQ and compression blocks would have extended the flexibility even further.

I'm not sure whether all-out guitarists will be smitten by this unit but I would expect that occasional guitarists, and the project fraternity is filled to bursting with these, are likely to pay attention to the Focusrite branding and will appreciate some of the pure recording features that this box offers rather than it's abilities as a pure guitar channel. There are guitar pres that perform better but none are as optimised for the recording environment to the degree that the Tone Factory is.

A perfectly workable device and bold move by the company. It sounds good on instruments but general mic processing duties are also well within its abilities. There is not much else that attempts to address this task with this sort of conviction.

Tone Factory retails at A\$1,599

- Australia: Electric Factory, +61 3 9480-5988
- HK: Digital Media Technology +852 2721-0343
- NZ: Protel International Technology +64 4 801-9494
- Singapore: Team 108 Tech Services +65 748-9333

www.focusrite.com

This Preview first appeared in Studio Sound magazine UK.

Mackie HR824

(continued from previous page)

Listening to music, it is possible to quickly get to appreciate the capabilities of the MACKIE HR824s. Their accuracy (apart from the previously mentioned coloration) is good. It is possible to listen to detailed orchestral music and hear the difference between the first and second violins and violas, subtle brass attacks, and the full lows of the double bass and big timpani. Personally, I found the HR824s to be more enjoyable with modern material such as tracks from the Orb's "Orblivion".

The stereo imaging was strong, and not confined to the "sweet spot". This, MACKIE claim, is due to the exponential wave guide, and the claim is verified by listening whilst moving around. As well as lateral imaging, there is also good depth of sound field.

There is some overhang of low frequency impulse signals. This translates to a lack of tightness of the bottom end, but seems to be a trade off for some real sub bass. Indeed it was good fun playing with the new Roland MC-505 GROOVEBOX, and hearing a result when the sub octave was used with some of the big sounds that this and similar machines produce.

These attributes will keep many a recording engineer satisfied.

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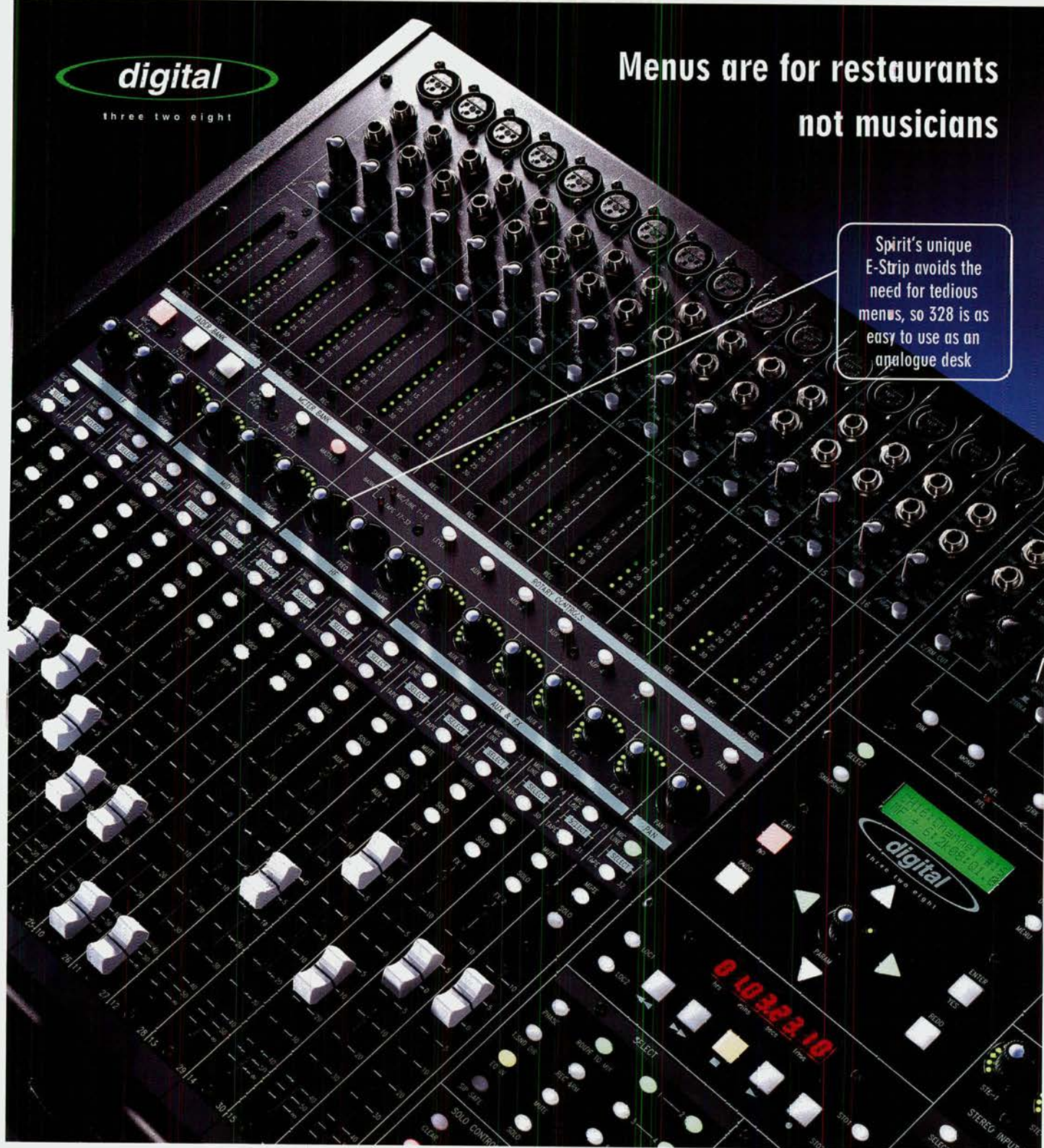
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Studio Data session management software

By Anthony J Muzik

Andrew Host has been a recording engineer for the past eighteen years and when I visited him while he was working at Tiger studios in North Sydney the heart of Sydney's AD land, he explained that apart from being busy (a good sign) he had the usual headaches associated with working at a major commercial recording operation and he explained that the biggest headache was one of information storage and retrieval.

Enter StudioData, which is a FileMaker Pro Database designed for Australian recording studios by Andrew over the past 4 years. It had its origins back in 1993 while commuting from his home at Mt Colah. Host explains "I designed StudioData mainly for my own records, using my NEC laptop running Windows ... and I wanted to put a studio job card on my computer to sort out the problems of tracking the whereabouts of a particular job or accounts" He added, "I determined that for example there are five places where a job card could be when you needed it (usually in a hurry).

1. Filing Cabinet (surprise, surprise!)
2. Jobs Done File (waiting to be invoiced)
3. In the Accounts Dept.
4. Has been Billed (but not refiled tray)
5. Waiting for jobs to be done tray
6. Or just in the wrong place, place (eaten by your cat, etc)

StudioData eliminates the confusion as to the status of record keeping for the recording industry. Basically any Mac or Win'95 system running FileMaker can run StudioData which is available in two versions, free via shareware and the registered version.

There are nine modules which are integrated relational files with simple find commands covering such areas as Job Records, Invoicing, Purchase Order, Labels, Addresses & Talent Quotes.

Information is entered in fields similar to a regular card file with the additional feature that information is shared between modules in much the same way as MYOB.

While on that subject, Host recommends that studios run a separate accounts program as StudioData does not have a

accounts receivable component as yet although future versions may, he admits that importing, "MYOB is a bit fiddly at present. However, StudioData is "perfect for firing off a quick invoice"

Separate address books were integrated into the mix as it seemed to make sense, simply enter text such as addresses and all phone and fax numbers are cross indexed automatically as are order numbers and client names.

There is a hole in StudioData and that is the sound FX catalogue, basically an empty shell so as to accommodate popular standards such as SoundIdeas FX file (available on diskette from Production Music Services), so studios can customise their applications to suit. General housekeeping functions such as machine maintenance allow studios to track (no pun intended) installation information and repair status. There are nice touches for the Australian user and those New Zealanders who bill Australian clients. These include the Talent Quote module which has the breakdown of industry rates to answer questions like 'what would RMK and Morrissey charge for a party political voice over ad?'

Those wishing to print labels for VHS, CD and cassettes can do so.

Andrew says StudioData has not replaced the diary at the front desk for bookings, but that it has streamlined the operations of their busy studio. He still has a few headaches these days, when asked he said "sure, we do but different ones, like I can't always get an engineer to fill out a card properly!"

Which goes to show you that you are only as good as the information you've got.

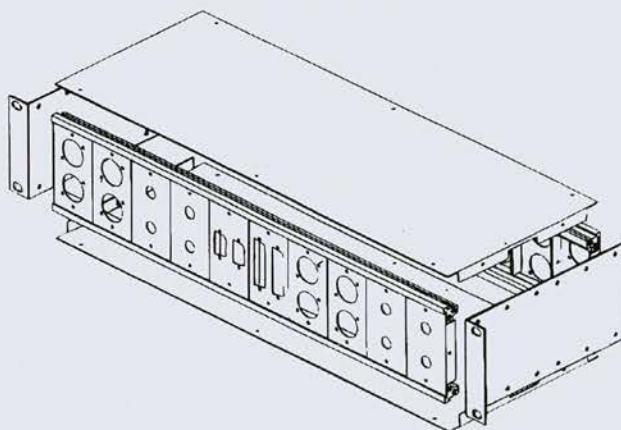
- StudioData is available via Shareware (without the ability to customise) for \$40.00 at this web site:
<http://users.bigpond.com/studiodata>
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Graphic Equalizers

A Graphic Equalizer is a giant tone control. It runs from very LOW (Bass) through to very HIGH (Treble), and covers the whole audio sound spectrum, usually agreed to be 20 Hertz (20 cycles per second) to 20 Kilohertz (20 thousand cycles per second).

Depending on its design it will have 10, 15, 30 or more slider controls which indicate the relative amount of Cut and Boost per frequency, rather like a graph; hence the name Graphic Equalizer.

A 10 band Graphic EQ has 1 octave between sliders, a 15 band has 2/3 of an octave between sliders, and a 31 band has 1/3 of an octave between sliders. Thus the more sliders, the more accurate control you have, enabling you to target the specific frequency you want to cut or boost, and leave the rest unchanged.

Note that a third octave equalizer may not always have 31 sliders. A lot of manufacturers feel that the frequencies at each end of the scale are not ones that need a lot of control, so they leave them out. For example, a 30 band will usually leave out 20 Hz, which is generally considered subsonic, and a 27 band will leave out the 20Hz, 25 Hz and 31.5 Hz down the LOW end, and the 20 KHz slider on the HIGH end.

Why do we need one?

We need an equalizer to make what comes out of the speakers

12 dB
6 dB

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IN

LPF
IN

EQ
IN

PEAK

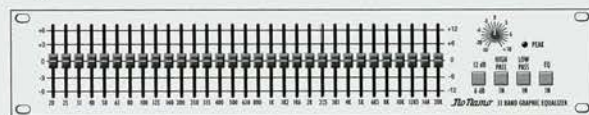
1.2K

-10dB
0dB
+6dB
+10dB

'equal' what went in. In other words, to make sure that the sound the audience hears is not affected by the sound of the room (not too much, anyway).

Every room, or area, has a 'sound' all of its own. Different surfaces reflect or absorb different frequencies and add peaks or dips in the sound that weren't there in the original sound. These changes can cause the system to sound boomy, ringy, dead or thin. By identifying the frequencies that are causing these overtones, and reducing (or increasing) them by the right amount, we can smooth out the response of the system and make it sound much more pleasant to listen to.

We can also make it louder, something which is very useful in stage monitors.



Our diagram shows a typical 31 band Graphic Equalizer, and for our purposes it has just about every feature that you might find on one. Not every Graphic EQ will have all these features, but they will all have some of them.

Range

This changes the maximum amount of cut and boost of each slider, from 12 or 15 dB, to 6 dB for fine tuning. This way you can have a lot of control (12 or 15 dB) for tricky monitor tuning, or more subtle EQ (6 dB) for the main speaker system.

High Pass Filter

Also known as Low Cut, or Subsonic filter. If it is a switch, it is usually preset and rolls off frequencies from 30 - 40 Hz downwards. On some equalizers it is a knob or a slider, and the frequency is adjustable.

Low Pass Filter

Also known as High Cut. Once again, if it is a switch, it is usually preset between 8 - 10 KHz, and rolls off frequencies above that. It may also be a knob or slider, and the frequency is adjustable.

Bypass

EQ IN/OUT. This switch lets you make comparisons between EQ'd and Non EQ'd program.

Peak LED (or Clip or O/Load)

This will light up when the EQ circuitry is about to overload or distort. You may need to reduce the input level slightly, and increase the gain somewhere else after the EQ (usually on a compressor or the crossover) to compensate.

Sliders (or Faders)

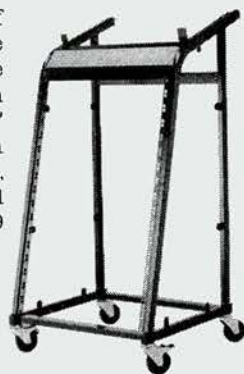
These cut or boost whatever frequency is marked on them, up to the maximum as determined by the Range switch (see Range above). Use them carefully; too much cut can make the sound 'dead', and too much boost can cause feedback ringing.

Master Level

This gives you overall level control of the signal, and can be a rotary knob or a fader. You can usually turn it right down to nothing, or very soft, and also turn it up, to +6 dB or more. This is useful if you have cut a lot of frequencies and then need to bring the overall level back up.

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Continued on page 34

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Brian Walton – Disco Factory/ Lightsounds

"...There is *nothing* that comes even close to matching the performance of the ART 500A from RCF. They've got it made..."



Peter Morris – Adelaide Sound Hire

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Drew Muirhead – DMC

"...You said they were going to be loud, but *that* loud! I hope they come with a warning, because they sure need one. They're awesome..."



HOW TO DO IT

LIVE SOUND MIXING - EQUALIZERS

Continued from page 32

Parametric Equalizers

What are they?

We've already talked about quasi-parametric EQ on the channels of the mixing console, but these also come as stand alone units.

On a parametric Equalizer you can control *all* the parameters - the frequency, the amount of cut or boost of that frequency, and the bandwidth (Q). Typically you can adjust the bandwidth from 3 octaves down to 1/20th octave. This means two things:

1. You can effect a broad frequency band cut or boost - all the Mids up a little, centred around a particular frequency, for example.
2. You can zero in on a required frequency more exactly than you could on a Graphic Equalizer. For example, if 2.8K is troublesome, you can just pull that frequency alone out. This is known as notch filtering.

A narrow Q, signified by the symbol $\wedge$, means the frequencies either side of the one being cut or boosted remain unaffected. Only the one you have chosen is changed.

A broader Q, signified by $\sim$ or $\cap$ means that the cut or boost is spread over a wider range of frequencies, centred around the one you've dialled up.

Some parametrics have 3, 4, 5 or 6 sections, each either dedicated to a range of frequencies or able to be used over any frequency range. You will often find parametric EQs in monitor systems, inserted on each

send, pulling out troublesome frequencies in the monitors.

How do you use one?

To find a frequency you want to lose on a parametric, set up about 6 dB of cut, set the Q (Bandwidth) on medium, and slowly sweep the frequency control around until you hear the problem frequency disappear. Fine tune the cut and the Q until **only** the problem frequency has been pulled out.

A parametric equalizer offers the most accurate degree of control over the sound, which is why you will find them used in the most demanding situations. They are not difficult to use, with practice. If you can come to grips with the sweepable mid range controls on mixing consoles, then there's no reason why you shouldn't be able to handle a parametric EQ.

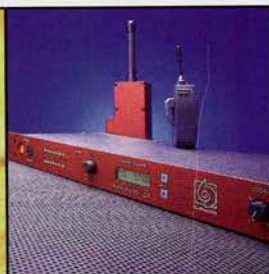
This is extracted from the top selling book: LIVE SOUND MIXING, by Duncan Fry. © D.R. Fry 1998. ISBN0 646 11235 X. Retail: \$39.00. Available from book stores and music shops everywhere, also through the Connections Shop, call 1-800-635-514.



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Write in Reader Service Number: 141

HOW TO DO IT

TOM MISNER'S PRACTICAL STUDIO TECHNIQUES

- PRACTICAL EFFECTS (Part 7)

Feedback Phase

This switch reverses the phase of the feedback signal. It is most noticeable on short delays of less than 10 ms, especially when using modulation (e.g. flanging and phasing effects). In-phase (positive) feedback creates a metallic sound, while reverse phase (negative) feedback creates a hollow sound.

PRACTICAL USES OF DDL

The following is a list of common effects which can be obtained using a digital delay. They are often available as presets programmed into the ROM (Read Only Memory) of most effect units.

Doubling

Doubling is a technique that combines original and delayed signals in order to make a single performer sound like two or more, or a small group sound larger. The sound of multiple performers differs from that of a single performer in a number of ways. The sounds of each performer will arrive at our ears at different times, from different directions, with different frequency balances and different amplitudes. There will also be slight pitch differences.

To create the doubling effect, use a single delay of less than 50 ms with no feedback. Panning the delayed signal to the center creates the standard doubling effect. Panning the signal to one side will simulate two performers. Mixing the delayed signal with a small amount of pitch shift will more naturally simulate a group of performers.

Doubling creates an increase in the apparent loudness of the signal, and is most effective with delay times less than 40 ms. Greater opportunities for doubling exist when you use two separate delays with independent control of their delay times. To maintain the tight doubling sound, the difference between the two delay times should not exceed 50 ms.

Doubling Using Tape Recorders

This is the traditional method of creating a delay by using a tape recorder with separate record and replay heads (i.e. a three head tape recorder). Before the introduction of digital delays, this was the only convenient form of delay available to the sound engineer. It is commonly referred to as tape delay.

A tape delay can be created by connecting an auxiliary send from the mixing console to the input of a standard three head tape recorder, and connecting the tape recorder's output back into the mixing console. The tape recorder is in record mode and monitoring off the replay head. Sounds are recorded onto tape at the record head's position, and replayed off tape a short time later from the replay heads.

The delay time is determined by the time it takes a point on the tape to travel from the record head to the replay head. The two factors to consider are the distance between the heads, and the tape speed.

The formula for calculating the exact delay time is:

$$T = (d/s) \times 1000$$

where:

T = is delay time (msec)

d = is the distance between heads (cm/sec)

s = is tape speed (cm/sec)

Tape delay is limited to the speeds available on the tape recorder, and the amount of varispeed. To save using too much tape, many engineers create a 'tape loop' by splicing together the ends of a short length of magnetic tape and letting it run continuously through the tape transport. Note that because there are no actual reels of tape, it may be necessary to 'fool' the tape recorder into operating, by using rubber bands (or similar systems) to maintain tension on the tension arms.

Early Reflection Enhancement

This is especially important for multitrack recording where most mi-

PRACTICAL INFO: Using room microphones

When using room microphones, compress them with a high compression ratio. The result will be a more natural sounding room without having to use external reverb units.

crophones have been placed close to the sound sources, resulting in signals composed mainly of direct sound and lacking early reflections and reverb. To recreate some early reflections, use a short cluster of delays - between 10 ms and 50 ms - panned left and right in the stereo mix. To create a more impressive effect, feed the signal into the delay set up and then to the reverb; this setting will use the reverb to enhance the early reflections.

Delayed Reverb Send

By inserting a DDL between the auxiliary output of the mixing console and the input of the reverb unit, we can increase the apparent size of the room by increasing the time interval between the direct sound and the first reflections. The DDL will act as a pre-delay, enhancing early reflections and allowing us to use a shorter reverb time.

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Write in Reader Service Number: 171

PRACTICAL STUDIO TECHNIQUES - PRACTICAL EFFECTS

Manual Flanging

This effect sounds like waves or a jet plane effect and is often used on the bass guitar. Flanging can give a sense of pitch to a complex unpitched sound. It also tends to smooth out sharp sounds such as cymbals and percussion.

Settings for DDL without a flange preset:

Initial Delay: Typically 3 ms to 5 ms.
Feedback: Around 50%.
Feedback Phase: Positive for metallic sound.
Negative for hollow sound.
Modulation Width: Minimum.
Modulation Speed: N/A
Output Mix: 50% dry, 50% effect.

Rotating Speaker Effect

An older sound made popular in the '60s by Leslie, the famous organ manufacturers. The listener hears reflected and direct sound in changing proportions.

Settings for rotating speaker effect:

Initial Delay: Around 12 ms.
Feedback: Minimum.
Feedback Phase: N/A
Modulation Width: Subtle, usually about 25%.
Modulation Speed: Fairly fast setting of 10 Hz.
Output Mix: 50% dry, 50% effect.

Slapback Echo

Similar to sounds heard on recordings from the '50s, when this effect was obtained using tape recorders as delays. Excellent on lead guitar.

Settings for slapback echo:

Initial Delay: Around 90 ms.
Feedback: Medium.
Feedback Phase: Positive.
Modulation Width: Minimum.
Modulation Speed: N/A
Output Mix: 60% dry, 40% effect.

Bathtub Reverb

A rather hard-sounding reverb, often compared to more simple spring reverbs. It is, however, quite intensive and is not easy to cover up in a mix. Best suited for electric instruments such as guitar, keyboards and bass.

Settings for bathtub reverb:

Initial Delay: Around 50 ms (or more).
Feedback: Maximum prior to 'runaway'.

Feedback Phase: Positive.
Modulation Width: Minimum.
Output Mix: 50% dry, 50% effect.

Chorus

Used to thicken and widen the sound. Especially popular on single instruments where the effect of many instruments is required. Also suitable for vocals.

Settings for chorus:

Initial Delay: Around 20 ms.
Feedback: Around 25%.
Feedback Phase: Positive.
Modulation Width: Around 15%.
Modulation Speed: Slow.
Output Mix: 50% dry, 50% effect.

RECORDING INFO: Microphone separation

Microphone separation can be achieved to placement of isolation walls known as gobos around the instrument or vocalist, and by choosing a polar pattern which has the most amount off-axis rejection. In some studios there are a number of different sounding rooms - the best possible isolation is achieved by putting each sound in a different room.

Psychoacoustic Imaging

This effect requires two DDLs and is suitable for sustained sounds and long drum fills. The sound tends to move between the speakers and to increase and decrease in level. It is very effective in headphones.

Settings for psychoacoustic imaging:

Initial Delay: One at 8 ms, the other at 20 ms.
Feedback: One at 20%, the other at 40%.
Feedback Phase: Negative.
Modulation Width: Around 20%; just noticeable.
Modulation Speed: Both at 1 Hz, one slightly offset.
Output Mix: 100% delay signal.

This is extracted from the top selling book: PRACTICAL STUDIO TECHNIQUES, by Tom Misner. ©Tom Misner 1988. ISBN0 646 16704 9
Retail: \$40.00. Available from book stores and music shops everywhere, also through the Connections Shop,
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Scientists tell us that our ears only have a short time in which they're at their peak. So why waste it?

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1. All analog circuitry (and proud of it!)

Instant access to all frequency bands, no nudge buttons, no hard to read LCD displays nor any one of a hundred things on most people's list of digital dislikes.

2. Smooth, well damped faders - with knobs on!

Hey, a lot of equalizers don't even have knobs, just the end of the fader poking through the front panel. Tacky and cheap.

3. So quiet that it doesn't need noise reduction built in.

Our theory is this. If you poke a signal into an equalizer, what comes out the other end should be exactly the same, minus anything you have changed. No extra noise, distortion or other unwanted stuff. The EQ60 is quiet and smooth enough for CD mastering,

and it has headroom and noise figures that digital EQs would cut off their left xxx for!

4. Constant Q filter design for true WYSIWYG performance.

When you pull down one fader 3dB on an EQ60, that's all you get. Just 3dB down on that fader. No interaction with other frequencies, no sudden phase changes, no nuthin'. That should make life a little easier, for a start.



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The EQ60's rigid U-channel extruded aluminium front panel resists flexing to a far greater degree than the thin punched aluminium sheet that most other EQ's use. The result? An EQ that works and works and works and works and works... At the 1997 Entech Awards, the ARX EQ60 was awarded the coveted "Most Popular Audio Product" award. Voted for by industry people

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www.conpub.com.au August '98

Switcheroo!

Hire operators need to watch for substitution

The packer came back weighing less than it did when loaded on the semi, something you would not ordinarily notice. Except I loaded it in the first place, and I have an inbuilt mental weight scale from years of doing this.

The two thirty metre three phase extension cables inside were still there, but somewhat shorter than thirty metres! Being a nice flexible black Olex cable, they were more valuable than the normal orange coloured ones, and it appeared that whilst on hire someone had cut ten metres from each and then rewired them to appear 'as usual'.

Inventory adjustment isn't limited to one kind of equipment either, I've seen entire devices turn up on hire return but clearly considerably older than the originally hired item. This is more un-usual, because hire equipment is almost always properly marked.

Lamp exchange was a problem in one of my rental companies when we had a replacement policy. For rentals on casual - not long term- rate, we would replace failed lamps. But the failure rate on casual rentals was higher than it should have been, even considering rough handling. When we started marking each lamp inside the fixture, we soon found failed lamps returning without our unique mark.

The perpetrators of much of this mischievous fraud were usually other rental companies, to whom we had cross hired equipment. Extra scrutiny was applied to these rentals, but we also had problems with institutions who seemed to occasionally try to improve their inventory at our expense.

Cable substitution is a hard one to beat, our microphone cables were generally all Canare with Neutrik connectors, so picking a substitution made in China was easy, but only if you

were certain that EVERY cable in the order was originally superior to start with. The substitute microphone cable situation became a drama when we somehow ended up with a few VERY similar cables but with the earth wired to the shell, causing no end of earth loops at one corporate gig.

Microphone substitution tended to happen regularly despite the identification being an engraved name on the side of the mic. We found to our horror that our old, clapped out micro-



Cartoon © Brett Bower

phones which had been sold off were returning to stock, as someone switched our new microphones on us!

With discharge lamps often worth more than one thousand dollars the need to manage use is essential. What is never a good idea is to let hirers know how long the lamp has left to run, because new lamps can then get changed for others with just a few hours life left. Marking the lamp is essential, we spray painted a logo on the lamp base.

More ominous is component substitution. I've recently heard of LCD panel substitution in some rental projectors.

The production and rental business is an exercise in margin management, with direct loss or shrinkage of inventory an immediate journey to a loss on the bottom line.

-Julius Grafton

X-Array PA rolls into stock

The concert and 'big' audio business is expanding across the region. E.V.'s X-Array PA series has been the winner in the period since our previous directory.

The X-Array fleet now numbers around 200 cabinets, with additional orders expected. The first system was delivered to Production Works in Hobart earlier this year, they have 40 cabinets with another 16 on order.

X-Array is now spread across the geography, with Wild Gravity in far north Queensland operating 48 cabinets. They have just purchased a 48' drop deck jumbo pantech to transport the system plus their ground support stage and lighting roof.

In Melbourne Powa Audio have 32 new boxes, and in Perth AAA Productions have 24. "They arrived just in time for Winter" laughs Neil Campbell. "We will get more when we ramp up for Summer".

In Auckland Barton Sound



Systems operate 32 boxes, driven by EV P3000 amps. Most of these firms offer Midas desks.

X-Array is notable for its choice last year by The Rolling Stones for their current world tour. The system is available as a range, with nearfill, long throw and other cabinet options.

Other rental firms are understood to be negotiating to buy X-Array, which could result in a network of independent rental companies offering X-Array across the region.

Such informal networks already exist with EAW and Meyer Sound. Turbo Sound are also represented in the region, but not as widely. **-JG**

Regional Roundup

Austage Sydney in the last six months have purchased a Barco 9200 Reality (6000 ansi-lumens) video projector, fast assuming market leadership in the Big Projector Business. A Mitsubishi 100e LCD projector, extra Extron interfaces, a Sony DSC1024G scan converter and an Atom 24 LX desk are all new. *Call Austage +61 2 9517 1599.*

Stagecraft (Melbourne) have a new Deuce Video Scaler and also have a serial digital output computer to video converter available, the Scan Do Pro/D. This is a broadcast standard unit and available now from their hire stock. They are also shortly bringing in a complete fibre optic system for presentations - the "Fibervision" which is manufactured by Communication Specialties (see our June issue). Stagecraft are the Australian distributor for Communications Specialties. *Stagecraft Corporate*

Theatre +61 3 9686 7770.

Cearhouse Lighting in Sydney have purchased 24 new High End System's Technobeams. *Cearhouse Lighting +61 2 9697 9500.*

Sex, drugs, rock & roll, 40 bands under the hot sun outdoors, all the beer you can drink, strippers, Jands Concord PA bins a blast from the past, right? No, just one gig last month for Top End Sounds, probably the most diverse of all rental firms in the world! River Rocks is on every year near Darwin. July and August are the best time to visit the north, the editor was there last month and can report that Top End do not only concert work, but also video and AV hire, installations & more. They also operate an Info TV network. *Call +61 8 8981-7744.*

> Continues on page 41

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Email: gwilli@ozemail.com.au
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Key Staff: Nick Nonas, Co/owner
Manager; Tommy Powell, Production
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Phone: (02) 6280 8777
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Email: sn@enternet.com.au
Key Staff: Stephen Nano, Director;
Norman Korte, Director; Dave

Bowron, Production Manager.

Sound Workshop

67 Wilshire Street,
DICKSON ACT 2602
Phone: (02) 6247 6203
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Email:
sound.workshop@interact.net.au
Key Staff: Tony Brighton, Director;
David O'Rourke, Production Manager;
Ben Brazier, Production Assistant.

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Dave Primmer, Product Manager;
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Key Staff: Steve Lowe, Production
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Fax: (02) 9362 8716
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Key Staff: Jane Rosback, Managing
Partner; Alex Bialocky, Director.

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Phone: (02) 4229 6010
Fax: (02) 4227 6644
Key Staff: Stuart Udy, Director; Tim
Vandenburgh, Director; Matt Penny,
Sales Manager

Feral Studio

24 Agnes Ave
QUEANBEYAN NSW 2620
Phone: (02) 6299 3224
Fax: (02) 6297 0244
Email: exhibita@cheerful.com
Key Staff: Jon Robertson, Owner/
Sound; Raylene Robertson, Owner;
Rhys Nesbit, L.D.

Fogg Productions, Ellis D.

PO Box One,
DARLINGHURST NSW 2010
Phone: (02) 9363 9122
Fax: (02) 9363 9201
Email: foggfx@tig.com.au
Web site address: fogg.com.au
Key Staff: Roger Foley, Designer; Anita
Freed, Yae Balls Director

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Fax: (02) 9661 7110
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www.jazz_r@maxi.net.au
Key Staff: Matt Donovan, Productions
Manager; Matt Cleary, Audio Service;
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Fax: (02) 9651 3217
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Web site address:
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Web site address:
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Manager; Daniel Monro, Hire Co-
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Regional Roundup (continues)

AVLA (Audio Visual Lighting Australia) of Perth have added a large inventory of Penn Box Truss - in fact they purchased the entire Penn Stand at Entech 98 - to add to their hire stock. Two new Seleco and Hantarex Video Walls have also been purchased. Lighting purchases include Martin MAC 500 moving heads and a Martin Case Desk. Recently appointed as Clay Paky dealers, AVLA have also added Clay Paky Mini Scan HPE's and VIP's to their hire stock.

Call AVLA +61 8 9221 1888.

BLM Production Services of

Sydney have purchased added Shure Beta87, and In Ear Monitors wireless systems. Extra Cerwin Vega PA speakers; and a Martin Audio EM15 System with subs. Added to that was 100 metres of Penn Fabrications ST250 Box Truss with corners, base plates etc for freestanding structures ... excellent for corporate displays of any size. New LX gear includes a Jands HOG 250 Console; Q Commander Console; and 24 more moving lights (Martin). + 61 2 9541 4888.

Stage Music in Cairns have added a 16 box EV DeltaMax PA system to inventory. The DMS 1183/64 PF 3 way cabinets are driven by EV P3000 amps; with EV T221M low profile foldback wedges; and a DDA CS8 40ch console. +61 7 4036-2419.

Showcorp recently moved into new premises at 32 Punch Street Artarmon, NSW and taken possession of a new Meyer PA, and Yamaha GA series 32 channel mixing console. They have just placed an order for new Clay Paky Stage Light 300 moving heads. Showcorp's new multi media video editing suite includes Media 100 software running on a Mac 9600 allowing full broadcast quality digital video from and to any source. They have just published "The Little Black Book Of Services" Call Showcorp +61 2 9966 9888.

AAA Production Services in WA put their new 24 box EV X-array system out on the Neil Finn tour, then going straight

onto the Regurgitator/Tism tour. +61 8 9317 2055.

Haycom Staging have the following new equipment on offer at all their offices. The Eiki Powerhouse One - released at INFOcomm '98 and featured in July Connections - is an XGA LCD Projector boasting 1500 lumens output with auxiliary lenses - "incredible images from data and video suitable for small to big screens". We agree, having seen it. New also: the Sony G-70 - "superbright CRT projector offering excellent video images"; Sony VPL S500M - SGA LCD projector (500 lumens ideal as a boardroom style projector)

Haycom also have three of the monster Hughes JVC ILA Projectors, giving 5000 lumens and 1200:1 contrast. Five different lenses allow for huge range in projection throws.

For interfacing there are MX-50 upgraded to Pro 50 Extron computer & video interfaces and switchers as well as Scando scanconverters.

New sound gear includes QSC Powerlite 1.0 amps; Allen & Heath GL3000 Desks; Mackie 1402 Desks; Rane Eq and Digital Delays.

Selecon luminaires; a Jands Digital Dimmer; and an Atom DMX Digital Desk add to the lighting equipment in stock. Call Haycom Staging +61 3 9529 3044.

Staging Connections new equipment includes four Barco 9200 Reality video projectors. They say the Barco Reality is judged by many to be the ultimate big-screen data projector. It's strengths are intense brightness and high resolution. The 1800 watt lamp delivers a light output of 6000 lumens - enough to deliver a maximum image size of up to 15 metres (50 feet) wide.

Staging have also added to their EV SX300 composite speaker box collection, which now numbers over 60 units. New SX 300's have gone into stock at the Hamilton Island, Brisbane, and Perth offices.

Other Staging Connections purchases include stocks of Martin Mac 500 moving lights in the Melbourne, Sydney and Cairns offices., and self-powered Meyer

(continued on page 44)



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Phone: (02) 9918 6668
Fax: (02) 9918 6668
Email: saltbush@spin.net.au
Key Staff: Alan Moran, Partner;
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Suite 13, 51 Spring Street,
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Phone: (02) 9386 9494
Fax: (02) 9386 9490
Email: techprod@intercoast.com.au
Web site address:
www.techprod@intercoast.com.au

Key Staff: Danny Yezerski, Managing Director; James Moran, Production Manager; Agostino Marcello, Production Manager.

tp EVENTS

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Web site address:
www.tpevents.com.au
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Phone: (02) 9580 4838
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www.blackexpress.com.au
Key Staff: Nick Megisidis, Hire Manager; Emilio Periera, Hire Co-ordinator; David Nikotera, Hire Co-ordinator

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Key Staff: Lee Clout, Manager

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Fax: (02) 9564 3734

Email:

premier@premierlighting.com.au

Key Staff: Philip Planer, Hire Manager.

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Key Staff: Geoffrey Grist, National Sales Manager; Rachel Akins, Sales; Tracey Wong, Sales.

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Email: codamail@coda_audio.com.au

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Key Staff: Bill Richardson, Managing Director; Michelle Richardson, Director/Administration; Gerry Wilkins, Director/Secretary

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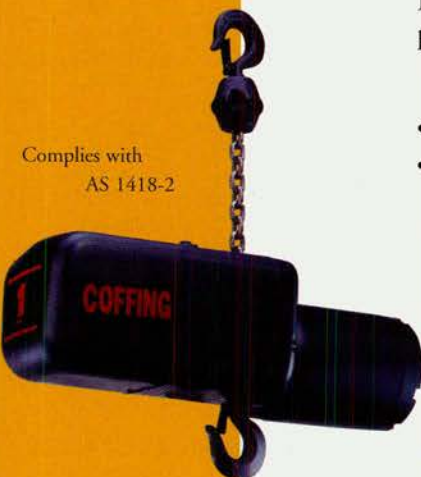
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Regional roundup

(continued from page 41)

UPA and MSL4 sound systems for its offices in Sydney, Melbourne, Cairns and Hamilton Island. The firm is about to move into its new 'super centre' headquarters in Sydney. We will check it out and report in Connections soon.

Call *Staging Connections* +61 2 9818 2555.

Multivision Australia has recently supplemented many areas of its equipment stock. Projection equipment purchase has included two Sony S500 LCD projectors. Multivision say they

are ideal for small to medium sized events and are easy to set up. This particular benefit has made them extremely popular with arts organisations who want something that is easy to line up and affordable for the long term hires that their seasons demand. Two Da-Lite 12' x 9' truss framed screens have also been added to stock, both with front and rear surfaces.

On the basis that you can never have enough drapes, Multivision have bought royal blue velvet drapes for a specific venue. The drapes will cover a back wall of 27 metres wide and a height of 7 metres. This will

offer their clients a different look for the same price as their blacks.

Also new: two Shure 900 mhz hand held radio microphones.

Traditional audio visual production such as 9 slide projector, 3-1 ratio modules, is far from dead. Multivision have been producing an increasing amount of these sequences as companies tire of the computer graphics and video options. To enhance this aspect of production they have harnessed DAT replay with other equipment to produce high quality audio output linked to the slide projectors.

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Key Staff: Matt Kirby, Technical Director; Tony Papp, Set & Environment; Sarah Campbell-Mackenzie, Operations Manager.

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Fax: (02) 9667 0299

Email: info@eurovision.com.au

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Manager Sydney; Alan Hay, Managing

Director Melbourne; Victor Ashelford,

Operations Manager Sydney.

Jazzright Production Services

Romani Parade,

MATRAVILLE NSW 2036

Phone: (02) 9311 1197

Fax: (02) 9661 7110

Web site address:

www.jazz_r@maxi.net.au

Key Staff: Matt Donovan, Productions

Operator; Matt Cleary, Audio Service;

John Perez, Corporate Consulting

Sound and Visual Innovators (SAVI)

5/108 Warrane Road

WILLOUGHBY NSW 2068

Phone: (02) 9417 4388

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Email: savi@zip.com.au

Key Staff: Harald Mueller, Senior

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Key Staff: Peter Helft, General Manager; Risto Durovski, Operations Manager.

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PO Box 5660
GOLD COAST MAIL CENTRE QLD
9726
Phone: 0418 985 369
Fax: (07) 5531 5880
Email: statik@technet2000.com.au
Key Staff: Terry Bassett: Director;
Marcus Rutherford, Managing
Director; Robert Dale, Technical
Director

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Fax: (07) 3379 4049

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5 Pidgeon Drive,
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Phone: (07) 3888 0222
Fax: (07) 3888 5967
Key Staff: Phillip Kay, Owner/Manager

Creative Lighting

105 Brunswick Street
FORTITUDE VALLEY QLD 4006
Phone: (07) 3252 5686
Fax: (07) 3252 4778
Email: hire@creativelight.com.au
Web site address:

www.creativelight.com
Key Staff: Steve Shannon, Hire
Executive; Chris Aston, Sales
Executive; Lance Stewart, Managing
Director

East Coast Lighting Pty Ltd

7 Allison Street,
BOWEN HILLS QLD 4006
Phone: (07) 3252 9198
Fax: (07) 3252 9604
Email: greg@eastcoastlighting.com
Web site address:
www.eastcoastlighting.com
Key Staff: Greg Hughes, Managing
Director; James Kenny, Hire/
Production Manager; Terry Sheather,
Administrator

Entertainment Lighting & Sound

30 Taree Street,
BURLEIGH JUNCTION QLD 4220
Phone: (07) 5593 5105
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Manager

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Email:
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Web site address: www.transtec.com.
Key Staff: Mark Stanford, Director;
Jason Terry, Director.

AUDIO

Acoustic Technologies

8-10 Staple Street,
SEVENTEEN MILE ROCKS QLD 4073
Phone: (07) 3376 4122
Fax: (07) 3376 5205
Email: info@acoustic-tech.com.au
Web site address: www.acoustic-
tech.com.au
Key Staff: Ean Redman, Hire Manager;
Dee Lloyd-Williams, Hire Administra-
tor; Dave Fitzherbert, Service Manager

Brisbane Sound Hire

36 Agnes Street,
FORTITUDE VALLEY QLD 4006
Phone: (07) 3252 4935
Fax: (07) 3252 7874
Key Staff: Alf Velm, Hire Manager

CPC Audio Pty Ltd

14 Short Street
BUNDAMBA QLD 4305
Phone: (07) 3816 1009
Fax: (07) 3816 1791
Key Staff: Murray Keidge, Director;
Tracey Keidge, Director; Eric Taylor,
Sales Manager

Entertainment Lighting & Sound

30 Taree Street,
BURLEIGH JUNCTION QLD 4220
Phone: (07) 5593 5105
Fax: (07) 5593 5161
Email: els@onthenet.com
Key Staff: Phil Stafford, Proprietor;
Greg Horrocks, Manager; Di Collins,
Admin Manager

Image Audio Productions Pty Ltd

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BROWNS PLAINS QLD 4118
Phone: (07) 3800 7742
Fax: (07) 3800 1847
Email: iap@quicknet.com.au
Key Staff: Benjamin Page, Managing
Director; Veronica Page, Business
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Web site address:
www.powerup.com.au/~daves
Key Staff: Dave Schafer, Manager

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66 Kitchener Street,
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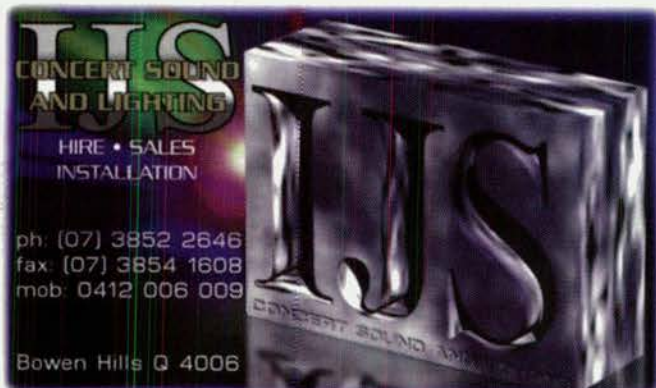
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Web site address: www.transtec.com.
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Phone: (07) 3357 9999
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Email: cavs@caribiner.com.au
Web site address:
www.caribiner.com.au
Key Staff: Wayne James, Staging Manager; Rod Dunbar, Technical Director; Mark Cheney, Technical Director.

Gearhouse Brisbane Pty Ltd



2/26 Bailey Street,
WEST END QLD 4101
Phone: (07) 3844 9171
Fax: (07) 3846 2054
Email:
brisbane.av@gearhouse.com.au
Web site address:
www.gearhouse.com.au
Key Staff: Stuart McEachern, Managing Director; Stephen McDonald, Operations Manager.
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Phone: (07) 4035 6522
Fax: (07) 4035 6511
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Fax: (07) 5570 3099
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Web site address:
www.gearhouse.com.au
Key Staff: Jenni Dobbie, Manager; Bruce Kemp, Operations Manager.
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Fax: (07) 3252 0222
Email: jennifer@robinwhite.com.au
Web site address:
www.robinwhite.com.au
Key Staff: Jennifer Rylance, Managing Director; Tim Rylance, Managing Director; Adam Ross, Technical Co-ordinator
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Phone: (07) 3357 9999
Fax: (07) 3357 8888
Email: thecrew@stagecraft.com.au
Key Staff: Herbert Vandaalen, Staging Director; Chris Green, Sales Director; Wayne James, Staging Manager

Staging Connections (Brisbane)

6 Sneyd Street,
BOWEN HILLS QLD 4006
Phone: (07) 3252 9333
Fax: (07) 3252 4674
Email: ggay
@stagingconnections.com.au
Web site address:
www.stagingconnections.com.au
Key Staff: Michael Bosworth, General Manager; Jane Timmins, Stock Controller

Staging Connections (Cairns)

4/275 McCormack Street
MANUNDA QLD 4870
Phone: (07) 4032 2553
Fax: (07) 4032 2344
Email:
phassall@stagingconnections.com.au
Web site address:
www.stagingconnections.com.au
Key Staff: Dior Yarwood, Assistant General Manager; Paul Whitby, Technical Director; Kevin Savage, Operations Manager

Staging Connections (Gold Coast) Pty Ltd

19 Northview Street,
MERMAID BEACH QLD 4218
Phone: (07) 5526 0500
Fax: (07) 5572 3355
Email:
scgold@stagingconnections.com.au
Web site address:
www.stagingconnections.com.au
Key Staff: Michael Curran, Operations; Tina Thornburgh, Customer Development; Reiner Schuhle, General Manager

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Email: justin@winshop.com.au
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www.winshop.com.au/justin/
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334 Port Road,
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Fax: (08) 8340 4177
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production@osmondelectronics.com
Web site address:
www.osmondelectronics.com
Key Staff: John Murdoch, Manager; Darren Boughton, Production Manager; George Psorakis, Managing Director

Pro Co Stage Sound Whyalla

1/77 Essington Lewis Ave
WHYALLA SA 5600
Phone: (08) 8644 0211
Fax: (08) 8644 0233
Key Staff: Ron Hay, Proprietor; Irene Palmer, Office Manager/Lighting

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Key Staff: Ian Linton, Manager; Sue Linton, Assistant Manager

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Adelaide Sound Hire
18 Martindale Ave
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Phone: 014 096 682
Fax: (08) 8331 9605
Email: Adlsound@Camtech.net.au
Key Staff: Peter Morris, Manager; Peter Lambe

AV & STAGING

Gearhouse Adelaide Pty Ltd



15 Grove Street,
MARLESTON SA 5033
Phone: (08) 8293 8155
Fax: (08) 8293 8163
Email: adelaide.av@gearhouse.com.au
Web site address:
www.gearhouse.com.au
Key Staff: Jerry Kushnir, Managing Director; Gavin McElroy, Operations Manager; Michael Rhodda, Sales Manager.
Gearhouse- A National Audio Visual Staging company carrying in stock the largest inventory of specialist audio visual products available in Australia including cubewalls, big screen video projection and data projection systems, portable video production systems and a large inventory of audio visual equipment for conferences and exhibitions. Gearhouse has offices in Adelaide, Brisbane, Cairns, Gold Coast, Melbourne, Perth and Sydney, plus a number of in-house offices in hotels and convention centres around Australia.

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82 Leader Street,
FORESTVILLE SA 5035
Phone: (08) 8371 1948
Fax: (08) 8371 1486
Email: events@multivision.com.au
Web site address:
www.multivision.com.au
Key Staff: Craig Williams, Operations Manager; Richard Creasy, Managing Director; Richard Watson, Events Manager.

Staging Connections
59 King William Street,
KENT TOWN SA 5097
Phone: (08) 8363 1006
Fax: (08) 8363 1402
Email:
dbiar@stagingconnections.com.au

Web site address:
www.stagingconnections.com.au
Key Staff: Dave Biar, General Manager; Dean Lewis, Technical Director; Bronte Rhodes, Account Manager.

Western Australia

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19 Regal Place
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Fax: (08) 9221 1444
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Phone: (08) 9478 5678
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Fax: (08) 9309 6219
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Stage and Studio WA Pty Ltd
6 Cleaver Street,
WEST PERTH WA 6005
Phone: (08) 9227 9932
Fax: (08) 9227 9347
Email: ssp@crystal.com.au
Key Staff: David Cook, Managing Director; Kris VanderPlas, Production Manager; Graeme Robson, Hire Manager.

Theatrecrafts

468 Newcastle Street,
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Phone: (08) 9227 7015
Fax: (08) 9328 2787
Email: nie@wanews.com.au
Key Staff: Patrick, Manager; Lynne, Accounts; Berni, Tech

LIGHTING

Lighting Workshop Perth
408 Newcastle Street,
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Phone: (08) 9227 1221
Fax: (08) 9227 1242
Email: workshop@inf.net.au
Web site address:
www.inf.net.au-workshop
Key Staff: Mr Brian Anslow, Mr Mike Bird, Mr Tony Turrer.

AUDIO

AAA Productions
44B McCay Street,
MYAREE WA 6154
Phone: (08) 9317 2055
Fax: (08) 9317 1566
Email: aaa@netwox.net.au
Key Staff: Simon Hunt, Director; Neil Campbell, Director; Kristy McGrath, Executive Officer.

Audex Concert Sound Pty Ltd
251 James Street
NORTHBRIDGE WA 6003
Phone: (08) 9328 3188
Fax: (08) 9227 7161
Key Staff: Ray Godfrey, Operations Manager

Phase 1 Audio
286 Aberdeen Street
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Email: phaseone@opera.iinet.net.au
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Client Services; Stephen Smith, Client Services; Scott Goodby, Client Services

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Fax: (08) 9478 5679
Email: events@corptheatre.com.au
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Phone: (08) 9221 3700
Fax: (08) 9221 3870
Email: perth.av@gearhouse.com.au
Web site address:
www.gearhouse.com.au
Key Staff: Basil Fuller, Manager
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Phone: (08) 9221 2222
Fax: (08) 9221 2251
Email: perthav@perthav.com.au
Key Staff: Peter Blewitt, Director; Brad Haines, Technical Director; Mark Williams, Hire Manager

OTHER

Soundworks Rehearsal Studio PA & Equipment Hire
8 James Street
BAYSWATER WA 6053
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89 Mersey Main Road,
SPREYTON TAS 7310
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Mobile: 0417 325 617
Fax: (03) 6427 0696
Key Staff: Michael Westcott, Manager

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Soundfix Audio Production

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Phone: (03) 6425 5989
Fax: (03) 6425 5989
Key Staff: Greg Dunham, Owner/
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54 Arthur Street
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Phone: 0419 368 675
Fax: (03) 6435 0885
Key Staff: Jamie Howell, Proprietor

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Phone: (03) 6229 7510
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Email:
tbanfield@stagingconnections.com.au
Key Staff: Tim Banfield, General
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Manager; Adam Cox

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STUART PARK NT 0820
Phone: (08) 8981 7744
Fax: (08) 8981 7525
Email: tes@topendsounds.com.au
Web site address:
www.topendsounds.com.au
Key Staff: Colin West, Director; Kerrie
Alterator, Administration

Alice Concert Sound

180 Kurrajong Drive
ALICE SPRINGS NT 0870
Phone: 0417 815 673
Fax: (08) 8953 5415
Key Staff: Tim Upward, General
Manager

OTHER

Alice Concert Sound

180 Kurrajong Drive
ALICE SPRINGS NT 0870
Phone: 0417 815 673
Fax: (08) 8953 5415
Staff: Tim Upward, General Manager

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COMPLETE PRODUCTION CO.

Accent On Production

12 Kingsley Street
LOWER HUTT,
New Zealand
Phone: +64 4 563 6486
Fax: +64 4 563 6486
Email: howardanderson@xtra.co.nz
Key Staff: Howard Anderson,
Managing Director; Vicki Anderson,
Production Assistant

Metro Productions Ltd

3 Tennyson Street,
WELLINGTON
New Zealand
Phone: +64 4 384 1531
Fax: +64 4 384 1631
Email: metro@xtra.co.nz
Key Staff: Mike Conroy, Operations
Manager; Neill Bryce, Customer
Services; Carsten Smits, Customer
Services.

Robert Barclay Limited

19 Old Mill Road,
GREY LYNN, AUCKLAND
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Phone: +64 9 376 6846
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Email: rbcueltd@ihug.co.nz
Key Staff: Paul Ashby, Production
Assistant

The Sound Crew

474 Palmerston Road
GISBORNE
New Zealand
Phone: +64 6 867 1769
Fax: +64 6 868 8759
Email: TWWONP.GIS@xtra.co.nz
Key Staff: Boss Katipa, Engineer;
Stuart Blank, Engineer

LIGHTING

Kenderdine Electrical Ltd

8 Burrett Ave,
Penrose, AUCKLAND
New Zealand
Phone: +64 9 525 2200
Fax: +64 9 525 2233
Email: ccrmck@ihug.co.nz
Key Staff: Chris McKenzie, Sales;
Peter (Zeb) Mansell, Rental Manager.
Lighting Rental, Sales. Full Production
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1220, Disco. Shakespeares, Source 4,
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Key Staff: Mike Conroy, Operations
Manager; Neill Bryce, Customer
Services; Carsten Smits, Customer
Services.

Oceania Audio & Lighting

9/16-18 Taylors Road,

AUCKLAND

New Zealand
Phone: +64 9 849 3114
Fax: +64 9 849 3307
Email: hire@oceania-audio.co.nz
Key Staff: Greg Peacocke, Director;
Paul Jeffery, Technical Director; Mike
Smeaton, Senior Engineer.

Professional Lighting Services Ltd

8 Burrett Ave,
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New Zealand
Phone: +64 9 525 2200
Fax: +64 9 525 2233
Email: ccrmck@ihug.co.nz
Key Staff: Chris McKenzie, Sales;
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members.xoom.com/prosound
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Phone: +64 9 849 3114
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Next HIRE & PRODUCTION
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FRY



Legless in Seattle

(Actually nothing to do with Seattle at all - just legless!)

By Duncan R Fry

Alcohol is the universal social lubricant. In most circles it is more socially acceptable than giggle cigarettes, and when taken in moderation it performs a myriad of tasks - breaks the ice, loosens up inhibitions, makes people more friendly, more inclined to socialise, better looking (He/she's looking better with every beer!) that sort of thing. Increase the dosage and things get quite different; people end up doing things that they would never do when sober.

Add music into the equation and the effect increases exponentially. For most pubs music is an integral part of the beer delivery system, a way to make more people drink more of it. Personally, I was always careful not to drink at all at the gig if I had to drive home that night. However sympathetic a cop might be, they would certainly took a very dim view of driving a fully loaded 7 tonne truck around when you yourself had a few drinks onboard!

Some years ago I did a private gig at the Myrtleford Fire station in North East Victoria. One thing you can say about country people is they sure know how to enjoy themselves. And enjoying themselves usually involves downing about a week's worth of CUB's total output.

The band was happily playing their little hearts out, the guests were hoping and bopping away, when at about 11 o'clock one of the organisers dashed on stage, a look of consternation on his face. The band ground to a halt as he grabbed the microphone.

"Shit - the beer's run out!" he yelled.

There was a collective gasp from the audience, as everyone immediately became more protective of what little they had left in their glasses.

While urgent reinforcements were being sent for, two young desperates couldn't wait any longer. After draining the contents of the drip tray under the tap, purple dye and

all, they went looking for more. Their eyes settled upon the long drip cloth laid out along the top of the bar. They grabbed it between them, complete with cigarette ash, peanut shells, dribbles of any other drinks that had been spilled, rolled it up tightly and managed to squeeze two pots worth of a lumpy grey mixture out of it.

And then they drank the murky mess!

Of course, country folk don't have a monopoly on shedding inhibitions with copious amounts of alcohol. Nat Prick, 80's disco supplier to the rich and fatuous, got me to do a home disco gig with him once, at a house in oh-so-trendy Brighton, to christen their new swimming pool. I must have been particularly hard up for work, because these sort of functions would normally bore the living crap out of me, but a dollar was a dollar. And I would get well fed!

It was a warm summer night, and the party was to be held outside since the weather was so good. Now at a pool christening party you'd expect that things would get a little wet, so I was careful to set everything up well clear of any flying water. Nat's revolutionary ideas of earthing consisted of disconnecting wires until the hum stopped, so I always tried to keep well away from him while he was working his console. Perhaps electric shocks were his way of dissuading people from requesting tunes! You could imagine some drunk leaning on his disco setup - "Hey pal, can you play Zzzzzapp!" But this night no one had reeled back from the console, smoking from the ears, and the Brighton glitterati frolicked around the pool getting steadily more and more pickled, until 'Splash' - the inevitable happened. The hostess was thrown into the pool, fully clothed, closely followed by the host in his tuxedo.

"Aah, my boots, not my new boots," screamed the hostess, leaping straight out again. She slid a pair of knee length leather boots off, poured the water out of them, carefully dried them with a towel and put them safely away. Then she jumped back into the pool again. Pretty soon everyone was being thrown into the pool, willingly or otherwise.

Climbing out again a few minutes later to get another drink, the hostess proceeded to peel off her wet clothes and run around totally nude in the warm night air! Not to be outdone, pretty soon the rest of the women did the same. I think some of the guys stripped off as well, but I'm afraid those images aren't burned into my retinas anywhere near as strongly!

The night turned out to be not quite so boring as we had both anticipated! A bunch of rich good looking women with perfect tans and the best bodies that their husbands' money could buy running around naked? Hmm - there's got to be worse ways of spending an evening!

The things you see when you don't have a camera - Nat Prick and I could have both retired in luxury on those negatives.

Studio News

◆ Producer **Andrew Klippel** has finished vocal recording vocals at Tiger Recording Studios (North Sydney) for the new Human Nature album. Klippel and Engineer **David Hemming** has sung the praises of the facility for a story appearing next month in Connections. The cool thing is that of one of Sydney's leading advertising recording studios is being used for music recording - and Klippel has since recorded with CBD at Tiger. Who says the Australian Music Industry is dead?

◆ An SSL 4000G+ is to be installed at the **Australian Institute of Music's** Q Recording Studio in East Sydney. This is the former site of Rhinoceros Recording.

◆ **Rocking Horse Studios** in Byron Bay have upgraded studio B to ProTools 24. They have also overhauled their 48 channel Neve V-Series console. Their new studio manager is Jo Soledad-Flynn. Call 0418-235-394.

◆ **Rowland Productions** (South Melbourne) is the first studio in Australia to install an Eventide DSP-4500 ultra harmonizer effector. "The scope it gives you is incredible", said John Rowland, who first saw it demo'd at NAB in Las Vegas. "It has much the same impact on audio sweetening as FLAME has had on video production. It has over 1,000 different sounds. With increased demand for 'sound design' in tracks lately, it will be invaluable!" Call +61 3 9699-8399.

◆ **Roam Around Sound** (Sydney) is a 16 track mobile recording studio using Tascam DA-38 20 bit MDM recorders. They have been busy lately, having made three compilations at various venues, and several cool demo projects in people's homes. Evan Manning even had his blues guitar recorded in his bathroom. Call RAS on +61 2 9810-8121.

The Connections Studio, Audio Post and Replication directory is coming in our November issue!

BE IN IT!

Call Nicole on 1-800-635-514 for listing information. Deadline September 30th.

CONNECTIONS SHOP



NEW! MOBILE DJ HANDBOOK \$45

By Stacy Zemon. Want to be successful as the owner-operator of a mobile DJ service? Read this book! Written for both the newcomer and the experienced DJ, the book contains helpful tips, advice and ideas on how to develop and expand your business, covering marketing, bookings, buying equipment and music, and running parties and dances. 170 pgs. 1997.

NEW! STAGE LX CONTROLS \$89

By Ulf Sandstrom. Gives an historical overview of the evolution of control systems, then explains the general principles of modern computerised lighting consoles and the relevant control standards such as DMX512, MIDI and Ethernet. Also covers the basic aspects of controlling moving lights and scrollers, with profiles of ten major manufacturers. 215 pgs. 1997.

Stage Lighting Controls



THE AUDIO WORKSTATION HANDBOOK

By Francis Rumsey. Contains vital information on MIDI control and computer standards, audio workstation principles, computer soundcards, storage devices, files transfer and networking, audio interfaces and digital video. 284 pgs. 1996.

MIDI SYSTEMS & CONTROL

By Francis Rumsey. 2nd Edition. Covers MIDI control principles and how they can be implemented in practical systems. Deals with MIDI in studio, musical and lighting equipment, mixer automation plus information on the latest additions to the MIDI spec. 202 pgs. 1994.

PRACTICAL STUDIO TECHNIQUES

By Tom Misner. Includes a bonus CD, a practical demonstration of a complete mixdown session including setting up effects, uses of the compressor, gating of sound, various types of equalisation, selecting reverb settings & more. 102 pgs. 1994.

SOUND & MUSIC FOR THEATRE

By Kaye & LeBrecht. Covers the complete process of sound design from original concept through to finished plan. Looks at development, research, cues, recording and various techniques. 196 pgs. 1992.

\$75 LIGHTING THE STAGE

By Francis Reid. This book contains tips and pointers which will stimulate all those concerned with using designed light on stage. Ideal for directors, choreographers, set designers, costume designers, stage managers and specialist technicians. 114 pgs. 1995.

STAGE LIGHTING HANDBOOK

By Francis Reid. 5th edition addresses recent advances in lighting technology. In 1974, Connections editor Julius Grafton read the first version of this book and successfully lit a professional stage play. Widely accepted as the standard work on the subject. 224 pgs. 1996.

PROFESSIONAL LX HANDBOOK

By Verne & Sylvia E. Carlson. Details technical foundations, equipment and methods of lighting for film and video productions. Packed with practical insights, tips and troubleshooting techniques useful on the set. 224 pgs. 1991.

CONCERT LIGHTING

By James Moody. 2nd Edition covers every aspect of rock & roll concert lighting equipment and techniques, including CAD, moving lights, hi-bred consoles, rigging safety and special effects. 279 pgs. 1998. WAS \$94

\$40 PROJECTION FOR THE PERFORMING ARTS

By Graham Walne. Gives a brief historical overview of early projection attempts, then looks at equipment and the planning and design of every kind of indoor and outdoor live performance. 139 pgs. 1995.

CONCERT TOUR PRODUCTION MANAGEMENT

By John Vasey. Provides basic information needed to manage the production of a touring concert from start to finish. Discusses different types of venues, who's who on the road, crew management, riders, contracts, and even electrical formulae! 165 pgs. 1998.

MODERN RECORDING TECHNIQUES

By Huber & Runstein. Addresses the area of project studio recording, the new base of home music production, using multitrack, Hard Disk and MIDI technologies. Descriptions of the toys, tools and practices of music recording and production. 4th ed. 500 pgs. 1995.

LIVE SOUND MIXING

By Duncan Fry. 3rd Edition addresses the basics on how a PA system works, and details on troubleshooting when it doesn't. Covers EQ, processing, mixing, sound-checks, effects, monitors. 176 pgs. 1997.

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OTHER BOOK TITLES:

BASICS OF VIDEO LIGHTING Des Lyver/Graham Swainson	\$35.00
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BASF National Tracking Guide

ARTIST	PRODUCER	ENGINEER	PROJECT	ARTIST	PRODUCER	ENGINEER	PROJECT
New South Wales							
@ Fx Robert Searls (02) 9555 6603 Post				Yung	Artist	Guy Saminaden	Demo
Holden Commercial	Robert Searls	Robert Searls	Commercial	Guinn Ragel	David McMillan	Ralph Esther	Album
Stollis TV Commercial	Leo Burnetts (Agency)	R.Searls	TV Commercial	C.O.D.	Band	Ralph Esther	Demo
Kids Ward	Channel 7	R.Searls	Channel 7	Barclays Bank	Ralph Esther	Mike Ward	Voice over
Meta Music	Grey Adv.	R.Searls	TV Commercial	Satill & Miller	Ralph Esther	Mike Ward	Voice over
A# Sharp Studio Jeff Cripps (02) 9153 9988. 24 Track 1"				Lucinda St Recordings Rick Mostyn (02) 4225 2272 8 Trk Digital			
Ray Beadce	Jeff Cripps	Jeff Cripps	CD	Philip Entremont	Rick Mostyn	Rick Mostyn	Re-mastering an Album to CD
Rumblefish	Jeff Cripps	Jeff Cripps	CD	Megaphon Studios Guy Dickerson (02) 9550 6576 24 Trk Analog & DA-88 digital 40 channel console			
Ken Davis	Jeff Cripps	Jeff Cripps	Christian CD	Crow	Peter Fenton	Daniel Denholm	Soundtrack Songs
The Swing Team	Jeff Cripps	Jeff Cripps	Country CD	Alienchrist	Guy Dickerson	Guy Dickerson	Album Mixes
Albert Studios Leesa (02) 9953 2544 48 Track Analog & Digital Studios				Jack Lord	Band/Jason Blackwell	Jason Blackwell	Album Mixes
Utopian Babies	Dave Wilkins	Craig Portiels	CD Release	Azeruz	Chris Abrahams/Shane Fahey	Album Tracks	
The Wiggles	Band	Chris Brooks		Lime	Mark Thomas/Band	Mark Thomas	Album Tracks
Lime	Mark Thomas	Mark Thomas	Forthcoming EP	Nu-Town Studio Greg Hopping (02) 9516 3306 Synths & Effects, 16Trk Ana, Midi, Tac Console			
Jack Lord	Matthew Fitzgerald	Jason Blackwell		Shield	Greg Hopping	Greg/Sophie/Mark	Album
Aphek Studio Greg Dixon (02) 9876 8170 16 Trks to 1" Analogue				Navigator	Greg Hopping	Greg/Sophie	Album
Woo Hoo	Adam Kendall	Greg Dixon	Demo	Daydream	Band	Mark Worrall	Single
Logosdor	Libby Hume	Greg Dixon	Single	Lisa Wass	Greg Hopping	Sophie Loizou	Single
Purple Haze	Band	Greg Dixon	Demo	Ari	Sophie Loizou	Sophie Loizou	Demo
MTO	Mark Zangeneh	Greg Dixon	EP	The Necessary Blonthe	Mark Worrall	Mark Worrall	Single
Stephen Tonge	Artist/Greg Dixon	Greg Dixon	Demo	Paul Bryant Mastering Paul Bryant (02) 9748 0222. Mastering Suite			
Charing Cross Studio David Sykes (02) 9387 8362 24 Trk Automated Neve Analogue				Shaza Leigh	Lindsay Butler	Paul Bryant	CD Album
Penny Flanagan	Tim Powels	Tim Powels/Chris Campbell	Album Mixing	Rubysting	Tim Roebuck	Paul Bryant	CD Album
Gerling	Steve Foster	Steve Foster	Album Mixing	Butane	Rob Specogna	Paul Bryant	CD Master
Nic Dalton/Juliana Hatfield	Nic Dalton/Peter Jones	Nic Dalton/Peter Jones	Tracking	Ian Stephen	Artist	Paul Bryant	CD Album
Merte Gratis	Paul McKercher	Paul McKercher	Track/Mix Album	The Hoity Toits	Jeff Cripps	Paul Bryant	CD Album
Atticus	Jordan Bach/Band	Jordan Bach/Band	Track/Mix EP	Songsalve 2	Roxanne Paladin	Paul Bryant	CD Compilation
Dumpster	Greg Wales	Greg Wales	Track/Mix Album	Rawdemos Studios Kevin Ballard (02) 6557 0667 16 Trk Digital/CD Burning			
Crystal Clear Studios Dave Tozer (02) 9684 1152 24 Trk ADATS Amek, Big Automated 32 Channel console				Peter Burton	Kevin Ballard	Kevin Ballard	Album Tracks
Ventolin	Dave Tozer/Band	Dave Tozer	Fat Cat Album Track	Weeve	Band	Kevin/Donna Ballard	EP Tracks
Unprovoked Assault	Dave Tozer	Dave Tozer	Fat Cat Album Track	Roam Around Sound Angus Kingston (02) 9810 8121 Mobile Recording Studio. 16 Trk Digital			
Battlecat	Dave Tozer	Dave Tozer	Fat Cat Album Track	The Lucksmiths	Kingston/Band	Angus Kingston	7" Singles for US Release
Scheiders Ape	Dave Tozer	Dave Tozer	Fat Cat Album Track	Candle Records	Chris Crouch	Angus Kingston	Compilation Album
Lowdown	Dave Tozer	Dave Tozer	Fat Cat Album Track	Pulling on the Boots	Gary Moreman	Angus Kingston	Live Punk/Ska comp Album
Cherish	Dave Tozer/Band	Dave Tozer	Fat Cat Album Track	Young Circus	Young Circus	J.Carter/A.Kaub	Musicians Retreat Album
Damien Gerard Marshall Cullen (02) 9660 8776. Recording Studios				Venus in Furs	Band	Angus Kingston	EP
Not for You	Scott Harper	Scott Harper	EP	Twelve 24	Band	Angus Kingston	Demos
Telstra	Brett Hamilton	Simon Pickworth	Educational Tapes	Rockinghorse Zubin Hermer (02) 6688 4005 Music Recording, Mixing and Mastering			
Bush Punk Cowboys	Band	Rudy/Simon Pickworth	Album	Budd	Paul Martin	Andrew Horne/Zubin Henner	Album Mixing
Klan Zenith	Band	Russell Pilling	EP	Budd	Paul Martin	Zubin Henner	Mastering
Crumpet	Band	Russell Pilling	Album	DJ Prawn & Spanner Boy	Christian Pyle/Anthony Lycenko	Anthony Lycenko	Album Tracking
Diane Diaz	Jamie Carter	Jamie Carter	Demos	Seven	Zubin Henner/Band	Jo Soledad-Flynn	Mixing
Darling Harbour Studios Ike (02) 9211 1474. 24Trk MCI 32 Channel Sound Workshop				Mumfets	Mumfets	Michael Worthington	Tracking
Dog Star	Keanu Reeves/Ike	Ike	Demo's	Snitch	Band	Michael Worthington	Mastering
Majher	Band	Frazer	EP	Sound Level John Soane (02) 9552 3200. 24 Track Digital			
Lachlan & Craig	Band	Tim Newson	Demo's	John Holland		John Soane	Demos
Zeitquest	Ike	Ike	Mixing	Luna Sea Boat People		Ian Perdie	Album
Swirl	Band	Frazer	Demo's	Dave Tice		John Bee	Album
Fried	Band	Ike	Demo's	Brendon Gallagher		Brendon Gallagher	Demos
David Hinds Recording Studios David & Lyn Hinds (02) 6581 1235 16 Trk Digital				Roddy Baird		Hugh Wilson	Album
Balance	David & Lyn Hinds	David & Lyn Hinds	Album Tracks	Ceelfish		Sean Lowry	Demos
Radio 2MC/Rox FM	David & Lyn Hinds	David & Lyn Hinds	Commercial Dubs	Soundwarp Meredith Brooks (02) 9905 7144 Mastering			
Electric Avenue Phil Punch (02) 9680 0385 24 Trk Music Studio				Meem	Michael	Meredith Brooks	Double Album
Cold Chisel	Band	Kalju Tonuma	Album	Various	Tony Grose	Meredith Brooks	Album
Midnight Oil	Warne Livesy	Warne Livesy	Album	Aust. Gaelic Singers	Caralie Joyce	Meredith Brooks	Album
Slim Dusty	Rod Coe	Phil Punch	Album	Dead Cells	Adrian	Meredith Brooks	Mini Album
Ed Kuepper	Punch/Artist	Phil Punch	Album Tracking	Marilane	Marilane/Mark Balfour	Meredith Brooks	Album
Glen Bidmead	Charles Fisher	Phil Punch	Album	Element	Jamie	Meredith Brooks	EP
The Flood	Band	Phil Punch	Album Mix	Studios 301 P/L Fiona Simpson (02) 9211 7301 24 Trk & 32 Trk Machines			
Festival Mastering Bianca Vukelic (02) 9395 8070 Mastering				Universe	Susan Rogers	Susan Rogers	Album Mixes
Waldo Fabian		William Bowden	Album	Alex Lloyd	Alex Lloyd/Trent Williamson	Trent Williamson	Album Mixes
Compilation	Nic Dalton	William Bowden	Album	Tania Kernaghan	Garth Porter	Ted Howard	Album Mixes
Josh Abrahams		William Bowden	Album	Utopian Babes	Chris Portiels	Craig Portiels	Album Mixes
Penny Flanagan	Tim Powles	William Bowden	Single "Thrillseeker"	Studios 301 P/L Mastering Jacqui Espie (02) 9211 7301 CD Mastering Facility			
The Church	Tim Powles	William Bowden	Album	Finiscad	Paul McKercher	Steve Smart	New Album
Mental As Anything		William Bowden	Album	The Cruel Sea	Phil McKellar/Daniel Denholm	Steve Smart	New Album
Festival Studios Bianca Vukelic (02) 9395 8070 Recording				Tania Kernaghan	Garth Porter	Steve Smart/David Macquarie	New Album
Carla Werner	Mark Thomas	Mark Thomas	Album	Happyland	Band	Don Bartley	Debut Album
Gadflys	Phil Moriarty	Mark Thomas/Matt Lovell	Album	Not from There	Magoo	Don Bartley	Album
Tumbleweed	Phil McKellar	Assistant Matt Lovell	Album	The Angels	Band	Don Bartley	Remaster "Life Line" Album
silverchair	Nick Launay	Nic Launay/Matt Lovell	Album	Velvet Sound Recording Studios Dave McCunn (02) 9283 5968 Automated 32Ch. 24Trk. 2"			
Hullabaloo Glenn Heaton (02) 9906 2933 24 Trk Analogue, 2 x 32 Trk Digital				Screamfeeder	Martin/Band	Martin White	Single
Strum	Heaton/McGarvey	Daniel Bowers	Album, Pre-prod	White Trash Orchestra	Andy	Tony Wall	Album Tracking
Heaton/McGarvey	Heaton/McGarvey	Daniel Bowers	Battle of Sexes Theme	Minq	Adrian/Band	Adrian Grigorieff	Album Tracking
Heaton/McGarvey	Heaton/McGarvey	Daniel Bowers	Help Desk Corporate Song	James Blundell	Greg/James	Greg Harris	QBE Commercial
Claire Gabriel	Artist/Heaton/McGarvey	Daniel Bowers	Demos	Universe	Steve Balbi	Tony Wall	Album Tracking
Igloo Paula (02) 4927 6822 16 Trk Analogue				Montana	Paul Scott	Tony Wall	Album Tracking
Centre for Disease Control	Chris Davies/Dave Romeo	Chris Davies	EP	Queensland			
Twin Psyche	Chris Davies	Chris Davies	Demon	Digital Paradise Ian Peters (07) 5527 0722 32 Trk Music/Jingles/TV Audio			
Shank's	Craig Foster	Craig Foster	Album	Yas	Ian Peters	Ian Peters	4 Trk CD
Mischling	Craig Foster	Craig Foster	EP	Lee Conway	Lee Conway	Ian Peters	Nissan Commercial
Glad	Andrew McAlister	Andrew McAlister	EP	David & Simon	David/Simon/Ian Peters	Ian Peters	7 Track Demo CD
So Ya Bean Fudge	Chris Davies	Chris Davies	Demo	Banana Benders	Jim Catt/Ian Peters	I. Peters/B. Pearson	Large Male Choir Album
Infinity Digital James Novak (02) 9672 3513 ProTools, HUI, Focusrite, MIDI				Gerry Dowling	Gerry Dowling	Barry Pearson	Corporate Video Sound Tracks
Australia's Wonderland	Stefan Nowak	James Novak	Soundtrack	Deborah Minter	Ian Peters	Ian Peters	15 Trk full budget Album
Cartoon Network Dubai	Nick Larkin	James Novak	Soundtrack				
Leefoo Taiwan	Stefan Nowak	James Novak	Soundtrack				
JMF Recording Studio Fran Esther (02) 9790 4097. 32 Trk 1" Digital, 24 Trk ADAT							
Dead Spawn	Band	Tony Jarret	Album				



BASF YOUR MUSIC IS SAFE WITH US



BASF National Tracking Guide

ARTIST	PRODUCER	ENGINEER	PROJECT	ARTIST	PRODUCER	ENGINEER	PROJECT
OPM Studios Daniel (07) 3374 0066 24 Trk ADAT, Mackie Console				Narcen's Rush	Petros	Petros	Debut CD
Look-a-Likes	Band	Daniel	EP	Peter Dene	Petros	Petros	Kyb Programming
Mainstay	Daniel	Daniel	EP	Mark Joseph	Petros	Petros	2nd Solo CD
Tamarind	Simon Young	Daniel	Album	Kate Ash-Brumer	Petros	Petros	Solo CD
Aphasia	Band	Daniel	Drum Tracks	RB-X Recording Studio Stephen Morgan (03) 9429 6199 24 Trk, 40Ch SSL/Sonic Solutions-Mastering/ 16			
The Rockaroos	Geoff Whitehead	Daniel	Album	Trk Digital ADAT			
The Awesome Brs	Band	Daniel	EP	Crackjack	Crackjack	Graham Williams	Album
Suite 16 Audio Productions Murray Lyons (07) 3369 8733 24 Trk Analogue/Digital				One Perfect Day	Chris Elves	Chris Elves	Movie Soundtrack
The Ten Tenors	Kim Kirkman/Steven Baker	David Champion	Album	Buckleys Hope	Buckleys Hope	Craig Smith	Album
Misery Guts	Gary Smith	David Champion	Television Series	Zuriya	Chris Elves	Chris Elves	Album
Taramalin Sound Allan Lahey (07) 3208 9736. 16Trk Post & PreProduction				Rosslyn M.	Steve Morgan	S.Morgan/C.Elves	Album
Justin Daley		A.Lahey	Demo	Sing Sing Phil Butson (03) 9428 4622 www.singsing.com.au			
Indeep	Band	A.Lahey	Demo	Vika & Linda Bull	Rene Gaylor	Chris Dickie	Album
Marsden Choir	Emma	A.Lahey	Album	Hunters & Collectors	Band	Chris Dickie	Live Show
Yabba Dabba Doo	Rob Fisher	Craig Loyns	Single/EP	Primitive Ghost	Kalju Tonuma	Kalju Tonuma	Album
Youfest			EP	Dave Graney	Artist	Adam Rhodes	Album
Kevin Kresch	Artist	A.Lahey	Demo	Liquid	Russell	Russell	EP
T.A.P. Studios Duncan Wood (07) 5479 2277 24 Trk Hard Drive, 24 Trk ADAT Studio				Dead Star	Barry Palmer/Mark Opitz	Chris Dickie	
Jodie Joy	Duncan Wood/Barrie Morrison	Duncan Wood	Album Track	Sound Around Trevor Cronin (03) 9531 3891 Mobile Recording Studio			
Umbra Embraced	Duncan Wood	Duncan Wood	Album	Chris Sutcliffe		Michael Letho	Tracking
TAP Team	Barrie Morrison/Duncan Wood	Duncan Wood	Betta July Campaign	Fat Bastard	Band/Trevor Cronin	Trevor Cronin/Jeremy Smith	Album Overdubs
Balladeer	Duncan Wood	Duncan Wood	Album Track	Fat Bastard	Band/Trevor Cronin	Trevor Cronin/Jeremy Smith	Album Mixes
Vandersound Eric Vandersande (07) 5546 8100 Fully Automated Digital & Analog & Master				Michael Fine	Dorian West	Trevor Cronin	Tracking
Ian Francis	Eric Vandersande/Artist	Eric Vandersand	Album Editing	Studio 52 Paul Higgins (03) 9417 7707 Studio A: 32 Track Automated Studio B: 24 Trk ADAT			
One Eyed Milkman	Eric Vandersande	Adam Trougher/EV	Demo	The Music Men	Trevor Carter	Trevor Carter	Footy Album Demos
Lachlan Blundell	Artist/Andrew	Andrew Hines	Mix & Master	Supremacy	Trevor Carter	Trevor Carter	Metal Album
Rivermont College	Eric Vandersande	Eric Vandersande	CD Project	Commomile	Trevor Carter	Trevor Carter	Demo
Tested	Peter Perini/E.V.	Peter Perini/E.V.	EP Tracking	Kim Lawford	Trevor Carter	Trevor Carter	Demo
Who the Hell?	Peter Perini/E.V.	Peter Perini/E.V.	Demo	Gargamel	Band	Andrew Meakes	Demo
				Witicism	Band	Andrew Meakes	Demo
South Australia				Supersonic Dave Hannan 0419 349 618 24 Track Mobile			
Adelaide Tape Duplicators Al Sankanskas (08) 8212 7111 CD Mastering Suite, Manufacturing				Thread	Dave Hannan	Dave Hannan	Album
Cruel Game	Al Sankanskas	Al Sankanskas	Album Mastering/Manufacture	Tracey Lee	Dave Hannan	Dave Hannan	Demos
JuJu Eyeballs	Al Sankanskas	Al Sankanskas	EP Mastering	Honeyfield	Chris Askey/Dave H	Cave Hannan	Album
Tropical Dreams	Al Sankanskas	Al Sankanskas	Album Mastering/Manufacture	True Form Music Services Neil Gray 0500 509 509. 24 Tk. Digital, 12 Tk. Analogue,			
Alex Perry	Al Sankanskas	Al Sankanskas	Album Mastering/Manufacture	Snakehips	Neil/Band	Neil Gray	Album
Kym Purling Trio	Al Sankanskas	Al Sankanskas	Album Mastering/Manufacture	Koke	Damien/Band	Damien Montalto	Demos
The Pod	Al Sankanskas	Al Sankanskas	CD Release	Pollyanna	Matt Handley	Nail Gray	Pre Production
Disk-Edits Belinda Kent (08) 8340 1377 Post Productions				Pleasurehead	Darren Garth	Ross O'Driscoll	Pre Production
Just about Everything	Steve Fieldhouse	Neville Clark	CD Master/Album	Dolly Blitz	Neil/Band	Nail Gray	E.P.
Ebe	Artist/Cran Wilton	Neville Clark	CD Master/Album	Wombat Rd Recording Studio Barrie Clissold (03) 5145 4204. 32 Tk. Digital + 16 Trk Analogue			
Second Dimension	Band/Dean Edwards	Neville Clark	CD Master/Album	Peta Minter	F.Pranjic	Barrie Clissold	Backing Track
Julian Barnett	Artist	Neville Clark	CD Master/Album	STONEAGE	Barrie Clissold/Band	Barrie Clissold	Demo Album
Modern Recordings	Mark Scruby	Neville Clark	CD Master/Album	BLONDAGE	Barrie Clissold/Band	Barrie Clissold	Backing Tracks
Kranktus	Dave Bunney/Mick Wordley	Neville Clarke	CD Master/Album	Collene Honeyman	D.Pruser	Barrie Clissold	Album Tracking
Mixmasters Productions Mick Wordley (08) 8278 8506 24 Trk 2" Analogue				Ellen Lombie	Barrie Clissold	Barrie Clissold	Demo Tape/CD
Chris Finnen	Mick Wordley	Mick Wordley	Mix	Industrial Deafness	Band/Clissold	Barrie Clissold	Demo Tracks/CD
O'Carolan Quartet	Jack Brennan	Mick Wordley	Album	Xtek Studios Nic Moore (03) 9646 8833 2"24Trk Analogue, 24 Trk Digital			
Lobtailing	Matt Maddock	Matt Maddock	Album Tracking	Ale on One	Band	Nic Moore Demos	
Travis Taylor	Leb Kanski/Mick Wordley	Mick Wordley	Album	Red	Kevin English	Nic Moore	Album
"Number 9"	Band	S.Fieldmouse	EP	Donald Hirst	Donald Hirst	Nic Moore	EP
Bahn Te	Greg Hunt	Mick Wordley	Mix Album	The Avras	Nic Moore	Nic Moore	Demos
Nick Love Productions Nick Love (08) 8297 6519 Producer/Engineer				Everstone	Nic Moore	Nic Moore	Demos
Boom Box	Nick Love	Nick Love/Cran Wilton	Demo	Western Australia			
Revolver	Nick Love	Nick Love	CD EP	Bonsai Recording Studio Tom Thorpe (08) 9246 4408. 24 Analogue/32 Digital			
Pariah	Nick Love	Nick Love/Walrus	CD EP	Sue Black		Tom Thorpe	Album
Lessie Does	Nick Love	Nick Love	CD Album	Early Hours	Dom Mariani	Tom Thorpe	Re-mix Single
finelines	Nick Love	Nick Love/Walrus	CD Album	Brett Greenfield		Tom Thorpe	Demo
ASD	Nick Love/Band	Nick Love	CD Album	2-ins		Tom Thorpe	Demo
SA Recording Avalon Sperring (08) 8281 9900 24Trk ADAT Yamaha 02R Console				Matt & Nick		Tom Thorpe	Demo
Temporal Lobe	Louis Panayiotou/Band	Louis Panayiotou	EP	John Meyer		Tom Thorpe	Tracking
King Krill	Louis Panayiotou/Band	Louis Panayiotou	Album	Planet Sound Studio John Villani (08) 9382 2211 48 Track, 32 Track & 24 Track Analogue			
Kudos		Louis Panayiotou	Demo	Mike Cornell	Grant Hart/Mike Cornell	John Villani	Album Mix
FuManchu		Louis Panayiotou	Feedback Music Television	Sonny Morgan	Artist	John Villani	Album Mix
Villis SA Footy Show	Dave Wildy	Louis Panayiotou	Audio Post	Melle	Nunzio Mondia	John Villani	Single Mix
Victoria				M.Vdelli	L.W/Artist	Les Williams	Album
Crystal Mastering Joe Carra (03) 9326 2318 CD Mastering/Sonic Solutions				Revolver Sound Studio Vic Manfrin (08) 9272 7505 32 Trk Automated			
Superheist	Band	John Ruberto	Mastering Album	Terry Bennetts	Artist	Vic Manfrin	Demo
Even	Band	John Ruberto	Mastering Singles	Dystonia	Band/Ben Glatzer	Ben Glatzer	Album
The Handsome Deadman	Band	Joe Carra	Mastering Album	Nathan Gaunt	Artist/Ben Glatzer	Ben Glatzer	EP
Purge	Band	John Ruberto	Mastering Album	Wax tad pole	Band/Ben Glatzer	Ben Glatzer	EP
Verite	Band	Joe Carra	Mastering Album	Burdello	Band/Ben Glatzer	Ben Glatzer	EP
New World Soul	Band	Joe Carra	Mastering Album	Flavour of the Month	Grant Ferstat	Ben Glatzer	Album
Dex Mastering Adam Dempsey (03) 9372 2266 2 Suites, Sonic Solutions & No Noise				Tasmania			
Nasty Pasties	Christian Williams	Adam Dempsey	Album Track	Doghouse Recording and Productions Andrew McCulloch (03) 6433 4571 Audio Video recording,			
Soul Brothers	Francois	Adam Dempsey	Album	Mastering, Demo's, full album recordings			
Melbourne Praise	Ruth Messer	Adam Dempsey	Melb. Concert Hall Recording	City Medical Practice	Andrew McCulloch	Andrew McCulloch	Advertisement
Fold (N.Z.)	Leighton Anderson	Adam Dempsey	Album	Wayne Clarke	Artist/Andrew McCulloch	Andrew McCulloch	Single and Album
Sprmint Recordings	Umit	Adam Dempsey	Drum & Bass Compilation	YOUR BASF TRADE SALES OUTLETS:			
Media Monitors	Andrew Green	Jasmine Burke	Restoration of Tapes	NSW: Audio Visual Designs (02) 9281-2444, Silver & Ballard (02) 9439-5355, Independent Tape			
Metropolis Audio Fleur Colvin (03) 9696 2111 Music & Post etc				Services (02) 9436-0666 VIC: CATS (03) 9529-3177, Chapple Tape (03) 9580-6620, DEX Audio			
Kylie Minogue	Chong Lim	Ross Cockle/Ern Rose O.B. Recording Concert		(03) 9372-2266, MTA & Assoc. (03) 9819-6455 SA: Adelaide Tape Duplicators (08) 8212-7111,			
Kylie Minogue	Chong Lim	Ross Cockle	Mixing Sydney Concert	Pro Media (08) 8276-6793 WA: Ausmag (09)314-1953, Pro Copy (09)375-3902 QLD: Musiclub			
Tommy Emmanuel/CDB	Chong Lim	Doug Beady	Album Mixing	(07) 3862-1633, Tek (07) 3239-4000			
T. Emmanuel/Human Nature	Chong Lim	Doug Beady	Album Mixing				
Thurma	Tony Faranda	Tony Faranda	Recording				
Atlas	Brian McMahan	Brian McMahan	Mixing Trks				
Petrophonic Productions Petros (03) 9553 0176 16 Trk Digital/Midi Suite							
Glen Craven	Petros	Petros	Solo CD				
Itchy Fingers	Petros	Petros	50s Rock'n'Roll CD				



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BUYER'S GUIDE

studio mixing consoles

Prices INCLUDE sales tax and were correct on 15th July 1998. All care taken, no responsibility for errors. Four models only are shown in each category although these manufacturers have many more. Indicative only.

UNDER \$7500

ALLEN & HEATH

Technical Audio Group (02) 9810 5300

MixWizard 16:2 16 mono input desk top or rack mount mixer, left/right/mono outputs, 6 auxiliary sends, 4 band EQ with 2 mid sweeps, 2 stereo returns, 100mm faders, direct outs, vertical individual PCB construction. \$3395.

MixWizard 14:4:2 16 mono input desk top or rack mount mixer, left/right/mono outputs, 6 auxiliary sends, 4 band EQ with 2 mid sweeps, 2 stereo returns, 100mm faders, direct outs, vertical individual PCB construction. \$3595.

MixWizard 20:8:2 8 mono/6 stereo input desk top or rack mount mixer, 8 recording busses plus left/right/mono outputs with unique Mixdown facility, 6 auxiliary sends, 4 band EQ with 2 sweeps, 100mm faders, direct outs, vertical individual PCB construction. \$3595.

FENDER

Fender Australia (02) 9666 5077

MX5224 24 channel, 4 subgroups, stereo and mono o/p's. 3 way EQ with mid-sweep, 6 aux, sends separate power supply. 2 assignable parametric EQ's. 5 year warranty. \$3500.

MX5232 as above but 32 channels. \$4500.

MACKIE DESIGNS

Australian Audio Supplies (02) 4388 4666

Mackie Designs 24*8 24 ultra low noise, high headroom mic preamps, 8 subgroups, 6 Aux sends, 100mm logarithmic taper faders, extensive EQ includes true parametric Hi-Mid and Lo-Mid swept, 6 stereo assignable Aux returns, Mix B section, expandable, includes meterbridge, plus loads more. \$6995.

Mackie Designs 16*8 16 ultra low noise, high headroom mic preamps,

8 subgroups, 6 Aux sends, 100mm logarithmic taper faders, extensive EQ includes true parametric Hi-Mid and Lo-Mid swept, 6 stereo assignable Aux returns, Mix B section, includes meterbridge, plus loads more. \$5495.

Mackie CR1604-VLZ 16 ultra low noise, high headroom mic preamps, 4 subgroups, 6 Aux sends, 60mm logarithmic taper faders, 3-Band EQ with sweepable Mids, Control Room/Phones section, Multi-way physical configuration, balanced inputs and outputs, rackmountable even! \$2995.

Mackie MS1402-VLZ 6 ultra low noise, high headroom mic preamps, 4 stereo line inputs, 60mm faders on all channels, extensive Control Room/Phones section, 3-Band EQ, 2 Aux sends, 2 Aux stereo returns, balanced inputs and outputs, rackmountable! \$1495.

PHILIPS

Philips Australia (02) 9888 0476

LHM0241/00 8 channels, 2 aux, 2 subs, mic/line selector, 3 band EQ, DJ mic, effect return. \$1637.

LHM0240/00 16 channels, 2 aux, 2 subs, mic/line selector, 3 band EQ, DJ mic, effect return. \$2725.

SOUNDTRACS

Synchrotech (02) 9879 0800

Soundtracs RX8 No meterbridge 24/8/2. \$4,650. RX8 32/8/2 \$5,998.

SPIRIT

Jands Electronics (02) 9582 0909

Folio Notepad Smallest and most affordable mixer in the Spirit Folio range for Home Studios, Multimedia, Video Post, Location Mixing. DAT quality; impressive EIN and high RF rejection. Four mic and two stereo inputs; Separate Mix and Monitor outputs. \$795.

Folio SX High quality 4 bus (Mix and Sub) desktop or rackmount recording or live mixer. 12 mic and 4 stereo inputs; Ultramic preamps; 3



Otari Status

auxes; 8 direct outputs; Superb low noise, surface mount design; 100mm Faders. \$2495.

Folio FX16 16 mic line input rack mountable console with 3 band swept mid EQ, HPF, direct outputs on all channels, 4 auxiliaries, 100mm faders and a lexicon dual effects unit. Connector panel can be flipped to the rear of the console for rack mounting applications. \$3395.

Spirit LX7 Available in 24 and 32 input versions, the LX7 features 4 band EQ with two swept mids, HPF on mic channels, 100mm faders, direct outputs on the first 8 channels, 6 auxiliaries and 4 subgroups + mix and a mono buss (7 busses total). Internal PSU. From \$4595.

TASCAM

TEAC Australia (03) 9644 2442

M-08 8 inputs. 4 mic and 4 line. 2 band EQ. 2 aux sends - one pre and one post-fade. PFL and mute on all channels. Dedicated 2 track input, 4 mono FX ret. Insert points, switchable 48v. \$699.

M-1600/16 16 input 8 group, 3 band EQ, 48v phantom power. 4 stereo aux returns, in-place solo, insert points on each channel, in-line design. \$4599.

M-1600/24 24 channel version of above. Also in-line and featuring an optional meter bridge (MU-1616/24). The 1600 series feature balances D-sub connectors for group out's. \$5299.

TM-D1000 16 input digital console w/- 127 snapshot memory, 2 FX processors on board, 3 band EQ, 8 mic-ins 4 with phantom, T-DIF digital out w/- optional A-DAT converter. \$2999.

YAMAHA

Yamaha Music Australia (03) 9693 5164

03D 24 mono + 1 st inputs, 8ch analog or digital I/O (option), 4-band full PEQ/dynamics processor per ch, 2 effects, automation, MIDI control profiles. \$5,995.

01V 20 mono + 2 st inputs, 8ch analog or digital I/O (option), 4-band full PEQ/dynamics processor per ch, 2 effects, MIDI, ADAT/TDIF/AES compatible. \$3,995.

MX200-16 16 mono dual A/B switchable (balanced) inputs, tape in, stereo+mono sum out, 3-band EQ, 4 aux's, cue, insert, PH. power, 2 stereo returns w/EQ, aux and stereo meters. \$2,095.

MX200-24 24 mono dual A/B switchable (balanced) inputs, tape in, stereo+mono sum out, 3-band EQ, 4 aux's, cue, insert, PH. power, 2 stereo returns w/EQ, aux and stereo meters. \$2,595.

UNDER \$15,000

ALLEN & HEATH

Technical Audio Group (02) 9810 5300

GS3000/24 24 channel, 8 group, in-line twin fader console, 2 patchable valves, 4 band EQ with parametric mids, 6 aux, mute automation with 4 mute groups/127 mute scenes, MIDI machine control, 100mm Alps

continued over



Allen & Heath GS3000

BUYER'S GUIDE

studio mixing consoles

continued from previous page

faders etc. \$13,995.

MACKIE DESIGNS

Australian Audio Supplies (02) 4388 4666

Mackie Designs 32*8 32 ultra low noise, high headroom mic preamps, 8 subgroups, 6 Aux sends, 100mm logarithmic taper faders, extensive EQ includes true parametric Hi-Mid and Lo-Mid swept, 6 stereo assignable Aux returns, Mix B section, expandable, includes meterbridge, plus loads more features. \$8495.

SOUNDCRAFT

Jands Electronics (02) 9582 0909

Ghost 24 has transport controls for MIDI machine control;

track arming, locate and cycle keys; timecode reader and generator; 128 on-board mute scenes. Inline format with 56 inputs at mixdown; 8 groups; 4 band split EQ with 2 fully parametric mids; 6 mono + 2 stereo auxes; optional meterbridge. Optional vca automation system available. \$16,995.

Ghost LE 24/32 As per Ghost except no automation and machine control. Optional vca automation system available. \$14,995. (24ch).

SOUNDTRACS

Synchrotech (02) 9879 0800

Soundtracs Topaz Project 8 Complete with meterbridge 24/8/2 \$8,000. 32/8/2 \$10,000.

SPIRIT

Jands Electronics (02) 9582 0909

Spirit Digital328 Digital In line recording console. - 16 mic line inputs and 16 digital tape returns (or 32:8:2 with additional preamp inputs). E Strip encoders mean that the console is 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 dual effects processors and two mono or stereo 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 ancillary equipment in the digital domain. Full machine

control and synchronisation capabilities (9 pin, MMC, MTC, SMPTE, Wordclock). Snapshot and Dynamic Automation capable. Two consoles can be linked to provide up to 84 inputs at mixdown. \$13,995.

Spirit 8 16/24/32/40 New 8 bus console for live and recording direct to multitrack applications, 40 UltraMic Plus Pre's 12 stereo inputs (40ch);

4 Mute Groups; 8 Audio Groups; 4 band British EQ with 2 sweeps; 6 auxes; Integral Meterbridge. From \$10,995.

TASCAM

TEAC Australia (03) 9644 2442

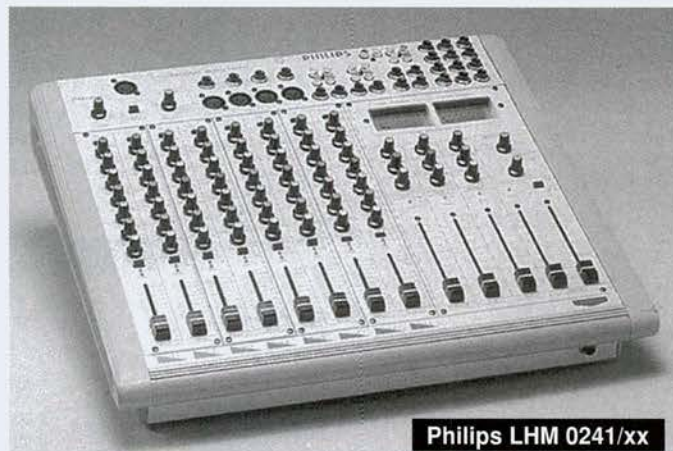
M-2600mkII/24 24 channel in-line design. 8 groups, 8 aux, 6 stereo returns, 4 band EQ splittable be-

in 1/30 second. Configuration for music, film, and TV post, TV broadcast, outside broadcast and multimedia. From \$200,000.

MACKIE DESIGNS

Australian Audio Supplies (02) 4388 4666

Mackie Designs D8*B 48 input, 8 bus digital console, full meterbridge,



Philips LHM 0241/xx

tween channel/monitor paths. Audiophile quality pre amps w/phantom power. \$7999.

M-2600mkII/32 32 channel version of the 2600/24. The 2600mkII series have an internal operating level of -2dBu and +/- 20v power supply rails for superb audio quality. \$9999.

YAMAHA

Yamaha Music Australia (03) 9693 5164

02R V2 40Ch/8 bus (w/optional I/O cards), 6 Aux & 2 DSP effects, 4-band full PEQ & dynamics per Ch., 96 scenes, motorised faders, automation, surround panning. \$13,995.

OVER \$15,000

ALLEN & HEATH

Technical Audio Group (02) 9810 5300

GS3000/32 32 channel, 8 group, in-line twin fader console, 2 patchable valves, 4 band EQ with parametric mids, 6 aux, mute automation with 4 mute groups/127 mute scenes, MIDI machine control, 100mm Alps faders etc. \$16,995.

EUPHONIX

Studio Connections (03) 9874 7222, (02) 9873 3994

CS 3000 digitally controlled analogue mixer with 6 inputs per channel, on board signal processing and automation, moving faders and dynamic equalisation automation. All controls may be stored and recalled

100mm motorised faders, full automation of all parameters, 4 band parametric EQ, compression and gating on all 48 channels, 2 on-board global effects expandable to 8 stereo effects, 24-bit main outputs, both 5.1 and 7.1 surround sound capabilities, on board up gradable computer, SVGA output, Apogee UV22 Super Encoding software, Apogee digital interface cards, totally up gradable architecture. \$19,995.

OTARI

Amber Technology (02) 9975 1211

Status digitally controlled analogue console featuring digital switching and routing, console recall, 'Eagle' VCA automation w/- optional moving faders, dynamics and film panning/monitoring. 24-48 dual-path channels, 8 aux busses, metal P/Bay. From \$55,000.

Concept Elite large format, digitally controlled analogue console. Up to 48 dual-path channels with 2 x 4 band P/M EQ, dynamics, 'Eagle' VCA automation w/- optional moving faders, dedicated film versions available, 10 aux busses, hi-res metering. From \$150,000.

Advanta advanced large format, fully-digital console for all music, post and film applications. Up to 300 channels with either mapped or dedicated control surfaces. 40-bit floating DSP, up to 24-bit/96kHz capability. From \$250,000.

SOUNDCRAFT

Jands Electronics (02) 9582 0909

Ghost 32 Unique in its class, it has transport controls for MIDI machine control; track arming, locate and cycle keys; timecode reader and generator; 128 on-board mute scenes. Inline format 72 inputs at mixdown; 8 groups; 4 band split EQ with 2 fully parametric mid bands; 6 mono + 2 stereo auxes; optional meterbridge. Optional vca automation system available. \$20,495.

DC2020 Moving fader automated inline console with touchscreen driven onboard computer that controls console automation; machine control for all popular digital and analogue recorders/sequencers, and project management. Optional patchbay. Also available in surround capable format. From \$73495.

SOUNDTRACS

Synchrotech (02) 9879 0800

Soundtracs Solitaire in-line Console with dynamics in every channel and moving fader Automation. From \$40,000.

Soundtracs Jade Console equipped with highly developed dual inputs on every module with fader and mute automation, EQ and dynamics processing. From \$77,000.

Soundtracs Virtua Digital Audio Console From \$45,000.

Soundtracs DPCII Digital Production Console \$POA.

TASCAM

TEAC Australia (03) 9644 2442

TM-D8000 40 mono input channels, 16 analogue mic/line and 24 digital 6 analogue stereo inputs. 4 stereo digital inputs. Machine control for DTRS, 9-pin, MMC, 24 channels of track arming. \$17,999.

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COUNTRYMAN Isomax Lecturn Mics (8) \$250.00 each. Cannon Sound (02) 9948 4440. Call for a catalogue.

CREST V11C0 amplifiers 550 + 550 into 4 \$1,300.00 (02) 9799 7219

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ELECTROVOICE SX200 cabinets \$1,300.00pr (02) 9799 7219

EV 1183s for sale \$5,000.00 ea Phone Wild Gravity (07) 4721 3540

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JANDS Hog250 Lighting Console \$5,000.00, Hog600 \$8,000.00. Cannon Sound (02) 9948 4440. Call for a catalogue.

JANDS JL24/8 Analogue Lighting console, 2x12 inch Strand Dimmers, Multicore \$1,800.00 0417 933 678 or (08) 9725 1546. W.A.

JANDS Roadpack dimmer racks (analogue) \$750.00 each. Celco digital/analogue 36 channel interface, new \$300.00 (02) 9799 7219

JBL 4208 Studio Monitors 4 \$600.00 pair ono (02) 6557 0667

JBL EON15P Powered 15" & Horn \$1,300.00 ea. JBL EON10P Powered 10" & Horn \$1,000.00ea Sound Advice (02) 6280 8777

JBL M712 dual gated compressor/limiters \$350.00 (02) 9799 7219

JBL TR225's double 15 and horn speakers, \$2,300.00 pair, while stocks last! Anything Audio Phone (02) 9818 8000.



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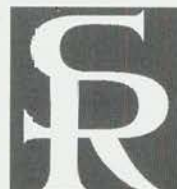
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Neil Finn

Try Whistling This Tour

Paul Guthrie first started working for Neil Finn ten years ago when he was nineteen years old, later travelling to the UK with Crowded House where he stayed. He worked for Vari*lite both in the UK and USA and for the past three years he has worked as Sheryl Crowe's lighting designer.

Paul is based in Minneapolis and is actually trying to retire from touring due to the arrival of his first child. The plan with the Neil Finn tour is for Paul to only ever be on tour for two weeks at a time.

"I'll go to the US, set it up and do the first week before going home," said Paul. "I'll join the tour again for the UK run (the Albert Hall gig in London sold out in just ten minutes).

The lighting design is a collaboration between Paul and Sharon Finn, Neil's wife.

"Sharon did the Finn Brothers tour in the US and we collaborated on it when it reached Australia and New Zealand," said Paul. "She has a lot of over all aesthetic ideas relating to the songs and the feel of the songs. I do the more practical stuff, the more technical side. We had a design conference in Minneapolis a couple of months ago and figured that we wanted something simple that we could take everywhere. The skeleton logo which is on the cover of Try Whistling This came in but we were a bit worried it would turn into an Iron Maiden thing! Skeletons definitely have heavy metal undertones. The backdrop was designed by Noel Crombie, formerly of Split Enz, and his wife Sally Ann. They came up with about four different designs, all wacky in their own way. They made the final backdrop in about a week. It works well and we can take it every where."

In Australia the show is totally run

through the Artisan which Paul programmed and operates. For the New Zealand shows prior to the Australian run, there were separate consoles for Golden Scans and par cans one of which Sharon operated.

The lighting rig is simple but used very effectively. It's a system that Paul has been using for a number of years now, a system that maximises one truck.

"I stuck with it for Sheryl, the Finn Brothers and now this," Paul said. "The show is 28 Vari*lite's - VL5's and VL6's. I wanted VL7's but they haven't got them

States and the UK. I think it was mainly venue availability, no one in their right mind would suggest you do all these back-to-backs but we've done it without any problems!"

Programming time consisted of just one night in Brisbane after a week in New Zealand so at least Paul knew the songs well.

"I took a whole lot of cues out for the first night," he said. "There are a lot of cues in the show but I endeavour to change it quite a lot, each song really only has a couple of looks to it. I never programme

to the actual music, I sit down and do it off my head. Then I run it while the band are sound checking. Because I've done the same 'lay out' for a few years now I can't remember if I'm repeating myself! Ever since Split Enz Neil has always had a good looking show, people just assume it's going to be a nice looking and sounding show."

Custom gobos of the skeleton design were made up by Vari*lite in Dallas in three days. Paul sent them a fax of the design and three days later they were delivered by Federal Express.

"I also have my own set of colours as I don't particularly care for the standard colours in the VL6's," said Paul. "They're a bit too 'lollipop'."

Sound Engineer Chris 'Privet' Hedge came straight from mixing for Genesis on their world tour. Chris is an Englishman who has worked in the industry for many years for bands such as Mike and The Mechanics, Brian May and Eric Clapton.

On his arrival in New Zealand he had to go straight into a show with no rehearsal time and without prepping his own gear.

"All the gear was there in place and we did one sort of run through, not a full



Photos: Cat Forcer

show," he said. "Then it was straight into the first show. I was crapping myself, I'm nervous before every gig as it is. You have to be aware how important every gig is, all the punters are coming along to see the show for the first time. If the people walk out and no one complains, then that's good. The worst thing any one can say is it was too loud."

"We're all still improving, learning the stage craft. It's a bloody hard show to mix, there's stuff going on all the time. With Genesis I was using a Midas XL4 and everything was automated, I'd just call up a song and it would change. Given that Neil is a bit more spontaneous than Genesis, I had to go back to the old analogue, bits of paper technology. But that's OK, I've done that for years."

Apart from a few compromises with the microphones - Jands couldn't supply a Beta 87 for the vocal so Chris used his own Beta 58 which he always carries with him - Chris got basically all the gear he wanted. For mixing he was using a Yamaha PM4000.

"You can drop these things out of an aircraft and they'd still work," he said. "The metering is great, they never lie to you. All the patching and routing is a doddle, it's so easy and completely uniform. I find them totally 100% reliable. Also doing these size theatres, using an XL4 would be murder - you need ten people on it and it takes up so much space. Without rehearsal time you can't get involved in programming because you just don't have time. With Genesis we had a month to program the show. By the time I get to the UK I'll know the material really well so I may well take one then."



"It's such a busy show in terms of mixing, you don't want to be chasing aux sends and doing the programme changes as well, it's nice to have dedicated units. I also have an SPX1000 although I originally wanted a SPX900. I've got a Lexicon 480 which I have across pretty much everything. It does most of the spade work, I could live without everything else."

On each of Neil's vocals there are Summit TLA 100's - 'designed by God, built by God with a hiss added' - a machine which Chris loves. DBX 160 compressors were used, Chris never uses anything else.

"The DM360 has Varicurves on the system but I like to have

something to grab especially as this is the third gig in with a Jands system," said Chris. "I have put in a couple of curves which reflect what I've done on this graphic. I like to have a graphic playing, a straight forward analogue graphic. The other Varicurve is on the Meyer MSL2 front fill cabinets. There's no compression on the system except what is in the Meyer electronics but no one, except for Meyer, knows what the hell goes on in there!"

Chris was also using Drawmer gates. He does a lot of switching in and out of gates which is where the PM4000 is 'a bit of a bastard'.

"You can hear it every time you switch them in so you always have to switch the gates in and out in a loud bit," he explained. "But that's the worst sin a PM4000 has and that's fine by me."

Chris is not particularly fussy about which PA system he uses. In New Zealand he used Oceania's Flashlight system, with Genesis it was Showco and before

Even so, being able to access the songs quick enough is where the problem is. With the software I'm using, you'd have to scroll through and then hit it. You could conceivably leave a whole load of the microphones open when they're not in use, but then all you are doing is letting more crap come through the PA."

Effects included an SPX990 for a distorted vocal mic effect used in three of the tunes - achieved by using a really crappy old microphone put through an amplifier.

"I've got a bit of a symphonic wobble on it just for a little bit on acoustic on some of the songs when it's exposed," explained Chris. "The top Eventide harmoniser I use has got a 'one up, one down on it', like the dual pitch thing used occasionally on a couple of the songs with Neil. Vocal effects wise, I don't have to use a great deal. The reverbs are mostly small, tight little rooms - it seems to suit his voice."

The bottom Eventide is used for all the DVL's, again there are only a few little delays.

continued on next page



Chris 'Privet' Hedge



Paul Guthrie and Sharon Finn

that it was EAW.

"I'm not really precious about speaker systems," he said. "Clar Brothers indoors I'm not a big fan of but outdoors it's fantastic. They're all great, it's a question of who is mixing and the band you're putting

through it. The systems nowadays are so well thought out although some can be harder to fly. In terms of useability, the Prism system is the easiest - it just flies into the air on its own. A lot of the newer systems - the new DMB and the Martin - have so many adjustments you can make to the fly bar you have to spend a lot of time getting that kind of thing right before you hang it in the air.

"Some people do like to have loads of facilities and options available at the crossover but in the real world you don't have enough time to be able to fanny with it. You want to be able to turn up, plug it in and go."

At this particular gig there were six speakers a side - a cluster of four at the top with two hung below on 10ft steels to cover the centre mezzanine at the State Theatre. Added to that were two MSL4's and two MSL2's on the inside. The bottom subs were turned off, they were just being used as a riser.

"In Brisbane we found that the coupling that we were getting through the floor was too much for the music, you don't want a big, punchy bass end," said Chris. "We were picking up so much resonance



through the floor, it was a bit of a death-ray down the front. With a seated audience you have to be more aware as they can't move around. A compromise has to be made between getting the low frequencies back here but also not killing the people at the front. Having said that, the MSL4 goes down pretty deep, you could almost do this show without subs. There are a few bits where it gets loud and naughty but other than that most of it is so dynamic you don't really need much low end."

• Cat Forcer

Clinton of More Than A Morsel and friend



Local caterers **More Than A Morsel** gave the crew a taste of Australia. On the menu was crocodile, kangaroo and other specialities including this witchety grub which some were game to try. I tried the smoked barramundi coated in green ants and it was delicious. There is no truth in the rumour that this was washed down with echidna piss.

ROUGH RIDERS

"27 (b) (iii) A clean, dry space will be provided adjacent to the Principal Artistes dressing room, suitable for the accommodation of a Bolivian Boa-Constrictor."

What is it about rock stars that compels them to include slithery and slimy creatures as part of their act? I mean when they're about fourteen do they suddenly get the urge to buy an electric guitar and then go "oh and by the way throw in a boa constrictor with that would ya?". Forget music lessons just give me the snake!

I've tried to analyse this phenomena from several angles but could only come up with one: chick magnet. When I was fourteen and watching bands like Status Quo, Hush and The Angels on Countdown I could see the powerful effect that having a Fender Stratocaster between your legs had on women: it didn't matter if you couldn't play it, it was the visual effect that counted. But I don't know too many women who go for the guitar, beast and rock star menage-a-

trois thing; but then I've been told that I don't get out as much as I should.

Then I thought maybe its companionship. But if you're onstage with around 10,000 people screaming their lungs out chanting your name and wanting a piece of you how could you possibly be lonely and in need of a snake for company? Yeah yeah I know rock stars are really just like you and me, they go home after a gig and watch the telly: alone.

Now if I were a mega rock star I might let my best mate Bluey sit in the wings and take in the show, he's a cultured dog, he's been around a bit and enjoys good music and the roar of a crowd. But I can tell you this I wouldn't have him out there with me curled around my neck whilst I was busy working my way through all three guitar chords that I'd mastered.

This all reminds me of something I read about Alice Cooper when he was touring last year. He wasn't able to bring his boa constrictor to Australia due to our quarantine laws (the poor beast would have spent 4 months in

solitary confinement which would have been a bit of a hard gig to face after the adulation of the crowd and life on the road) and the promoter was busy auditioning for a suitable replacement, I'm not sure who or what they found in the end but I know a carpet snake and a black snake were on the shortlist.

Ozzy Osbourne is another hardened British (must be something in the water) rock man with a penchant for creatures: though he tends to take his relationships with the hapless beasts a bit too far and devour them. There is his legendary nibbling of a dead bat onstage during his Diary of a Madman tour (how appropriate) where he had to be carted off to hospital for a rabies shot. If the poor man was hungry why didn't he just order a sandwich like everyone else does? This fetish that rockstars have for helpless beasts has got me stumped. Any theories welcome.

Rufus B.



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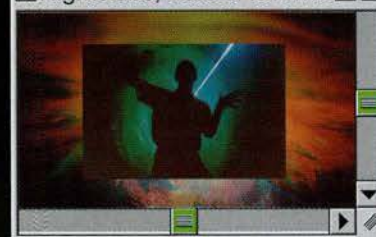
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LIGHTING

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Edited by Catriona Forcer

LXbizzBITS

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City of Lights

Sydney CBD is magically transformed



The Museum of Contemporary Art

During early July, visitors to Circular Quay would have noticed some very bold and dramatic lighting effects being showcased by the City Council. The notion was to demonstrate some of the creative ideas being developed by Lighting and Theatre consultancy Vision Design Studio for use around the city. The immediate impression was a re-definition of the landscape by use of strong colours. Circular Quay assumed a vivid appearance that gave shape and depth to the harbour. It also provided an intriguing foreground to the city backdrop. The colourful effects were reinforced by sequential colour changing at some sites.

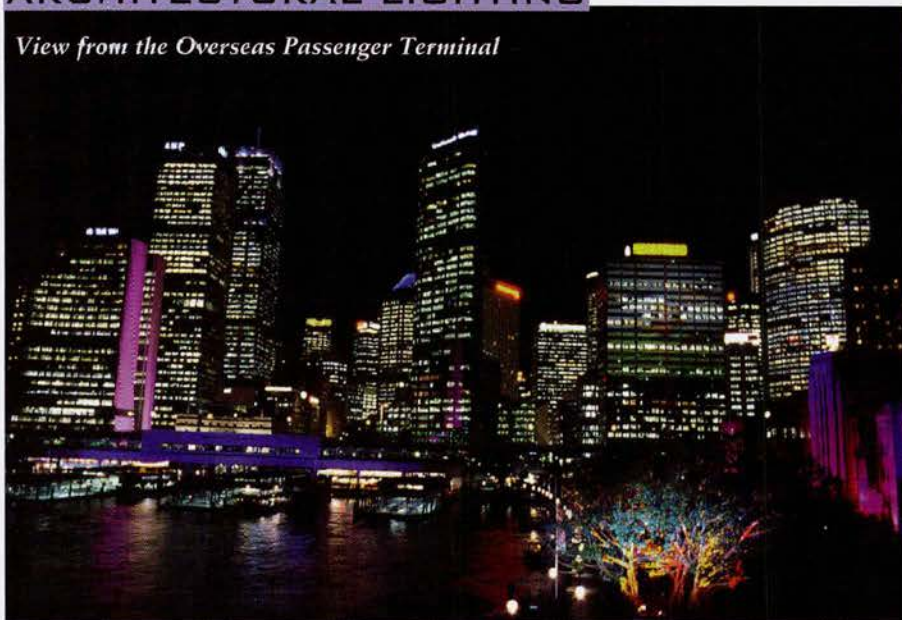
The Museum of Contemporary Art (MCA) best demonstrated this technique. A combination of Mac 600s in Ecodomes, Citycolors and Arenavisions bathed the museum in fascinating colour mixes that gave a vitality to West Circular Quay. Of particular interest was that the lighting designers lit only significant architectural features, and visually this was most successful. The outline of form was starkly described, and the flatness and monotony of floodlighting was denied. The temporary lighting gave the building a new iden-

tity, and as the colours changed, it was interesting to see how the presence of the building and its surroundings transposed. Shocking pink subtly mutated into soft purple with deep blue columns, giving way to a green facade with red features. Standing on the lawn close to the building, you could measure changing emotional reactions to the architecture, as each scene gave the building a different presence. Chameleon Touring provided the lighting equipment, and a team of up to 6 lighting engineers worked with Vision to create the final effects. Under the supervision of Mike Tanner, Chameleon maintained staff on site around the clock, sleeping in the caravan control centre in the MCA car park, to ensure that the installation was monitored, and the nightly demonstrations were serviced in the event of any problems.

A beautiful fig tree stands between the Museum and the Overseas Passenger Terminal, and this was lit like some mythical tree from a fairy tale. The huge branches were outlined and contrasted in red and yellow light from Par 64's laid out around the base of the tree while a single spot-

continued on next page

View from the Overseas Passenger Terminal



City of Lights *continued from previous page*

light illuminated the leaves in a warm aquamarine wash. It provided a most unexpected treatment of a natural form, and gave a pleasing balance to the MCA.

From the tree, it was impossible not to be drawn to movement on the paving around the Overseas passenger terminal. Pal 1200s located at several positions on the building structure projected an assort-

ment of curvaceous patterns. The result was a rhythmic effect that softened the hard expanse of the area. What is normally an unforgiving empty space at night was transformed into a playful arena. The Pals were linked via DMX to the control station/temporary hostel located in the MCA car park, a run well in excess of 100m. Re-cutting the cables was a major headache, especially given that this is a major pedestrian thoroughfare. Chameleon were forced to resort to using as many existing features as possible to conceal the cabling. This included flag poles, fences, flower beds and trees. Unavoidably the cables were exposed at ground level, and vandalism proved to be the major source of problems. As a permanent feature, clearly there would be difficulties in maintaining this kind of lighting feature, but as a transient enhancement it was very appealing, and appeared to amuse adults and children alike.

However, the real show stopper seemed to be the colours and images being projected onto the Goldfields building. This work was undertaken by Peter Milne of Electric Canvass who positioned a single film projector on the roof of the MCA. Using a unique 7kw xenon projector, the Pigi from French company E/T/C, they were able to project moving images that covered the entire width of the building, by some 17 floors high. The artwork was created by Peter's production company, PM Production Design, in close collaboration with Vision Design Studio and architects Cox Richardson. A screen, manufactured by Jands, and covering 4 floors was placed high up on the building, and some images benefited from this. But the most fascinating aspect to the event was how the details of the building were interpreted and used artistically. At various times floors

LXbizzBITS

NEWS

MARTIN SWAG WINNER

The winner of the Martin Professional lighting swag promotion is - Daniel O'Connell from the University of Wollongong. To claim your prize contact Martin Professional Lighting Australia (02) 9898 1111 before August 31st.

ULA SEEK DISTRIBUTORS

ULA are seeking interested parties for distribution of LeMaitre pyrotechnics in South Australia, the Northern Territory and Tasmania. For more information contact Justin Knox or Con Biviano at Universal Lighting & Audio on 1800-648-111.

NAME CHANGE

Total Fabrications, Inc. has changed its name to Total Structures, Inc. This change reflects the US company's history, philosophy and commitment to go beyond the manufacture of truss and into the realm of complete structure design and construction.

The UK and Singapore offices will retain the Total Fabrications name.

NEW FACES AT SHOW TECHNOLOGY

Show Technology have four new faces at their Sydney head quarters: Shannon Jeffries is their new Junior Technician; Stacey Bromage is the new accountant; Stella Ziegler is Rod Salmon's new Personal Assistant; and Anthony Zibara will be developing new markets outside the entertainment industry through the use of promotional lighting tools.

Call Show Technology +61 2 9898 1111.

CHAMELEON NEWS

This winter has been one of the busiest on record for Sydney based Chameleon Touring Systems with large projects such as the Sydney Lighting Masterplan (see page 67) which involved the custom manufacture of luminaires to light the sandstone eastern sea wall of Circular Quay and the lighting of Circular Quay Railway Station, the Museum of Contemporary Art and the Overseas Passenger Terminal.

Some of the shows currently on the road with Chameleon gear include; The New Rocky Horror Show, Star City Ballroom; Phantom of the Opera, Perth Entertainment Centre; Les Miserables, Princess Theatre, Melbourne; Midnight Oil's Redneck Wonderland Tour; Mighty Mighty Bosstones; Tism; SOCOG Cultural Olympic "Lighthouse" Tour; Bell Shakespeare's Henry IV; and Opera Australia Regional Tour Production of The Barber of Seville.

fogfor495*



The new Rosco Alpha 900

is the lowest priced of all Rosco's fog machines, and carries the Rosco assurance of high quality. The Alpha 900 fog machine is ideal for discos, church halls and schools.

Simple on/off remote control, the Alpha 900 is economical and powerful enough for amateur theatres and all those on a limited budget. Made for Rosco to exacting specifications, the 900 is compatible with all Rosco fog fluids.

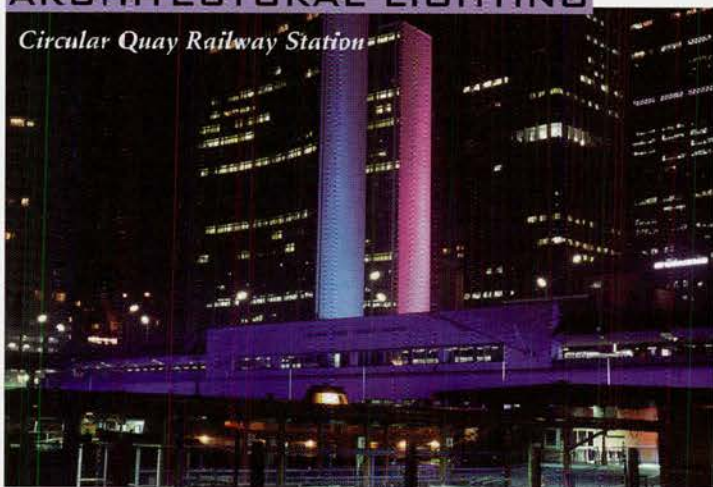
*\$495.00 plus sales tax from your Rosco dealer.

For your nearest ROSCO dealer
Ph (02) 9906626

Write in Reader Service Number: 133

ARCHITECTURAL LIGHTING

Circular Quay Railway Station



were separately 'banded' in different colours; text was written along the solid sections of the building, and a variety of animated pictures rolled across the whole width of the building.

At the other end of the Quay, the AMP Sydney Cove building was lit. Strong coloured light washed up the plain concrete sides from powerful spotlights located at ground level. The colours changed periodically, giving the Quay an unusual, elegant glow.

As a focal piece Circular Quay station was bathed in a low key blue light. This central feature was created by using narrow beam 1.8kw spotlights mounted on top of the wharf roofs, aimed across the face of the building at very shallow angles. It was interesting that the lighting identified a building that usually is unnoticed, and gave a coordinated composition to the Quay area.

The facade was flanked by a laser either side, mounted on wharf roofs. The lasers were aimed skywards, heralding entry to the city. Lasers were supplied by Lasersvision.

As the eye moved around the Quay towards the Opera House, a short section of the stone Quay wall was highlighted in red and green light. This was an interesting concept, accenting the edge of



Goldfields House

the city. Again, the lighting focused attention to a feature otherwise ignored. It created a colourful delineation between land and water; accenting the unique mark that distinguishes Sydney.

• Cat Forcer



Chan:eleon Crew

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Write in Reader Service Number: 106

New/Old Colour Changing Technology in Space Cannon Searchlights

Technology preview by Andy Ciddor

Colour changing systems for large, high power luminaires are fraught with a range of problems which become even more complex if you want to wave the luminaire about or leave it out in the weather for prolonged periods. Giant colour filter scrollers have been developed to fit large luminaires such as minibrutes/molefays but these tend to have fairly substantial wind-loading problems out of doors and the likelihood of the colour filter surviving even a brief shower is fairly slight. The filters also bleach rather rapidly in such close proximity to the lamps.

Lee Conlon from Showcraft, manufacturers of the Colourset range of scrollers developed a special architectural two-colour changer, one could hardly call it a scroller, for the Phillips Arena metal halide beam lights used to illuminate the Victorian Arts Centre spire. One of these units was on display at Entech '97 in Melbourne and for those of you who didn't see it, these are large, well very large actually, units in which frames of filter which consist of strips of coloured, tempered glass, slide in front of the luminaire. These fixed-position architectural units are built like the proverbial tank, designed to withstand long periods of wind, rain, lightning (and that's just in Melbourne's summer) and the intense heat of the luminaire. You certainly couldn't wave these around on the front of your luminaires.

Bruno Baiardi of Space Cannon in Italy wanted to build xenon searchlights that not only change colour while they're sweeping their beams around in the sky but which are capable of colour mixing, fading and variable beam softness, thus also making them suitable for architec-

tural applications. As searchlights are usually used out-of-doors, weather resistance and wind drag are also major considerations. The idea which he developed and has since patented is not new although it certainly hasn't been used in this way before, in fact, you may have actually used a luminaire based on the same principle when you were a kid. Do you remember having a torch which had two concentric plastic cylinders (one red and the other

green) that slid out of the base of the reflector and over the lamp allowing you to make even more terrifying faces when you shone coloured light up from under your chin? This is the basic concept behind Baiardi's new searchlight design.

Optically, a searchlight is just a beamlight, a very bright version of the VNSP par lamp, where a small light source is placed at the focal point of a paraboloidal reflector to produce a narrow parallel beam. In the case of a short arc xenon searchlight the lamp is located

along the axis of the reflector to minimise the amount of the beam blocked by the arc electrodes, allowing a cylinder to slide over the lamp and filter the light before it is gathered by the reflector (see photo). A frosted cylinder will make the light source appear to be larger and in doing so will soften the beam. Any such cylinder is going to have to withstand very high temperatures close to an arc source and will require a very stable colouring medium to survive the high output of the arc, especially in the ultraviolet part of the spectrum. Baiardi has used quartz glass for the cylinders in the Space Cannon searchlights and has achieved a colour mixing system using three dichroic cylinders: cyan, magenta and yellow.

Whilst at first glance dichroic filters



Space Cannon 2kW

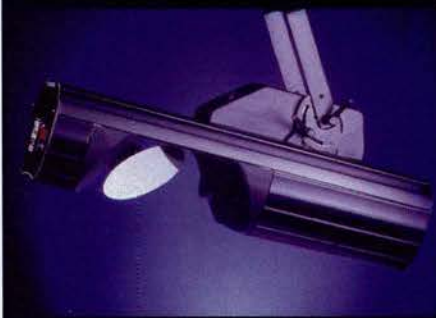
LXbizzBITS

PRODUCTS

ROBOSCAN 918

Martin Professional Lighting now have in stock the Roboscan 918. Based on an MSR 575/2 lamp, the Roboscan 918 features both a rotating gobo wheel (five positions plus open) and a fixed gobo wheel with nine positions plus open. Two motorised colour wheels, each with nine positions plus open and 14 colour filters with four CTC filters provide the colour punch. Additionally the Roboscan 918 comes with a motorised iris, motorised hard-edge focus and a rotating 3 facet prism.

Call Martin Professional Lighting Australia (02) 9898 1111.



NEW EFFECTS FROM ADJ

ADJ have introduced four new disco effects perfect for nightclubs, mobile DJ's or small bands. **Mini Raggi** is a smaller version of the ever-popular Astroraggi. This lightweight (6Kg) unit uses an economical linear lamp (R7 - 240V 100W), is audio activate and features multiple flat line beams. Price \$410.00 (ex-tax).

Rotogobo is perfect for any retail outlet as it can project your logo or image. Price \$205.00 (ex-tax).

Mushroom is a high impact effect (6Kg) which uses two different lamp types for changing beam shapes - 2 x 120V 300W (64514) and 1 x 240V 300W (R7) lamps. The Mushroom does not use any motors. \$245.00 (ex-tax).

Gobo Moon II Two gobo wheels work together to project an array of multicoloured images that swing back and forth to the beat of the music. Price \$495.00 (ex-tax).

Call Show Technology on +61 2 9898 1111

ELEKTRALITE CP-3

The CP-3 preprogrammed lighting controller includes built-in lighting shows for selected fixtures, just plug and play. Manual tempo adjustment is provided for accurate music synchronisation. Other features include: DMX512 output; sound-to-light input; reload of new light shows for various fixture types possible; 19" rackmount 2U; 3-pin and 5-pin XLR connectors. Price \$995 inc tax.

Call Show Technology +61 2 9898 1111.



general view of rod mechanism

seem to be the obvious choice for such an environment, the fact that the transmitted colour of dichroics changes as the incident angle of the light changes (haven't you ever wondered why dichroic filters aren't used in cyc floods) would lead one to expect some problems with colour purity in the searchlight's output, although this doesn't appear to be the case. The relatively long distance between the short arc of the lamp and the filter cylinders may be the explanation for this unexpected bonus.

Using concentric cylinders for colour frost and shutter effects is a great idea but getting smooth, accurate movements which can be repeated as part of a programmed sequence is quite another matter. To keep the whole mechanism compact and accessible whilst allowing for accurate positioning Baiardi used a drive mechanism which will be familiar to anyone who has maintained Fresnels: a lead screw driving a solid metal block which is connected to a point on the circumference of the glass cylinder it controls (see photos). As the drive is on the edge of the cylinder the block runs on a pair of rods to keep all movement squarely in the right plane. Each of the lead screws is driven through reduction gearing from a stepper mo-

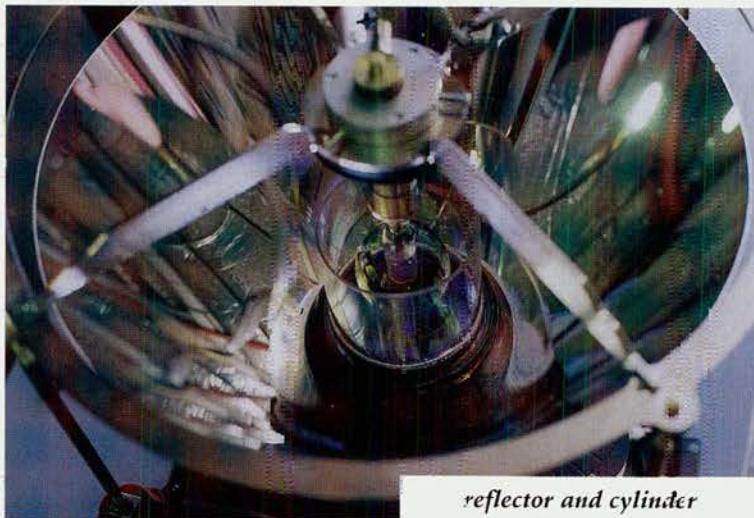
tor which is controlled and driven in the same manner as any other robotic luminaire. This arrangement allows all of the drive mechanisms to be readily accessed for maintenance and alignment. There are also large forced air impellers inside the housing to dispose of the considerable heat generated by the xenon lamp.

Space Cannon make IREOS, their colour change xenon searchlights, in 2kW (the complete unit in the photographs) 4kW (the disassembled unit seen in the photographs) and 7kW versions, all of them somewhat larger, brighter and more attention grabbing than that torch you once used to impress your friends and read comics under the blankets.

Manufactured by: Space Cannon +39 131 772238 - 772538

www.space-cannon-vh.com

Australian Distributor: Ashton Admor +61 8 9478 3800



reflector and cylinder

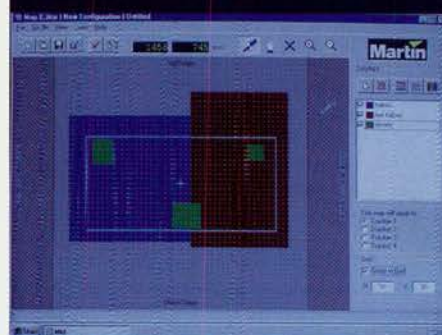
LXbizzBITS

PRODUCTS

MARTIN LIGHTING DIRECTOR V2.

Martin have released the Martin Lighting Director version 2.0 for Windows. Lighting Director is a performer controlled followspot system and the main improvements to this version are: Windows 95/98 based with online help; improved followspot performance with smoother response and better prediction; easier communication with all DMX lighting boards; a large fixture library; and a library editor so users can add their own models.

Call Martin Professional Lighting Australia +61 2 9896 1111.



CELCO FUSION DIMMERS

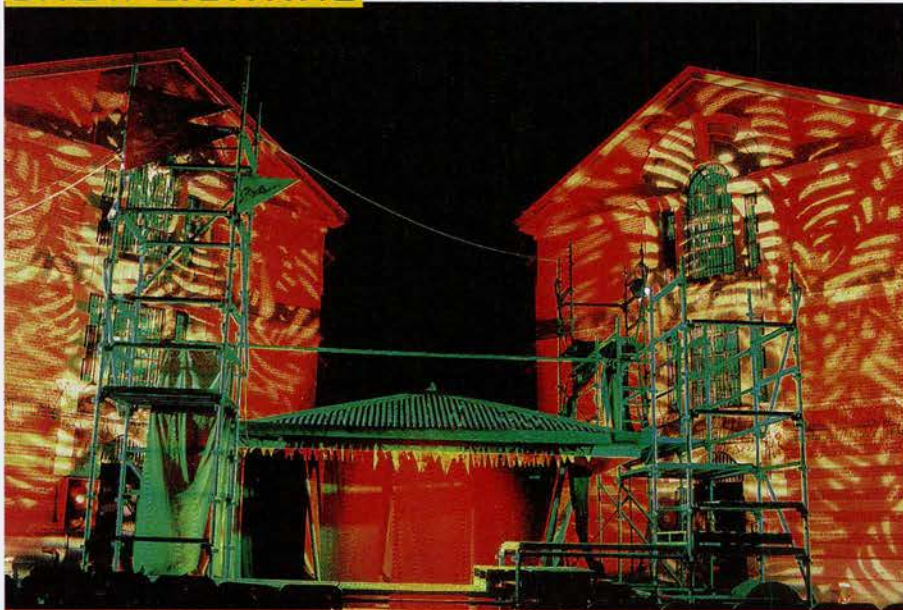
The Fusion Rack Mount can be used in both touring and installed applications covering television, theatre, conference and concert med lms. Featuring 12 channels of either 10A (Fusion RM1210), 12 channels of 16A (Fusion RM1216) or 20A (Fusion RM1220) each Fusion Rack Mount dimmer is supplied in a 3U high, 19" wide enclosure. Control input is by either DMX512 (1990) or 0-10VDC Analogue.

Two operating modes are available to the user to cater for both basic (User) and advanced (Super User) setup requirements. Upon power-up, the Fusion Rack Mount dimmer defaults to User Mode, a simple two step process places the dimmer in Super User mode.

User mode allows the user to select the DMX512 address alone. Super User mode allows the user to configure the advanced features such as individual DMX channel addresses, dimmer curves and back-up states.

Call Celco +44 1322 282 218.





BOGGO GETS BOGGY

Geoff Squires goes to Gaol

Full-time lawyer and part time actor Brett Heath is known for choosing unusual venues to mount his productions in. He is also known for choosing the lesser known and performed plays by Shakespeare and his last "King John" was no exception. Based on the company's previous success with the old women's section of Boggo Road Gaol it was again chosen as the venue for the new production. What's my involvement I hear you ask? I was the lighting designer and major equipment supplier.

One of the most interesting things about the Gaol is its history. Built in 1901 as a women's prison before eventually housing men, it is now a prison museum and only recently, an aviation museum. The buildings are still very solid and will be around for years to come, unlike the remainder of Boggo Road Gaol which was torn down a few years ago after being declared unsafe after only 20 or 30 years. They don't make anything like they used to.

Played as a traditional Shakespeare, the action took place in three locations to maximize the effect of being in the Gaol. One of the old cell blocks was used as the opener to each act, first as the court of England and second, as a torture chamber (funnily enough quite fitting). Most of the show was presented in the main quadrangle upon a large L shaped scaffolding erection and pallets, using the existing hut as a feature. The last two scenes of the show played in an exercise yard, between two cellblocks. Denise Toogood and Leo Bradley designed the set and costumes.

Sound for the show was easy as there wasn't any, with all sounds being reproduced live via drums, voices and the odd theatrical maroon. (A loud noisy

pyrotechnic thing). So other than set the only other requirement was lighting, which is where I come in. I have lit the last five of Brett's productions with venues such as a warehouse, the Princess Theatre (audience and cast all onstage), an RSL, and previously Boggo Road. This meant I knew what I was in for, having previous experience of the venue.

One of the most constricting factors is power, there are no three-phase outlets, requiring tails to be hooked into the various boards I needed three tails to power the two Strandpak racks and one Jands-CCT 5k rack. Power was such a problem that on opening night the pie warmer in another building took out a complete phase to the rack that was hooked into the superintendents building.

Another problem is rigging. There is no where to really hang lights other than fences and the abundance of barbed wire makes it rather difficult. After being torn to shreds last time I decided that scaffolding towers was definitely the go. Brett's father, John, is a scaffolder and arranges for sponsorship of scaffolding needs for the company. I used two towers for front of house and two for side lighting, all around four to five metres tall with a sloping tarp roof.

Weather proofing, as most of you will have experienced first hand, is a major problem. I thought that by using the towers with tarpaulins, I could reduce some of the exposure damage to my gear. Unfortunately, the base dimensions that I wanted didn't make it through channels to John with the result that the par bars had to be vertically hung rather than horizontal. This reduced the amount of pro-

continued over

LXbizzBITS

PRODUCTS

ORACLE MIRROR EFFECTS

Oracle Laser now stock a full range of Skylonic mirror effects available for hire or sale. Director of Oracle, Paul Mazlin, says "no laser show is complete without one!". Call Oracle on +61 2 9938 4466.



D.E.B. DUAL POWER BALLASTS

Coemar De Sisti Australia announce the release of several new Dual Power Electronic Ballasts (DEB's) by De Sisti. The four new ballasts add to De Sisti's already extensive range of electronic and magnetic ballasts. They feature automatic input voltage selection, solid aluminium extrusion construction and lightweight housings. The Dual Power range includes: DEB 575/1200W; DEB 2500/4000W; DEB 4000/6000W; and DEB 12000/18000W. Information can be obtained on line at <http://195.103.47.190/> or call Coemar on +61 3 9467 8666.



ILLUMINATED BALLOONS

Pleine Lune Illuminated Balloons are an innovative way to light up the night with the minimum of electrical and rigging equipment. They are suitable for special events, parties and outdoor night activities. The balloon's outer skin works as a diffuser to produce a soft, glare free illumination over the full 360°. Balloon size varies from 300mm to 2500mm and they use light sources from 300 watts to 2500 watts HMI in a patented design. Inflation is by standard balloon gas - helium - and they remain inflated for at least 24 hours.

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the Pacific range

The world's first base down axial profile delivers leading performance and operational features, cool light, and choice, creating new opportunities for performance and display lighting around the world.

The PACIFIC range delivers the light output of traditional luminaires of twice the wattage — 600w produces the same or more light as a 1200w profile, 1000w produces the same as a 2000w. Adjustable from a centre peak to a usually flat field using Selecon's unique planetary gear system. Beam quality is 'near condensor' like, with a 'whiteress' that stands out. Pattern projections are sharp and in-focus across the complete beam.

With a range that includes two Zooms, 12°–28° & 26°–50°, and four fixed angles of 20°, 30°, 40° and 50°, the PACIFIC range provides



The 'cold' mirror reflects the light, but transmits the heat directly onto the heat-sink for efficient dissipation. Ventilation through the product is by convection.

the choice and versatility to deliver both the amount of light and the beam size you require.

Selecon's active heat management system takes much of the heat out of the light, and exhausts it from the luminaire away from heat sensitive components such as the lamp base, wiring and operational controls. The result is a luminaire that is safer and easier to use.

With precision die cast components and the latest in plastic technologies, the PACIFIC is a compact sized luminaire with all the safety and operational features you have come to expect from Selecon, including automatic disconnection of the mains supply as the lamp module is removed from the luminaire, two pattern holder mounting slots, 360 degree rotatable lens tube, interchangeable colour coded lens assemblies and lens tubes.

To trial the PACIFIC or for your copy of the PACIFIC CD and brochure contact your Selecon dealer

NSW: HERKES PRO LIGHTING, Ph 02-9319 3133, Fax 02-9319 0204

VIC: CLEARLIGHT SHOWS PTY, Ph 03-9553 1688, Fax 03-9553 4401

SA: OSMOND ELECTRONICS, Ph 08-8410 1111, Fax 08-8410 3322

QLD: HEFKES PRO LIGHTING, Ph 07-3841 4288, Fax 07-3841 5448

ACT: SOUND ADVICE, Ph 02-6280 8777, Fax 02-6280 8177

WA: STAGE & STUDIO, Ph 08-9227 9932, Fax 08-9227 9347

TAS: K.W.McCULLOCH, Ph 03-6343 1043, Fax 03-6343 1847

PRODUCTS

COEMAR TOURLITE

To celebrate Coemar's 65th anniversary they have undertaken a comprehensive plan to entrench them as the market leader in the lighting industry, they say. The first fruition of this plan was the release of the CF1200 carbon fibre moving yoke luminaire. Now they are set to become the first main stream lighting manufacturer to release a full featured colour mix profile moving yoke.

This fixture is set to include full 16 bit movement, dual rotating gobo wheels, multiple rotating prisms, frost filter, CTO, CTB, dimmer, strobe, iris, linear zoom, remote focus, colour wheel + CMY colour mix, rotating multi-colour effect, electronic flicker free ballast, multiple voltage operation, 1200w MSR/SA lamp, quick restrike, auto alignment technology, ultra light weight, and digital LED menu system.

A higher power version, the Coemar Tourlite-Power, will be an 1800w version of the above unit, with double colour wheels instead of the CMY colour mix.

To book your pre-release demonstration of these units call Coemar De Sisti Australia +61 3 9467 8666.

JEM TECHNO-HAZE

Now in stock at Show Technology and with a fluid capacity of 2.5 litres, the Techno-Haze can run for eight hours at full output. Creating the perfect ambient haze relies heavily on correct particle size and dispersion. JEM claim that the Techno-Haze produces this by vapourising the special working fluid at a very precise temperature in a high mass heater block which contains a cupreous helicoil of 3 metres length.

The product of this process is injected into the uniquely designed JEM "Dispersal Chamber", where it is mixed with a turbulent airflow and projected from the machine as an optically translucent haze, at 1200 ft per minute (exit velocity). Price \$1099.

Call Show Technology + 61 2 9898 1111.

SHOW LIGHTING

BOGGO GETS BOGGY

continued from previous page

tection offered by the tarps and therefore increased the damage to the cans finish.

I also tried to make all cable runs long enough so that the fewest plugs were out in the open. The four par 64 cans that lit the audience paths were the only lights to be out in the weather unprotected so I used electrical tape to seal plugs and splitters. Other lights that weren't in the tarped towers either had small sheets of perspex as covers or were rigged in the exercise yard, which is essentially a large wire cage. This allowed us to cover the roof with tarps creating a water-proof acting and audience area, which became an alternate venue if necessary.

There is only so much you can do to light a building with a basic equipment list and not wanting to exactly repeat what I did last time, and not wanting to waste



the windows in L139. Last time I achieved this by gelling all the flouros in the building using pre existing stock, which was a very time consuming process. This time I used a 2k fresnel for each building hung of a piece of scaffolding poked through the handrail on the stairs. To add variety I used ex-Expo 88 sitescape prolites to project gobos onto the building faces as well.

The main acting area was lit with par 64 narrows and mediums in

a combination of front and side light to achieve not only illumination but also mood and scene location. I decided to try something different inside the cellblock and lit the Court scene using chandeliers. One fresnel picked up the king's throne and another lit the roof to give depth and

colour. For the dungeon I downlit the acting area in a dark steel blue through the wire mesh to give shadow and used candles to fill in some the gaps. The stairs proved to be a pain because I just couldn't get light into places I needed to due to the steelwork. (Aren't small budgets fun.)

The final area, the exercise yard, I lit according to the scenes. The first of the two scenes was under a moonless night, so two parcans in L120 and two prolites with tree gobos all at low levels fitted the bill, extra light provided by hurricane lamps. The final scene was lit by four par 64 in steel to cover the larger area and on top of the shed roof, which gave another acting level. Far cans were perfect for the job, as they are rugged, simple, and somewhat adaptable to outdoor locations.

The show broke even despite an ongoing battle with the local critic resulting in no coverage from the large newspaper, the equipment survived to light another day with no plugs getting damaged and only minor paint work coming off second best. And I still learned things about weather proofing that I hadn't thought of. What I like about Boggo Road is the challenge it provides and the atmosphere it creates, what more can you ask of venue.

PS: For those people trying to contact me please note I have a new mobile number after a disgust with last networks service: 0417 712 633.



time and resources to achieve these looks was my next challenge. There was no option but to light the buildings, as they were such a major feature of the production.

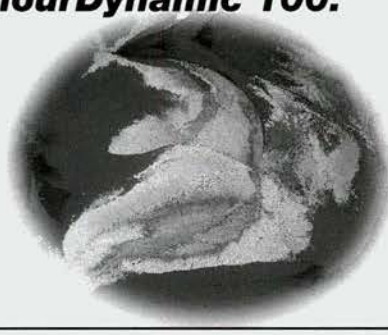
I lit each of the cell block faces using two par 64 med on floor stands in L113. To create a contrast I shone light through

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PURELY AND SIMPLY THE BEST



LSC TOURING RACKS WITH TS DIMMERS

By Mandy Jones

LSC Electronics are an internationally renowned Australian company known for their quality lighting control and dimming systems. Having won numerous awards for their range of products, LSC have recently released a new improved range of dimmers - the TS Dimmer (TS). The touring racks stand alone or can be configured into a tour package incorporating power distribution, hotpatching and full digital monitoring.

Mike Tanner from Entech Award winning hire company Chameleon has four TS Touring racks in his stock. In the three months he has owned them, Mike says they have been used constantly.

"We ordered four Touring Racks with the lot - 4 TS racks, Powerguard module and 96 way patch."

Mike explained it was a number of factors about the LSC Touring Racks that convinced him to purchase them. The most significant factor being LSC's reputation for making high quality dimmers and their ability to back-up their products with ongoing after sales support.

"Being the owner of a large quantity of another manufacturer's dimmers that we'd had both good and bad experiences with, initially we were motivated to look around and see what was available on the market, particularly as to what was available as an efficient touring system package rather than loose dimmers. We looked at the Jands Touring Rack and it certainly had all the bits but we felt it was a little bulky, then we looked at the LSC version and we found it to be a more tidy unit and certainly far more well thought out in its overall layout."

Features

Like other touring racks, the overall configuration of the rack is completely optionable according to the requirements of the customer. Options include configurable connectors; 2 pin or 3 pin hotpatching; 10 or 12 Amp Micro Circuit Breakers.

"We had the highest rated breakers installed which effectively gives us sufficient headroom. When we've got the channel loaded up to its nominal 2.4k loading the cold filament in-rush is not going to be a problem, which it has with other racks that we own - circuit breakers have been known to drop out with 90% of the rating of the channel."

Mike said that two of his major considerations were the organisation of the power input and the patching.

Power distribution is looked after by a 240 Amp Three phase mains distribution unit to which power is supplied by 400 Amp Powerlock input and thru connectors.

"We were looking for a system that didn't have too much innate intelligence within each dimmer rack. Too much intelligence at the rack level, in terms of protection features etc, can sometimes be rather confusing when you're trying to de-bug a system."

Mike said he was impressed by the separate Powerguard unit developed by LSC. The Powerguard provides electrical monitor-



ing, digital date/time stamping; voltage, current and frequency displays, and temperature monitoring of the individual rack modules. Installed at the top of the touring racks, the Powerguard unit provides quick access to important operation data in a succinct and readable format. The unit also has a remote output so that the data can be sent to another location, such as the lighting console operator who can monitor the racks regardless of their physical location.

"The ability to simply set addresses was another feature - without having to press lots of buttons, you can simply

walk up to the rack and reassign its channel configuration to suit your needs."

Patching

Mike said the organisation of the patch panel, although superficially not all that different to rival touring racks, has been designed with an attention to detail.

"Its very neatly constructed, logically laid out and well numbered. Its quite easy to see which is a 240v patch outlet and which is a series outlet."

And this organisation leads to a huge reduction in patching time.

"To give you a good idea, from a traditional Weiland type patch panel 19" rack mounting panel with Weiland's and patch tails on it, patching a dimmer rack in the factory could take up to 8 hours doing a 48 way system so you're doing 4 hours a rack.

With the LSC racks it only takes about an hour at absolute most. Most people say they can get it sorted in ten minutes with a patch sheet. So there's great labour saving for us. We can have the rack pre-patched and out the door in a fraction of the time of the older patch systems."

Mike explained that the timesaving patching design has also given Chameleon the opportunity for greater returns on their investment.

"If there's a 3 day layover on a jobs the racks are being used on, we can pull them out, reconfigure them, put them into a corporate job for two days and get them back on site with minimal fuss. Its fantastic as an ability to get returns on the initial investment of buying the racks.

"Traditionally dimmer racks and consoles are generally the lowest return items in a hire company - the LSC product has really turned that around."

Main Use

In the time that Chameleon have had the four Touring Racks they have been out working consistently. Mike said they are their preferred racks to put out on jobs, and are currently being used on the Keanu Reeves movie *Matrix*.

"In fact we like them so much when extra racks were called for, rather than sending out our other touring racks, we sub-hired in two other LSC Tour Series racks from Active Lighting in Melbourne so we could keep a uniform look on stage. That promoted us to think of adding to our existing inventory of LSC

continued on next page



JANDS

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LSC TOUR SERIES DIMMERS

Continued from page 76

touring systems, and to increase those over the next few months so that we would have around eight touring racks in stock."

Mike said the hirer responses have been remarkably good, "It almost comes down to a slug fest over who's going to get the racks! The *Matrix* guys are very impressed with the performance of the racks".

Noiseless Dimmers

The new TS dimmers feature in built fans with temperature monitored speed control circuitry which has reduced fan noise considerably. To Mike this noise reduction has been a huge advantage over other dimming systems.

"The TS dimmers themselves are particularly quiet - the fan noise is minimal, and there's very little conducted noise in the units in terms of noise from chokes."

Maintenance

LSC products are known for their practical design when it comes to maintenance or service access. Mike explained that again this is evidenced in the overall design of the touring racks.

"A lot of thought has gone into the construction of the case and the overall packaging so that service access can be gained quickly and easily. When we've been doing our own maintenance on them - dusting and checking on parts, we've been able to have one person take a rack out, take the lid off and inspect it, rather than being a major job for two people. Again it's another labour saving feature for hire companies like us. And it's that little extra thought and attention to detail that separates the product from its competitors."

Mike said the best proof of ease of maintenance is how quickly LSC have been able to turn them around when a problem has cropped up.

Improvements:

Mike asked around the office and the only aspect of the racks they would like to see improvement on is the weight - the time old problem with dimmer racks.

"It's not really a problem - the weight is a given for what you get. By the same token our other racks are heavy, it's just that they're a little bit bigger so that mass is spread around more, it's more condensed in the LSC units. You're getting quite a deal of mass within a fairly small space. At the end of the day it's not a problem itself - one day the chokeless dimmer will arrive and it will be a breeze. In the meanwhile, it certainly keeps the



loaders on their toes!"

With each TS dimmer weighing 28kg, the complete package including flightcase, Powerguard module, patching and power distribution weighs in at around 280kg.

"The physical design of the rack is very good so that it is well supported and doesn't sustain any damage when it is being transported. They're a pretty rugged design and they even pack four across a standard pan-tech."

Final Comment

"When it comes down to value for money, in all senses of the word, in terms of design as well as the result, and for the dollars that you put in, the touring racks are an exceptionally good value buy. The service we get from LSC is good, not that we've had anything other than some initial teething problems, and that was a combination of getting used to a different way of doing things. But the support we've been given by Andrew and Dean and all the staff at LSC has

been tremendous.

"We had one incident where a brand new rack was sent out to do a show and was inadvertently inundated with water by the client, and LSC were exceptionally good about it - appearing on site to inspect the damage and arranging to service the rack overnight for us and got it back on line. That certainly demonstrated LSC's dedication and commitment."

LSC Touring Series Dimmer Specs:

based on 48 way Touring Rack)

Dimensions (flightcased):

1400mm (H) x 570mm (W) x 1050mm (D)

Weight: 280kg (full rack, Powerguard etc)

List Price: \$23,000 - \$36,000 depending on configuration (ex-tax)

Warranty: 2 years

Manufactured & Distributed by: LSC Lighting Systems, a division of LSC Electronics Pty Ltd, Ph: (+61 3) 9561 5255

Email: info@lscighting.com.au

Distributed in New Zealand by: Grouse Lighting (Wellington),

Ph: (+64 4) 801 7964, contact: Allan McShane

Grouse Lighting (Christchurch), Ph: (+64 3) 377 4776,

contact: Steve Blennerhassett

Distributed in Singapore by: TEDEUM, Ph: (+65) 742 0181,

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Good People to Know: Chameleon Touring Systems,

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THE INTER-CHANGEABLE REVOLUTION



**JUST A FEW MINUTES
TURNS A WASHLIGHT INTO
AN EFFECTS LUMINAIRE
OR VICE VERSA**

Stage COLOR 1200

A 4-disc cyan, magenta, yellow and amber colour mixing system provides an infinite number of rich hues plus a full range of pastel shades - sure to meet the approval of the most discriminating lighting designers. The exclusive GTC (Gradual Colour-Temperature Correction) system provides gradual correction of colour temperature differences from one luminaire to the next. You can choose between three diffusion intensities (including one with an exclusive 50° beam angle), and special effects such as concentric twin-colour beams and ultraviolet light.

These are just some of the great features you will find in Stage Color 1200, the most powerful and imaginative washlight for advanced applications currently on the market. Stage Color is revolutionary, thanks its easy conversion into the Stage Zoom 1200 effects projector.



Just change the head on your Stage Color 1200 to turn it into a fantastic effects luminaire, Stage Zoom 1200. Or you can convert the other way round.

The basic unit for both fixtures is electrically and mechanically identical, so you can build up the luminaire you need at the very last moment, even just before the show begins! And do it yourself, with no need for expert help.

Both luminaires use an HMI 1200 lamp, the number one choice for professional use. Both luminaires also have generous pan (450°) and tilt (252°) angles with smooth movements and microstepping resolution selectable between 8 or 16 bit.

Hot restrike and lamp control from the desk, along with automatic repositioning after any accidental movements. The convenient transport lock on the moving body make this a highly practical unit.

The standard unit is equipped with an electronic ballast, although a conventional electromechanical system is available as an option.

Stage ZOOM 1200

The 12°-24° lens with zoom and focussing controlled from the desk gives you a wide range of projection angles. The CMY colour mixing system offers an almost limitless palette and is supported by two colour-temperature correction filters (3200 and 5500 K).



The frost effect offers complete linear variation, allowing a spectacular transition from a hard-edged

beam to an increasingly diffused wash. Stage Zoom 1200 is also packed with graphic effects including static gobos, rotating gobos and rotating prisms. They are all fully combinable and all with indexed positioning through 540° so that a given effect can be repeated on several luminaires. These are just some of the exciting new features of Stage Zoom 1200, the sophisticated new moving-body effects projector. Stage Zoom is revolutionary too, thanks its easy conversion into the Stage Color 1200 washlight.

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PROFESSIONAL SHOW LIGHTING

Write in Reader Service Number: 153

Cantilevered Cables and Generators on Skyscrapers

The massive job of lighting *Matrix*

When asked to give a one sentence synopsis of *Matrix*, Reg Garside baulks. But we do know it's about guys inside a computer, set in the present and the future. *Matrix* is the biggest special effects film made in Australia, and it stars the elusive Keanu Reeves.

Garside, who was gaffer on *Dark City* and *The Island of Dr Moreau*, must have a reputation as someone who can handle mega-jobs. He certainly has a couple of trucks, two generators, and a workshop full of other gear.

Although he has a phone, a fax, a mobile, a pager, and email, he is still hard to reach. He works 14 hour days, and seems to spend every weekend at his sons' soccer games. "Dad's not here, he's at my brother's soccer," was the inevitable reply when I tried to contact him.

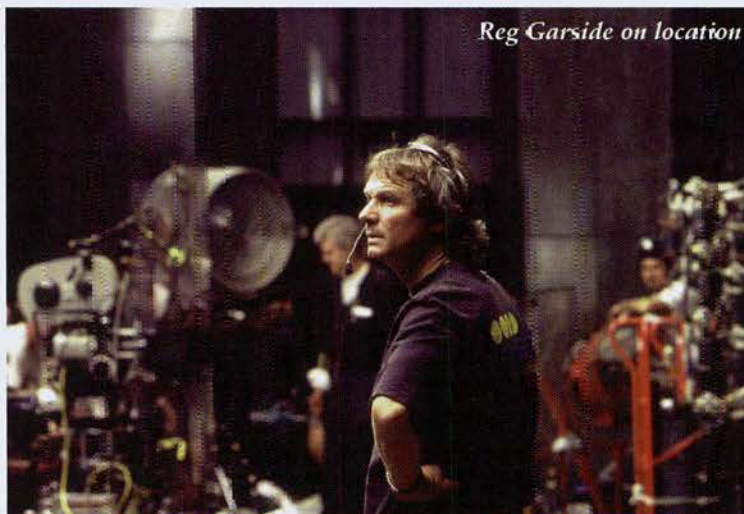
In December last year, Garside started doing tests on the translights, huge blow-up colour photos used as backdrops. The 60x12m Sydney skyline translight has to be backlit in a scene looking out the 42nd storey of a tower. "We have to see a skyline, with 160-degree view out of the window," Garside explained. "It could be done digitally with a huge green screen, but the problem is that you get lots of wraparound happening."

In the tests, Garside was working out how to backlight the photo, and what kind of light he had to put through it to get a certain stop. He came up with a 5kW Skypan, an old-fashioned light used in the States for the last 40 years.

Skypanes were going out of fashion when translights appeared. "They discovered Skypanes were the softest form of lighting a translight. At the moment we have about 140 of these, which I brought in from England, at the back of this translight," Garside said.

A Bit Like the Marines

Pre-production and location scouting began in January this year. Then *Matrix* started shooting exteriors on the tops of buildings, in office blocks,



Reg Garside on location

and on streets. Entire downtown streets were closed for several hours during the weekend.

The logistics must be something like war, where absurdly difficult things are expected. For one scene, Garside and his team had to crane a generator up to the top of a ten storey building. They used a 50 tonne crane to lift the generator up and put it on the roof. The action scene where the tower was needed, was ten storeys higher, on the top of the glass Price Waterhouse building. So they had to cable down the outside of the PW building. "We weren't allowed to touch the side of the building, so we had to cantilever the cables out from the side of the building, then tie them off so they didn't get caught in the wind."

They shot up there for several days. An-

other scene was from the top of the MMI building, but here Garside could use house power. They could pull 200 amps a phase out of the building, because it was the weekend.

The old GPO at Martin Place was another location. They had to cable up all the floors there, and could only go in on the weekend, because the building is being restored.

Garside has a full-time rigging crew, who go in and prerig all the locations. The crew varies from 5-15 guys. For this, Garside has a rigging gaffer, Craig Bryant. "I tell

Craig what we need, and he organises to get into places, and do the cabling. We have to be able to walk into a fully lit set each day. We have to rig ahead of ourselves."

300 frames per second is mighty fast

The DOP, Bill Pope shot *Bound*, *Dark Man*, and *Clueless*. Pope is using a lot of high speed photography. Some scenes are shot at normal speed, 24 frames per second, and some at 300 frames per second. The high speed scenes become slow motion in the final film. Garside has to light the set for the stop of 2.8, and as well as 16. "Every time you go up a stop, you double the amount of light needed. So to shoot at 16, I need five more stops of light, which is an awesome amount."

"We have huge lighting setups. One of the generators on a set is 1.8 megawatts, which is 2000 amps a phase. We did a Japanese temple scene in Mentmore studios the other day, and I had 16 Dinos going through 8 windows. That's really hot, that's cooking. We have to keep an eye on all the sets, which are wooden."

Theatre technology in film

Garside is running all his sets through dimmer boards, so he can pull down the lights easily, to keep the heat down between takes. "I just find that using dimmer racks totally increases

continued over



THE SHOW-LIGHTING REVOLUTION



Stage COLOR 1000

Stage Color 1000 is the washlight that solves colour temperature variation problems at the source thanks to the use of a 1000 Watt halogen lamp.

Designed and built for the needs of television and the theatre, this luminaire uses a 3-filter CMY colour-mixing system to give the exact colour required.

A frost filter of the latest generation provides a wide aperture and perfectly uniform light intensity over the entire illuminated area.

With ovalized projection, electronic dimmer beam stopper and strobe, the features of Stage Color 1000 are guaranteed to satisfy even the most demanding lighting designer.

WASHLIGHTS ALLOWING TOTAL MASTERY OF COLOUR

Only Clay Paky could make washlights so quiet (no risk of disturbing the hushed atmosphere of the theatre and television studio) and with such mastery of colour, offering an infinite choice of hues and perfect colour temperature correction.

These fine luminaires also share generous pan (450°) and tilt (252°) angles with smooth movements and microstepping resolution selectable between 8 or 16 bit. Both fixtures have automatic repositioning following any accidental



movements thus eliminating time-consuming realignment procedures, together with a convenient moving body lock system for easy transport.

Stage COLOR 575

Stage Color 575 uses a tried and tested HMI 575/SE discharge lamp with optional hot re-strike and on/off control from the lighting desk.

The 4-disc cyan, yellow, magenta and amber colour mixing system can generate infinite variations of tone, with a range of beautiful pastel shades to create special atmospheres not possible using conventional 3-colour systems.

The luminaire is complete with GTC the exclusive Gradual-variation colour temperature-correction system.

3 filters for 3 different intensity frost effects, special effects, ovalized beam beam stopper, strobe and mechanical dimmer are just some of the features of Stage Color 575, the washlight that offers the maximum creative potential supported by unparalleled reliability.

Cantilevered Cables and Generators on Skyscrapers

continued from previous page

your speed and setup time. A DOP can ask me to lose a stop of light. Instead of having the guys race around and switch off lights, a guy just pulls a couple of levers down on a board, and it's gone in five seconds. The whole lot is kept in memory.

"My board operators have monitors beside them. They write down every scene we do, and log it. If I get stuck, I just ask for a scene, and they bring it right back."

Dimmer racks are gradually coming into film, but Garside has been using them for about five years. "It takes more time wiring up, but it's the quickest way to do things. If you have rigging crews, that's part of their buildup time. On set, it's invaluable. Speedwise, it's unbelievable."

"There are good dimmer board operators out there now. I've got two or three working with me, and they totally understand the system I use. It's great. All my sets are on dimmers."

Theatre lights, too

It's ironic that dimmers come from theatre, a old fashioned medium compared to film. And for *Matrix*, Garside is using 800 Parcans on the sets. "Normally when I work on a film, I put my lamps through dimmers. When the lamp is dimmed, the colour temperature changes and gets warmer. A normal lamp runs at 3,200 kelvin, which is tungsten white light. If I knock the lamp down by 50%, the lamp warms up because the filament is cooling down, and I get 2600. So it warms up the light coming through, and changes the colour of the light."

"A lot of DOPs don't mind that happening. But on this film, I need to get the lights up in increments of light level, without losing colour temperature, because that would alter the look. So I'm using the dimmer racks as switching devices. Instead of dimming or augmenting one light, I just switch on more and more Pars."

In the roof of a subway set, Garside has 1500x300mm flouro fittings. "They are not really fittings, but trace paper that looks like fittings. Through each one of those fittings, I have aimed 24 Pars. I built the fittings semi-circular, so when I fired the lights vertically straight down through

them, it would hit the semi-circular diffusion, and spread out, like a flouro.

"That's to run the set at 2.8 Above that hole, are 72 Pars. When I go to high speed photography, I lift the roof out, and I put an 8x8' diffusion in there, and switch on



72 Pars, which gives me a light level of 11/16.

"I've designed it so that the light feeling still looks like a flouro fitting light. But to get that same light, I can't put 72 Pars through a 1500x300mm thing. First, I'd melt a hole in it, and secondly, they wouldn't physically fit. So I take the roof out and put another frame in there."

"The designer liked the look of these old fashioned subway light fittings. So the art department had to design a plastic diffuser that would take 1.5-2kW of light, or 400degrees of heat being put inside them. We've got 35 or 40 of these fittings all over the subway set, which have two circuits inside them with three 275w bulbs in each circuit."

"We also had to make them opaque enough to look like flouro tubes. The opaqueness stretches the light, so when you look at them through film, it all just blows out, and you don't know what's in there."

"But the secret was, to hide the gaps between the lights, when we only had 50% on. The right opaqueness made that possible."

Flying helicopter in a studio

Another challenge is the full size helicopter, spanned off the studio grid. It is motorised so it can fly into shot. "We have to light that, and the translight, plus the whole studio, and the interior of the set

"One of the big problems is that at some stage, the entire sprinkler system comes on. So we have to use underwater lights, plus I have to make sure that the safety of the set is covered. We have earth leakage protection devices all over the place."

Most of the logistics were figured out during pre-production. But the use of 300fps has increased the lighting demands. Normally 300fps is used in a small space. "But here the entire set is in shot, I have to light a big area to 11/16. That's where a lot of the problems are. I have two circuits in a lot of our practical lamps in the subway, so I can run at normal speed, and high speed."

Matrix are using four Fox stages, Mentmor studios, the Naval stores, and Epsom Rd, where they just put in a set 100m long.

They also have a full scale subway at the back of the grain silos at Glebe Island, with a train running through it. Garside had to light the five carriages inside the train.

With the high speed photography, and so many big sets, spread around the city, Garside could be feeling stressed. But he's not. "I've got a good crew of boys with me. We are working the American system, where the gaffer always stays on set. All the organisational and paperwork is done by the best boy, and the rigging gaffer. So I do most of the working out and mapping out of the film before it starts."

"Then I give all that to the best boy, and rigging gaffer. I can't leave set. My job is to be on set with the DOP, and advise him, and look after him the whole time." Garside communicates with his crew by walkie-talkie, and mobile phone. He sorts out any off site problems at lunch or after work. "A lot of thinking is done on set, and transferred down the walkie talkie. So you need to have a pretty good support system."

Garside has four guys on set, and four off. But sometimes they are rigging three sets, so there could be 20 guys working. They also had night shoots, where they had to prerig all the big street sequences, and rig studios for wet weather cover. At that point, Garside had 14 guys on the night shoots, the rigging crew had 6 in the studios, and 11 prerigging the streets ahead.

● **Madeleine Murray**

THE COMPACT REVOLUTION



Stage COLOR 300

Presenting an ultra-compact washlight with a high-quality Fresnel lens, plus an efficient and spectacular fading frost effect with perfectly linear variation.

The innovative frost system provides a unique 50° aperture with uniform light intensity over the entire illuminated area, which greatly reduces the typical loss of brightness associated with conventional diffusers.

The CMY colour mixing provides an infinite varied palette, allowing lighting designers to choose exactly the right tone of colour for each scene. With a dimmer and beam stopper on separate independent channels, Stage Color 300 achieves a level of performance previously available only from far larger and more powerful luminaires.

PINT-SIZE FIXTURES WITH BIG PERSONALITIES

Clay Paky have revolutionized the world of compact luminaires, making them so efficient and versatile that they are ideal for any type of environment and application. Both models use either the HTI 300 discharge lamp, offering the same features as the more powerful HTI lamps from which it is derived, or the brand new HMD 300 with a 3,000 hour average lifetime and colour temperature in excess of 5000 K. Equipped with a highly practical automatic repositioning device to correct accidental movements, both luminaires are also designed



for easy handling thanks to a convenient transport lock on the moving body. The wealth of functions provided by Stage Color 300 and Stage Light 300 makes them an ideal duo for professional and discotheque applications. Thanks to Clay Paky, top-level performance and compact dimensions are no longer conflicting requirements in the world of professional show lighting.

Stage LIGHT 300

Presenting an ultra-compact effects luminaire equipped with electronic focusing and a manual zoom lens for a wide range of projection angles. This unit provides unique features for a fixture in this category.

36 colour combinations, 2 filters for colour temperature correction and special effects filters combined with refined graphics equipment including 6 rotating gobos with indexed positioning through 540° and a 3-face prism. There is also a mechanical dimmer and a high speed strobe.

The superlative performance and features of Stage Light 300 rate it as the most advanced compact moving body effects projector on the market.

BUYER'S GUIDE

lighting dimmers

Prices EXCLUDE sales tax and were correct on 15th July 1998. All care taken, no responsibility for errors. Four models only are shown in each category although these manufacturers have many more. Indicative only.

ARCHITECTURAL

ANYTRONICS

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Black Box Series range of wall mounted dimming and switching packs. In 4, 6 and 8 channel configurations with 5 to 10 amp per channel capacity. Triac control 12-240VAC, opto isolated inputs, DIN and screw terminal inputs, channel mimic LED's, remote enable/disable facility and individually fused outputs. DMX optional on most models. From \$290.23.

PRO-DIM 2.5 architectural single channel dimmer of 10 amp capacity suitable for switching all types of loads. Master and slave versions available. Heavy duty choke, remote input facility, internal pre-heat and max level controls, circuit breaker protection. 60mm fader and blackout switch (on master). Surface or flush mounting enclosures. \$302.32.

BYTECRAFT

Bytecraft Pty Ltd (03) 9587 2555, (02) 9550 3955

Solution5 Compact, robust, wall mounted 20amp dimmer pack can control variety of loads incl. incandescent, fluorescent, ELV, metal halide and cold cathode. Analogue or digital control. Master/slave operations as well as multiple Solution5 configurations are supported. Stand alone internal sequencing, with presets including fade up and down time, multiple local and remote modes. From \$1200.

Solution28 Your specific dimming requirements (10, 20 and/or 40 Amp) can be incorporated into each Solution28 cabinet making it an economical approach to modern dimming specifications. Stand alone internal sequencing with 100 presets each including fade times, internal soft patch, fault detection, status monitoring, RCD protection and more. From \$7200.

DYNALITE

Dynalite (02) 9319 5055

Dimtek DTK406 4 x 5 Amp architectural dimmer - 96 scene memory, DyNet® and analogue control - suitable for boardrooms and small projects. Compatible with most AV control systems. From \$912.



Dimtek DTK905 12 x 5 Amp architectural dimmer - 96 scene memory, 12 circuit breakers, DyNet® and analogue control - suitable for clubs, comes with DMX and LCD options. Compatible with most AV control systems. From \$2089.

Dimtek DTK910CE 12 x 10 Amp architectural dimmer - 96 scene memory, 12 circuit breakers, DMX, DyNet® and analogue control - suitable for large commercial projects. LCD option. Compatible with most AV control systems. From \$3504.

Dimtek DTK916 12 x 16 Amp architectural dimmer - suitable for mixed architectural/theatrical uses - 96 scene memory, 12 circuit breakers, DMX, DyNet® and analogue control - suitable for large commercial projects. LCD option. Compatible with most AV control systems. From \$4900.

JANDS

Jands Electronics (02) 9582 0909

GP12 Wall Mount 12 x 2.4kW, Australian outlet, DMX512 controlled wall mounting dimmer. Soft turn on characteristics, circuit breaker protection on outlets, Switchable start address and mains supply indication. Optional extras include: 24 way patch field, extended back plate and other output connectors. \$2618.85.

HP12TR Wall Mount 12 x 2.4kW high performance wall mount dimmer. DMX512 controlled, on board menu driven software for a range of functions including individual preheat levels, scene storage, neutral failure detection, voltage compensation, maximum output voltage selection, software lockable control panel. Optional extras include: 24 way patch field, extended back plate and other output connectors. \$3766.39.

HP12SC Wall Mount 12 x 2.4kW Hard fired SCR control wall mount dimmer. DMX512 controlled, on board menu driven software as for HP12TR. 500 microsecond risetime. Optional

extras include: 24 way patch field, extended back plate and other output connectors. \$5421.80.

LITE PUTER

ELSTA (02) 9568 2100

D-120 1 channel dimmer, 2kW inductive loading maximum, high speed circuit breakers, plug-in modular type, emergency function, size 44 x 132 x 120 mm, use stand alone or with CP-2. \$351.64.

CP-2 4 pre-set scenes, controls up to 27 channels, 3 wire sync. remote control, fade time 0-60 seconds, emergency function, key lock function, use as system with D-120, size 70 x 120 x 40. \$245.08.

CP-3A 100 scene programmable dimming controller and dimmer, up to 512 channel, built-in computer controlled, timer control, fade time 0-30 minutes, password protection, size 70 x 120 x 50 mm. \$409.02.

DP-6 DMX Interface, 8 group control points, DMX-512 512 channel outputs, 100 scene memory, timer function, fade time 1sec - 30min, use with CP-3A for complete system, size 482 x 88 x 96. \$1639.02.

Q ENGINEERING

Q Engineering (02) 9938 6311

Dimmax digital dimmers come in two, four, six and twelve channel versions and are capable of dimming loads of five, ten and twenty amps per channel. From \$968.

Hidim is an energy management system for HID lamps. It can control up to six x 400w metal halide lamps per unit. Digital control available. \$841.

Lampguard is used to increase the lamplife of sensitive lamps. This is achieved by regulating the voltage. Available in 5, 10 and 20 amp versions. From \$286.

AMRA Control panels are used with the Dimmax digital dimmers. Programmable con-

Alcorn McBride's DMX Machine

trol panels are available. From \$250.

THEATRE/TOURING

ANYTRONICS

TechScape (07) 3358 5118, 1800 773 187

Series 192 range 6 channel dimmers and 12 channel switching racks in fan cooled 2RU rackmount format with automatic plus or minus input signal detection. Single and 3 phase models. Dimming of 12-240VAC, 5 and 10 amp per channel output capacity, low voltage DC output, analogue input 0 to +/- 25 volt, DMX optional whilst still remaining analogue input, From \$978.51.

Series 193 range rackmount dimmers in 3, 6 and 12 channel format accepting both analogue and DMX512 inputs and with circuit breaker protection on all outputs. Output capacity of up to 40 amp per channel (D310) 3 phase input, monitor LED's, on board rotary output controls and low voltage DC output. From \$1956

DS410DMX Universal 4 channel @ 10 amp per channel dimmer, single phase, analogue and DMX input, circuit breaker protection, rack, wall or truss mounting. \$1055.24

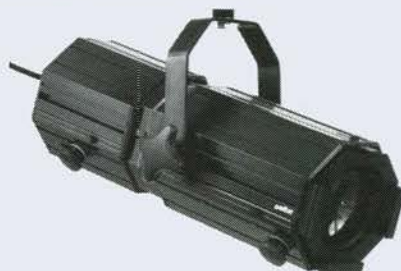
AVOLITES

Universal Lighting & Audio 1800-648-111, +61-7-5532-9922

Avolites ART 24 channel dimmer system a three phase, 100% duty cycle dimmer that will control 12 channels of up to 4,000 Watts each. The design incorporates full monitoring and status feedback via the backlit display. Channel levels can be set quickly and easily from the front panel via the 12 rotary faders. Each module can store 12 memories which can be replayed via the front panel controls. Channels can also be programmed to respond to any one of 16 dimming curves. 72, 60 and 48 channel systems available 12 channels at 16

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BUYER'S GUIDE

lighting dimmers

amps per module. A range of options and configurations are available. (ART dimmers in touring rack). \$37,968.

Avolites TV 24 channel dimmer system fully digital, high density systems. The modularly designed units are available in 25 and 50 amp versions and can be configured as a rack mounted main frame system or single modules for distributed dimming systems. All modules are three phase, offer high suppression levels, rapid response, 100% duty cycle, auto-voltage input selection and automatic frequency tracking. Each module is separately addressable. All circuits are protected by MCB's and control circuitry is cross phase protected. Switchable RCB protection is also fitted as standard. (TV dimmers in touring rack) \$37149.

BYTECRAFT I.D.S.

Bytecraft Pty Ltd (03) 9587 2555, (02) 9550 3955

Bytesize TRV Budget priced dimmer. 12 x 10A channels; DMX 512 or AVAB input; MCB protected output; output patching and curve control; LCD Display mounted control panel; internal backup. Also available as 6 x 20A channels. From \$3200.

Bytesize 483/TR 12 x 2.4kW channel dimmer. Input DMX 512, AVAB DMX, Felix, Command Link. Analogue +/- 10V. Fault reporting; internal preset programming; soft patch; curve control. Also available in 6 x 5kW channel model. From \$4200.

Bigtop Broadcast quality 12 x 2.4kW dimmer designed for touring includes 2 outlets per dimmer and guard rail. Features as for Bytesize 483/TR. Also available in 6 x 5kW channel model. From \$4200.

Bytesize 483 Broadcast quality dimmer designed for professional use, with iron core filtering and SCR's. 12 x 2.4kW channels. Features as for Bytesize 483/TR. Also available in 6 x 5kW channel model. From \$4200.

DYNALITE

Dynalite (02) 9319 5055

Performer 12 x 10 Amp, circuit breaker protection, DMX and analogue control, DyNet® control port, extensive front panel control, optional load indication, user definable dimming curves, rack mount. From \$2895.

Pro Pak 12 x 10 Amp, fuse protection, DMX and analogue control, lightweight, rack/shelf

mount, some front panel testing facilities. From \$2064.

JANDS

Jands Electronics (02) 9582 0909

GP1219 rack mounting, 3RU High, 12 x 2.4kW, Australian outlet, DMX512 controlled dimmer. Soft turn on characteristics, fuse protection on outlets, Switchable start address and mains supply indication. \$2454.91

HP12TR 12 x 2.4kW high performance 3RU 19" rack mount dimmer. DMX512 controlled, on board micro driven software for a range of functions including individual preheat levels, scene storage, neutral failure detection, voltage compensation, maximum output voltage selection. \$3684.43.

LSC ELECTRONICS

LSC Electronics (03) 9561 5255

TS Dimmer 2 ch - 12 Amp or 6 ch - 20/25 Amp, Digital, Circuit breakers, 19" rackmount, front panel Figgers Control and indicators, user selectable fade curves, integral fan cooling, 100% duty cycle, DMX512/1990 protocol, hard fired tracs, 600ms rise time (peak). \$3300.

ePAK - digital dimmer 12 Channel 10 Amp, Circuit breakers, Three phase tail. Riggers control and indicators, scene memory, choice of chase patterns, DMX512/1990 protocol, hard fired tracs, 600ms rise time (peak). \$2900.

Wallpak - digital dimmer 12Ch / 10 Amp or 6 ch / 20 Amp, slimline Wallmount or hanging (optional bracket), Circuit breakers, riggers control and indicators, scene memory, choice of chase patterns, DMX512/1990 protocol, hard fired tracs, 600ms rise time (peak). \$2900.

Touring racks Modular system offering up to 72 channels; hotpatching; mains distribution; choice of dimmers and connectors;

powerguard digital monitoring; gooseneck lamps all housed in a robust flightcase. Variety of configurations available. \$POA.

DMX & NETWORK PRODUCTS

ALCORN McBRIDE

EAV Technology (03) 9417 1835

Lightcue is a real time DMX recorder which records output of any lighting board onto flash RAM or PCMCIA drive. \$6584.

DMX Machine offers 'scripted' control of dimmers (512 DMX channels) or as a RS-232 to DMX translator. \$1747.

AMX

A.V. Technology (07) 5531 3133

AXB-DMX512 Can transmit and receive 512 DMX channels for DMX applications. Onboard memory stores channel groups, faders, patches and 72 presets. Used with AMX Control Systems. \$1,300.

ANYTRONICS

TechScope (07) 3358 5118, 1800 773 187

Anytest One hand held DMX tester, simultaneous control of 4 channels, large LCD, slider control of output. \$403.32.

AVOLITES

Universal Lighting & Audio 1800-648-111, +61-7-5532-9922

Avolites Rack Mount DMX Splitter will buffer, multiply, isolate and protect console DMX outputs. The device operates from any AC mains voltage (85 to 265v) with a robust 2 amp internal power supply. Standard units have DMX in, DMX loop out, Terminate On switch and LED, plus additional Power and Data LED's. The Rack splitter provides four pairs of outputs and the Truss splitter three pairs. These are optically isolated from each other and can

Compulite's CompuLINK



be standard 5 pin or 3 pin or 3 pin reverse. \$8668.24.

Avolites Truss Mount DMX Splitter The principals of Tube Technology are utilised by Avolites in the Truss Mounting DMX splitter. Cased in a thick-wall, rigid plastic tube, the splitter is designed to attach to anything. The use of two heavy duty velcro straps means the Truss Mounting splitter needs no special clamps or other fixings. The Avolites truss mounting DMX splitter will buffer, multiply, isolate and protect console DMX outputs. The device operates from any AC mains voltage (85 to 265v) with a robust 2 amp internal power supply. Standard units have DMX in, DMX loop out, Terminate On switch and LED, plus additional Power and Data LED's. In addition to the velcro, there is a safety wire and clip. \$7773.19.

BOTEX

ELSTA (02) 9568 2100

DR-DMX DMX tester, transmits up to 512 channels, 12 channel memory, includes laser pointer, auto scan function, battery operation, LCD display, fader control and flash key, comes with padded carry bag. \$245.08.

COMPULITE

Coemar De Sisti Australia (03) 9467 8666

DMX Converters A comprehensive range of converters for various protocols including D54 and AVAB, and Analogue (+ or -, upto 144 ch, bi-directional) to DMX512, and vice-versa. From \$1,900.

DMX Splitters & Mergers Compulite's range of input and output splitters allows connection of DMX receivers & transmitters in a hub configuration. The receivers & transmitters are optically isolated from the console and from each other. Various configurations of in/out are

continued on next page



Bytesize

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ABSTRACT VR8 SCANNER

By Cat Forcer

Released last year, the Abstract VR Series of automated scanners has given the market a fresh new product. With an exterior constructed from formed plastic with a steel chassis, the scanners are designed to be seen and admired - breaking the conventional attitude that they should be black and hidden.

The VR8 is the first of a planned four model range - VR4, VR8, VR12 and VR16. As the number increases so do the features and lamp output. The VR12 will include rotating gobos and optional features such as a 35mm slide projection facility.

The VR8 is very popular for bars and discotheques but it also opens up new possibilities for exhibition, architectural, multimedia, retail and promotional lighting applications.

Drew Muirhead of Sydney-based company DMC has purchased sixty of the units in the past month.

"I think it's the most powerful, punchy and compact small luminaire on the market," he told me. "We're about to replace all our permanent hire intelligent lights, about 240, with these fixtures. We're replacing them at the rate of eight a week.

As soon as the units are delivered, they go straight into one of the many nightclubs that DMC hire gear to. Ken Jackson, one of DMC's technicians, showed me some of the VR8's currently in use at Rouses nightclub on Oxford Street.

AESTHETICS

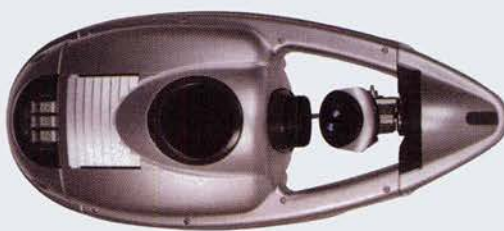
"They're a very stunning unit to look at compared to the old, black intelligent scans people hide in rooms," said Ken. "Abstract have made these a fixture to look at although you can hide it if you want. People walk in and wonder what they are. I've heard lots of comparisons from hoovers to space ships."

All of the VR8's owned by DMC are silver finished although Abstract have developed a colour coating system for the VR range allowing designers to specify their scanners in a comprehensive range of Pantone colours. ULA say that they will have VR's in black or gold ex-stock, in addition to the silver, by September with other colours to order.

PROGRAMMABLE EIGHT STEP CHASER

"They have an eight step chaser which you can program into the unit without the controller which means they can be used for anything," said Ken. "We have a couple upstairs in the restaurant with an eight step chaser built into them. Every time you switch them on they automatically go to that chaser and run themselves without a controller. That's good because it means you don't have people who don't know how to use it trying to control it.

The eight step chaser allows up to eight positions with colour, gobo and time to be set directly at the back of the unit via four buttons and an interactive LED display.



PAN & TILT

"In the units they have adjustable pan and tilt (via the control buttons on the rear of the unit) which means you can reverse them," said Ken. "It means you can have the units flat or on their sides, if you go from flat to on it's side the mirror, when it is actually panning, thinks it is tilting."

STAND ALONE SOUND TO LIGHT

Without the use of a controller and by simply linking the units together with a data cable, the VR's built-in software automatically makes one unit a "master" and the rest "slaves", with the master ensuring all the units operate in a coordinated fashion using the hundreds of built-in programmes running sound-to-light from the built-in microphones.

"Usually when you have other scans on stand alone functions, they have a habit of doing what ever they want and none of them match in together. With the VR8's, you can link them together so there's one control unit and the rest follow suit to it. Everything is symmetrical so it looks like a designed show.

"The actual programmes that are in the stand alone feature are programmed programmes, they're not just any old thing. Everything it does is put together with the thought that if you're going to hook more than one up, they'll look in sequence. It's been programmed as a show.

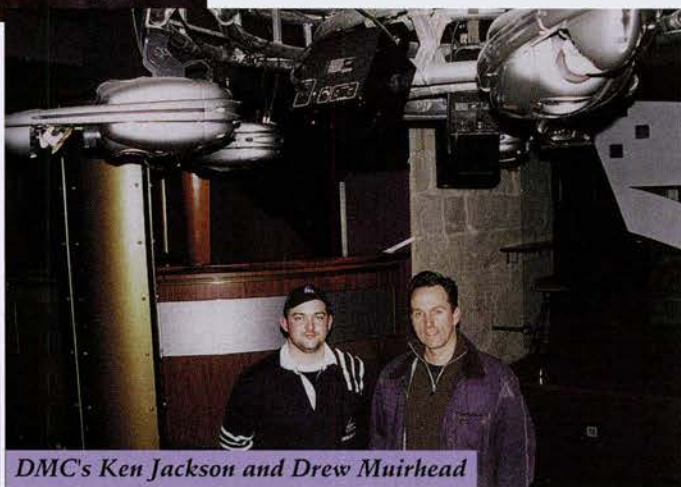
The units also have a "walk away" function which means if they don't get a control signal from a console, they will automatically go to stand alone function.

LAMP

"Abstract are bringing out a new lamp option for the VR8 soon," said Ken. "The lamp is currently a GE 150W HQI discharge lamp with a 6000 hour life. The units are rather

continued on next page

The VR8's in action at Rogues



DMC's Ken Jackson and Drew Muirhead

BUYER'S GUIDE

lighting dimmers

continued from page 85

available. The Mergers are sophisticated electronic switching boxes, effecting a merge between two DMX sources. The Merger ensures against unwanted blackouts. From \$1,800.

E-Mix The E-Mix Ethernet node is a dedicated Ethernet to DMX/DMX to Ethernet router. The E-Mix node has 1 Ethernet connection, 2 DMX outputs, and 2 DMX inputs. 2 E-Mix nodes can be connected to form a single redundant pair, which provides on-line backup. From \$7,700.

VideoLINK & CompuLINK VideoLINK is an Ethernet workstation with a remote VGA display and text keyboard. View exams independent of the main console, attach text labels, or master the main console with the local text keyboard. CompuLINK includes all of the VideoLINK functions plus DMX output and DMX input. It also supports peripheral operations for the remote floppy, printer, remote control panels, and MIDI. From \$7,000.

CRESCIT

Coemar De Sisti Australia (03) 9467 8666
DMX Splitter 1 in 3 out splitter. The DMX512 input is cleaned, optically isolated and then provided as three independent outputs. Each of the three outputs are capable of driving as many fixtures as the single input. From \$586.

DNA (Distributed Network Advantage)

LSC Electronics (03) 9561 5255
Isoport Wallmount electrically isolated and buffered DMX512 outlets. Integral Power and DATA indicator. Connects direct into a building's DMX512 wiring without powering down. Available in 1, 2 or 3 outlets. From \$220.
Isosode Wallmount, intelligent electronically isolated input, senses when a transmitting device is connected to disconnect upstream DMX512 data. Indicators show "Power", "presence of upstream data" and whether a transmitting device has activated the Isosode. \$250.

Isoport Powersource for ISONODE and ISOPORT. Short circuit proof, multiple units can be connected together for full redundancy. Auto fault detection and back-up selection button. Smaller wallmount unit also available. From \$250.

DMXchange Data cross patch unit to route up to six DMX512 inputs and up to 12 DMX512 outputs per unit. Can be used with other RS422 based products. Memory retention if power failure. From \$2800.

DMIX Merger unit for two DMX512 inputs to one DMX512 output (or 3 into 2) with signals merged on HTP basis. Fully isolated. From \$1580.

GREAT AMERICAN MARKET

Showcraft (02) 9698-3009
Gam Command Hand held riggers control for direct access to DMX512 dimmers. The full function keypad makes this unit easy to control a full scene or just a single dimmer. Switches from scene to solo with a single key. Functions as battery operated test device for all 512 channels. Checks all 5 pin cables and tests DMX presence on the line. Made in Australia. \$425.

Gam Command Two Hand held riggers control with LED channel number and level display. This versatile unit is quick to operate both solo and scene controls and provides access to all 512 dimmers. Functions as line and console tester automatically showing channel level information from the console. Ideal when DMX patching mysteries occur. Metal casing battery operated. \$620.

Gam Switch DMX Compact automatic line switcher for DMX. Designed to provide a riggers control input to the DMX line without having to plug and unplug DMX connectors which

may lead to faults. The switch is activated by turning the power off on the riggers control which returns control back to the main desk. Ideal unit to provide an access socket to dimmers without having to unplug the main console. \$295.

Gam Opto-Iso Compact optical isolator and line splitter. Isolates control signal and boosts signal to provide a fully split line with no interference to the main signal. This battery or plug pack powered unit provides a quick solution if trouble develops at last minute. It is a cost effective solution for desk to dimmer isolation. Housed in a sturdy metal case with one 5 pin input and two 5 pin outlets. \$255.

G.T.

Group Technologies (03) 9872 5000
GTMDI full MIDI to DMX converter allowing selectable MIDI channels. This enables MIDI notes to be translated into DMX. 1RU. \$900.

LIGHTPROCESSOR

TechScape (07) 3358 5118, 1800 773 187
QDMux decodes 24 channels of DMX to analogue, has both 3 and 5 pin XLR, DMX in/out's, start address alpha numeric LED, DMX line failure detection with blackout, last scene or stored scene recall programmability. \$1204.84

QBuffer DMX isolated distributor/splitter/buffer, 8 outputs, 1Kv isolation between input and output, has both 3 pin and 5 pin XLR outputs. \$1416.34.

QStore 256 channels DMX control and backup system, can store 64 presets of all 512 channels, can replace desk and run show-operated manually or triggered by binary trigger, pre-stored scenes can be recalled in any order and switched or faded in, has PC/MIA memory card slot. \$1506.99.

LITE PUTER

ELSTA (02) 9568 2100
CX-1 DMX Tester, DMX in and DMX Out signals, auto fade, chasing output, intelligent lighting equipment testing. 10 memories, measures in percentage or hexadecimal, runs on 4 rechargeable batteries, size 95 x 128 x 50mm. \$409.02.

ISO-1 DMX Isolator - Safety device to be used between DMX consoles and DMX lights, can be used as DMX terminator, has error indication, protects DMX equipment from surges or stray voltages., size 130 x 66 x 45mm. \$269.67

DP-3 DMX-Analogue converter, 72 channels, converts from DMX 512 to 0-10v DC, uses 3 25 pin D-type sockets for analogue signals, size: 482 x 88 x 50mm. \$1064.75.

DX-1220 12 channel DMX and analogue dimming pack, 20A per channel, 3 phase power input, 12 sockets on rear, 12 individual plug in packs, size: 482 x 176 x 260mm. \$2868.03.

LSC ELECTRONICS

LSC Electronics (03) 9561 5255
Linklight 48 channel multiplexer/demultiplexer with positive or negative analog voltage. Inbuilt test facilities, external switching for polarity and transmit/receive mode, switchable power supply. From \$1290.
Softlink Electronic Softpatch system. Multiple DMX512 inputs to multiple DMX512 outputs. Options: Floppy disk back up, 10 Fader master Module and Geographical patch option. From \$5600.

Multisplit Splits outgoing DMX512 signal up to 20 fully buffered outputs. All in and outputs fully electrically isolated. From \$1350.

DMX Splitter Small compact self-contained data repeater. Splits one outgoing DMX512

signal to 4 fully buffered outputs. Ideal for touring or positioning in truss. From \$600.

SHOWCRAFT

Showcraft (02) 9698 3009
DMX Isolator Model 204 Professional quality isolator with four outputs, two DMX line inputs and a riggers control input. This unit is constructed using high quality components throughout to ensure maximum reliability and 24 hour continuous operation. The isolator features an automatically switched input which provides a for a riggers control input or production desk input. It can be user configured as 1 in 4 out or 2 in 2 out on individual lines. Made in Australia. \$1400.

DMX Isolator Model 104 Professional quality isolator with four outputs, one DMX line input and a riggers control input. This unit provides the ultimate isolation for DMX lines, the input line into four outlets galvanically isolated from each other. The unit features an automatically switched riggers input to enable quick and easy access for dimmer testing or riggers control input. \$1300.

DMX Isolated Wall Socket A fully DMX compliant isolated line outlet housed in a strong metal casing fitted with a five pin XLR connector. Designed to provide an easy solution for the provision of one or many outlets throughout a venue. Boxes can fitted with single or dual outlets and provided with custom labelling for specific applications. \$270.

Dmx-Analog converter Model DA12 Compact 12 channel card provides up to plus10 Volt DC output from a DMX input. Can be

set to start on any channel from 1 through to 512. Supplied as a PCB card only with terminal block connections, this card converts a single analog dimmer rack to digital. Also used for relay drivers to trigger effects or to drive any analog item. \$295.

THEATRELIGHT

Lightmoves Technologies (02) 9560 0000
DMX Dongle DMX PC Interface, receives and transmits DMX from a PC. Set up a lighting rig and visually display dimmer out put levels. \$1250.

DMX Decoder 24CH Options from 24 ch up to 60 Channels. Decode from DMX to plus or minus 10 and 15 volts. \$825.

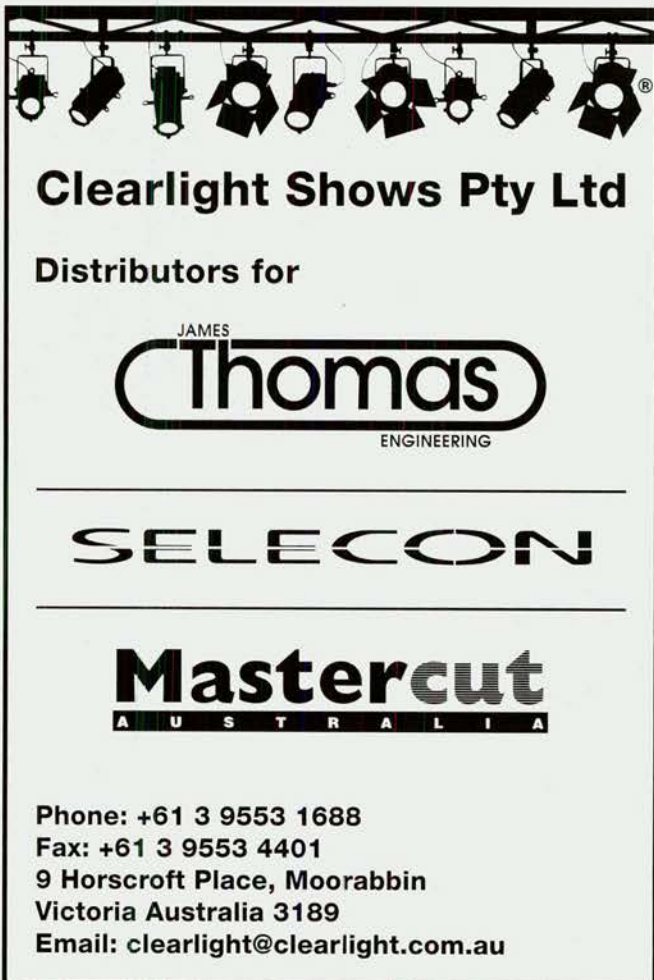
DMX Link DMX inputs allow 2 control desks of up to a total of 240 channels to be mixed then patched into the same lighting system. Also a stand alone memory desk. \$995.

Theatrelight Splitter One input to four DMX outputs \$725.

next month

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ABSTRACT VR8 SCANNER

bright for rooms because of the optics they have. The extra lamp life is certainly one of its main advantages."

ULA say the new lamp option for the VR8 is a HSD250 which will be available end of August.

COLOURS

The VR8 uses a 360° colour wheel driven by stepper motors. The use of a trapezoid colour system produces seamless movement between the 12 dichroic colours (10 colours plus white and multi-colour).

"The colours they have in them are really good, very live," Ken said. "They're the hot pinks and nice deep blues. They have a UV in them which, with the exception of Martin lights, a lot of lights don't have. They have a quad colour - red, yellow green and blue - in the one dichroic colour. All the colours are very live, very bright and warm - they're like electric colours."

GOBOS

The VR8 is supplied with a gobo wheel containing twelve patterns (11 plus open).

WEIGHT

"The VR8 is very, very light - only 10kg - and the construction is very sturdy," said Ken. "Because they are lightweight, you can hang them in any position. The hook clamp mount has got a 180° pan, a lot of lights only have a 90° pan on them."

COOLING

"The VR8 is fan cooled," Ken told me. "The fan is at the back of the unit near the top. As hot air rises, it is always a better place to have it rather than having it at the bottom of the unit near the lamp. A partition separates the fan from the lamp so the air doesn't blow straight on to it."

DIGITAL DISPLAY

"The digital display shows you the addressing of the unit," said Ken. "All of the built in functions of the light come up on it too. You can also put in the eight step chaser on the digital display. It also has "blanking" so after you've switched on the unit and it has gone through its initiation sequence, the LED display will switch off."

Another handy feature is the "lock out" for the control buttons meaning that features on the unit can be set up without the risk of others inadvertently changing them.

CONTROL

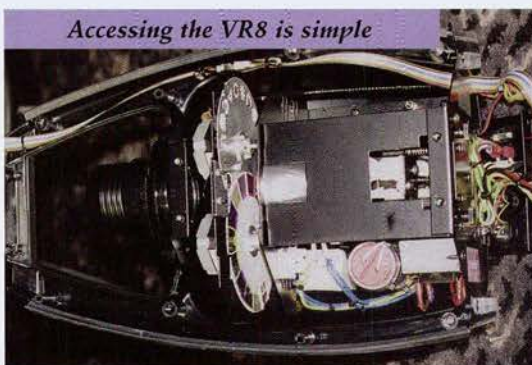
"The VR8's do have their own dedicated controller - Abstract CE Controller which can run 16 units - but they can run from any DMX controller," said Ken. "In nightclubs a lot of people don't know how to use controllers and are not too bright at learning!



The Digital Display



The Colour and Gobo Wheels



Accessing the VR8 is simple

You can teach them or use the stand alone function. With the VR8's, when the beat of the music stops instead of still moving fast they actually realise all the bottom end has stopped and they slow down. I don't know how they've done it but it's good not to have the lights going spastic when there's nothing happening with the music."

COMPETITORS

"Everyone is a competitor but there is a lot of stuff in these units that Clay Paky or Martin don't have," said Ken. "Martin have stand alone but it's not as neat as this one. I think the guys from Abstract have looked at all the other luminaires and put in as much as they can that no one else has thought of like the 'walk away' function. It really stands apart."

MAINTENANCE

"They come apart relatively quickly," said Ken. "They get hot but not terribly so you can still touch them. The main thing you have to worry about is keeping the filters clear so the air can travel through. You have to keep them up to quite a high standard. If the clubs have carpets, the filters need to be cleaned every couple of weeks."

The back of the unit comes off to reveal all the electronics and to gain access to the lamp. There are also software resetable functions for realignment of the mirror, gobo and colour wheels, if necessary, and minimising any need for access and manual resetting.

BACK UP SERVICE

"ULA have been very good although there haven't been any problems," said Ken.

PROBLEMS

"So far we haven't encountered any and they've been running for a while now in various nightclubs," said Ken. "They get used a fair bit - a minimum of eight hours a night for about four nights of the week. Normally if a product is going to have problems, it'll occur in the first couple of weeks but they've been great."

Price: \$2191 inc. tax

Manufactured by: Abstract Lighting +44 116 278 8078.

Australian Distributor: Universal Lighting & Audio +61 7 5532 9922 or 1800 648 111 (free phone within Australia)

New Zealand Distributor: ULA (ULA's preferred dealer in NZ is Lighting Supply Company +64 9 838 9247

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THE PA PAGE

With Michael Orland

SAFE STAX

Every Sunday night for the last year I've worked in a little Irish pub in Sydney's Oxford street called "Kitty O'Shea's". Man, it gets packed. The crowd gets pretty rowdy in the best sense of the word. They drink, sing, and dance a bit like the party in Steerage class on Titanic, and the vibe is such that even after a year of Sundays, despite the noise, smoke, and cramped conditions, I still enjoy being there. This surprises most other system operators I talk to who have worked there. Their main complaint about the place is that the setup is so small and tight. And almost each of them has a story about the night they worked there when one side of their PA got knocked down into the throng. Make no mistakes, although a place this size doesn't need much audio to fill it, this is no place for flimsy speaker stands.

Stacking speaker systems can be quite a science. We'll discuss parameters such as coupling, phase coherence, and Q (oh do pay attention 007) later. The first consideration for any serious professional must always be safety. It is a fortunate phenomenon that speaker cabinets traditionally called bass cabinets, i.e. those designed to reproduce 250hz down, can be placed below head level in a crowd with minimal losses of SPL or quality. In fact the damping effect of bodies can "tighten" bottom end considerably. Due to the wavelengths involved, bass cabinets are usually larger than mid, high, or mid/high cabinets; another handy thing for stacking. With this in mind, I have always preferred the big stable sub with a smaller mid/high type system to a full range twin 15" plus horn type system. Each sounds fine in a showroom or garage when you're shopping around. It's only when you realise that anything reproducing 250hz up, below headlevel in a crowd, is wasted, that the separate sub idea becomes so much more practical for even small systems.

As I've said before, the speaker cabinet is a link in an energy chain. One strives, as much as possible, to convert as much of this energy, as efficiently as possible, into sound. But it is inevitable within traditional wooden enclosures that some energy will be lost via vibrating panels. So boxes vibrating off bass cabs becomes yet another potential hazard. Back in the primeval era, many systems utilised pairs of super tweeters in their own little boxes. Heavy little suckers that were placed precariously on top of speaker stacks. I never heard of anyone being killed by falling rings, but I can recall at least two serious injuries.

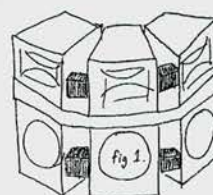
So let's look at techniques for minimising the dangers of falling boxes due to vibration or enthusiastic crowds.

We used to either staple or glue squares of carpet to our "Rays" and "Ws" (again harking back to the dreamtime). Not only did the carpet minimise rattles being induced between boxes, but the carpeted surfaces would never slide easily against each other. Safer.

Purpose built hardware (Penn, Re-an, etc) may be utilised. If the cabinets to be stacked are of identical width and depth, then interlocking corners are a good idea. We've used these on our new mid high concert cabs which works well when we do the mega

line array thing. For different sized cabinets, "foot and cup" type hardware can be fitted although this may restrict the versatility with which the system comes together. The drumfill mid/high in our big rig has two wooden pegs which fit within recessed holes in the sub. This works nicely even when the fill is set up in low profile, sharply angled on the floor.

For multiple mid/high systems, wratchet straps are a good idea. In these applications, load bearing is irrelevant, so the cheap types you see in bargain disposal stores will do fine (Never use octopus straps. Dangerous and stupid). Once you have decided on the appropriate splaying/arraying for the room, blocks of wood can be gaffed between boxes before tightening the straps as per fig 1.



One clever approach that has been utilised by almost every major manufacturer, but never gained much market acceptance, is the use of a floor sub as an anchor for a pole on which you sit your mid/high "satellite". I used this idea during my first three months at "Kitty's". It was certainly stable enough, and I only stopped using it when I decided I wasn't getting enough coverage with those particular boxes.

My final tip for safe stax is the use of gaffer tape. (Headline: Michael discovers gaff sticks. Big woo.) Can the sarcasm and let me finish. Now there is nothing very safe about using strips or crosses of gaff on the sides of cabinets. I have seen boxes with yards of gaffer on them come away from each other and come a-tumbling down. See, gaffer is pressure sensitive. Meaning the more you push down on it, the harder it sticks. Strips on the sides of boxes provide no pressure. Useless. However, Michael's genuine patent refused gaff wad has worked simply and effectively for years without a single mishap. To make a gaff wad, tear off about four inches of two inch wide gaff. Make a loop, sticky side out with about half an inch overlap where it joins. Flatten it into a double sided square. Fold in each corner to the inner centre to make a concertinaed smaller square. There. Gaff wad. Make four per box. Once your top box is positioned, tilt it back and stick a gaff wad under each corner. Carefully lower the box into position, taking care not to "smudge" the cabinets. Done. After about an hour or so, it becomes almost impossible to move the box by pushing it. Yet at the end of the night they come apart easily with an upward push.

It's this same simple technique that keeps my boxes together each Sunday night in seemingly impossible conditions. If you're ever passing by, stop in and say g'day to Warren or myself.

Michael Orland runs TPAC, Ph: +61 2 9799-7219.

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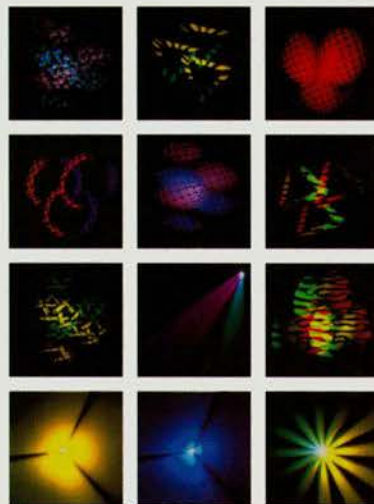


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