

[buyers guides: live mixing consoles, profile spotlights]

Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

AUSTRALIA \$4.50 #34 JUNE 1996

[industry news from
studios, theatre, av,
hire, production and
further afield]
[and new products]
[lots]



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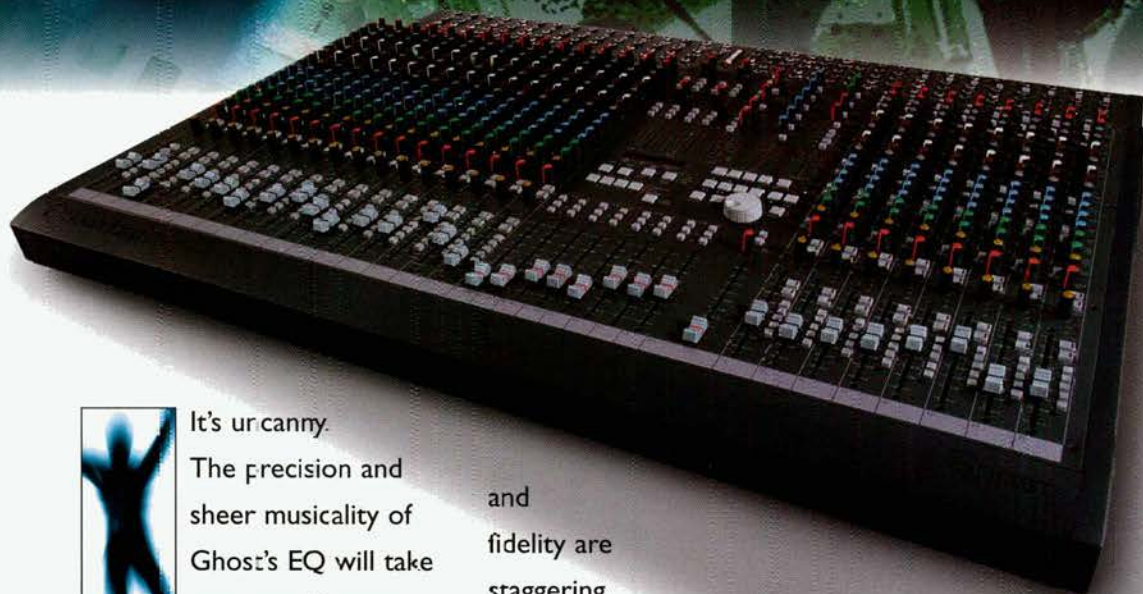
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ALWAYS full of NEWS

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Cover scene from Phillippe Genty play

Subscribers and readers
please note:

Connections is now monthly with the addition of a new JULY issue. This replaces our Connections Contacts, which has been scrapped. Instead we will bring you more useful information in the pages of Connections, monthly except January. We have some great new ideas coming soon!

Subscribers will now get 11 issues for the price of 10. In fact, at \$39.50 for one year, your per-issue cost is just \$3.62, a saving of 20% off our cover price. And that is mailed to your door before the mag is on newsstands!

If you subscribe for 2 years at \$58 you save even more, and pay just \$2.63 per copy! It pays to subscribe, with special ENTECH offers too, so dial 1-800-635-514 with a credit card handy, or use the freepost card in this issue.

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Peavey Electronics is pleased to introduce the MAQ™ Series of graphic-equalized power amplifiers. Optimized for feedback suppression, the equalizers provide 12 dB of boost and 18 dB of cut at 1/3 octave spacing between 500 Hz and 4 kHz, with 2/3 octave spacing above and below. Peavey's unique and novel FLS™, "Feedback Locating System," (patent pending) causes an LED indicator to glow red above the EQ slider controlling the feedback frequency. When feedback occurs, the operator simply pulls down the indicated slider.

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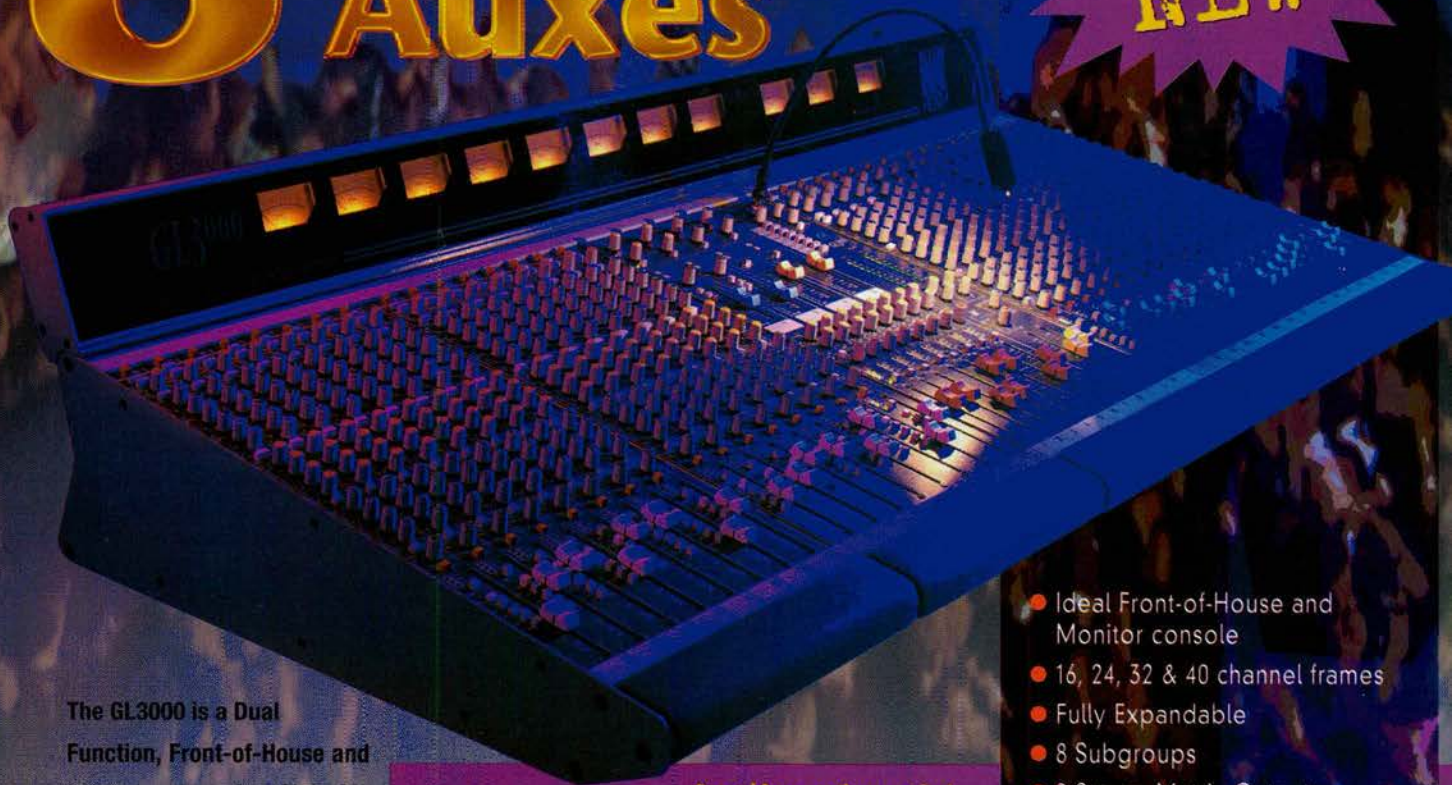
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Because the GL3000 has 8 Groups and 8 Aux busses; on one night the console can be a stand alone 8-2 mix monitor board, another night a single engineer can mix any number of bancs for a showcase performance. It is that easy with the GL3000 because everything you need is in front of you.

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INVESTOR IN PEOPLE

Connections

JUNE 1996. Number 34

Ray Dolby for AES

Our only 100% professional audio event, they say

The 6th Australian Audio Engineering Society Convention kicks off September 10, with keynote speaker Ray Dolby of Dolby Laboratories. AES hold their Australian regional convention each two years or so, returning this year to the World Congress Centre.

The workshop program promises more than 20 sessions, including MIDI, Recording, Digital audio, ISDN, post and Broadcast topics. At presstime the exact offerings were not available, nor costings. But watch this space.

A collection of technical 'white' papers is also presented at each AES, subjects to be addressed will include digital sound processing, coding and transport of high quality audio, recording styles and media, and amplifier technology. A special session is promised to address the topical issue of digital

radio broadcasting in Australia.

Technical tours will be run to leading audio facilities across Melbourne. The stuffy AES Banquet has thankfully been consigned to the data dumpbin of history, and a more relaxed (our interpretation) 'huge' party event will be held on board the Polly Woodside - a floating maritime museum situated outside the Melbourne Exhibition Centre.

The financial engine room of AES is the exhibition, where most major audio distributors show their wares to the 1000 or so delegates attending. This year over 50 exhibitors are again expected.

Other attractions include repeat performances of the Museum, and the Amplifier Comparison is back.

The AES this year is organised by ICMS, call them on (03) 9682-0244. *Dates: September 10-12th.*

National Safety Committee

Following the Safety in the Performance Space conference held at ENTECH '96, a working party has met twice to establish an industry based safety committee.

A target has been established to formally incorporate an Association around the time you read this, with representation from all representative bodies.

These include associations such as the Entertainment Industry Employers Assn, the Media Entertainment & Arts Alliance, and rep-

resentation from each sector of the industry including each state and territory.

According to convener Simon Jenkins, the key is to avoid re-inventing wheels. Links with overseas bodies are also being established.

High on the list will be establishing National Conformity for Rigging and Electrical Standards and practices.

Contact Simon c/o (02) 310-4989 & watch Connections.

INDUSTRY NEWS

SALES

Amplifiers from QSC have found homes in lots of places, say distributors **AR Audio Engineering**. 20 MX amps to LAVA in Melbourne, 9 Power Light 1.8 to Norwest Productions in Sydney, 5 to Austage (Sydney), 5 MX3000a to AAA Productions, 20 MX 1500a to AVSOUND (Sydney), and 4 to Technical Productions in Sydney.

Jands Electronics have sold a Soundcraft k3 48 channel theatre console to the Laycock Street Theatre in Gosford, NSW. Sound designer Graham Pogmore says the theatre had a Soundcraft 800B console installed for many years, and the scene set module on the k3 has made it possible for novices to work the new desk, once programmed. Laycock also purchased eight channels of Shure SC wireless mic systems.

DISTRIBUTOR AND MANUFACTURER NEWS

Audio manufacturer Miles Technology will now be represented by **Horwood Australia**, who will also handle the line in Asia. They are increasing do this. The first device released is the MTI-3 TriSonic Imager, for left-centre-right audio. Call +61 (0) 2 585-1011.

Fairlight has strengthened its Asian distribution, Applied Business Systems (ABS) now handle Thailand. AVIX Trading Co do Ko-

rea. P.A.C.E. do India, based in Bombay. Meantime Singapore sales have hotted up, with a recent installation at Singapore's JSP Post Production House. Fairlight: +61 (0) 2 9975-1230.

Solid State Logic (SSL) have opened a new office in Singapore to support distributors in Malaysia, Indonesia and the Philippines. Chan Kheng Wah heads the operation. Call +65 285 9300.

Tannoy have filleted off the Professional side of their audio distribution, with a new division headed by Richard Gainsborough. The pro division has several new appointments, flagging that the firm are getting tough. They have had some success in Australia, where they are distributed by Syntech International.

From the start of 1996 the European Economic Community (EEC) have insisted all electrical equipment sold in Europe carry a 'CE' mark - whereby it is certified not to generate electromagnetic radiation and other such things. **Talia**, one of our leading exporters of hi tech video switching, have CE marked their Gattson isolator, thus becoming the first such manufacturer to do so, they say. Distributed locally by Quinto Communications, (03) 9558-9377.

An **Export Group** has been established for entertainment technology exporters. *(continued over)*



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INDUSTRY NEWS

EXPORT (continued)

As detailed in our last issue, the group is exploring ways that Australian and New Zealand manufacturers and service providers can better co-operate to maximise export sales for all. Contact Julius Grafton at Connections on fax (02) 876-5715 if you are interested.

DRIVER LINEARITY

■ The latest AES International Journal (edition 44/4, April '96) carries a technical paper written by Sydney based Jonathan Scott, Jonathan Kelly, and Glenn Leembruggen. The paper is called 'New Method of Characterising Driver Linearity'.

DECLINE & SUNSET

■ The Lone Wolf Medialink pro-

ocol promised to revolutionise pro audio, giving everyone complete control of everything through one network on a PC screen. It was detailed at ENTECH 1994 and then disappeared from view. Now Apogee Sound have announced their DA-Series amplifiers, built for optional MediaLink control, will now utilise Lonworks lontalk protocol by Echelon. Lone Wolf are still out there, but....

■ The National Entertainment Technology Association of Australia Ltd (NETAA) is no more. A meeting was scheduled at presstime with one item on the agenda, namely to wind up operations. Much effort from too few, and yet another well intentioned idea which could have benefitted many dies due to apathy.

RICHARDSON & DEVINE

■ **Harley Richardson** and **Steve Devine** are open for business in Brisbane. It's a new audio, video & lighting business run by two -ahem- veteran installers and equipment resellers. Harley Richardson has been Brisbane based for some time, and until very recently ran an installation company for Mick Privitera. Steve Devine is infamous, having run Topstage Productions in the ACT until having a prolonged break which preceded selling that business. They now trade as Richardson & Devine, and have an arrangement with Skypak Lighting, with whom they share premises. Skypak will handle smaller retail sales.

• **At: 159 Abbotsford Rd, Bowen Hills 4006. Call (07) 3252-4433.**

— Corrections —

TENT JOB FROM HELL

The AFL Spectacular (May 1996 issue)



Last months story carried some glaring inaccuracies which we would like to set right.

Firstly, the picture above is of Peter Lothian (not Richard Grenfell) and Denis Bourke.

The event -truly a major one- was produced by The AFL in conjunction with Peter James Special Events. The AFL Production supervisor was Cathy Oswald, and Denis Bourke was engaged as production manager.

The tent itself is owned by Instant Stadiums, owned by Carl Harrison - not Ron Bell as stated in the article.

A survey of the Melbourne Cricket Ground was commissioned when it was discovered some weeks out that the original architect's plan of the arena would have placed the tent some metres over the fence - whilst it appeared

to fit according to manual measurements.

The survey data and the existing 3D computer model were combined to ensure that all structures and components fitted to the exact centimetre and that the 480 odd tent pegs avoided hitting any of the comprehensive underground drainage system of the MCG.

Connections wish to thank the numerous individuals who called to point out the above, and apologise to everyone involved. The writer and editor have established a new system to ensure facts are checked carefully before publication.

Major contractors included:

Instant Stadiums (tent structure), **Jands Production Services** (audio, stage and dance floor lighting), **Concert Lighting Systems** (audience lighting), **Staging Connections** (Video & decor), **World Stages International** (Table risers and stage ground support), **Syd Howard Fireworks** (All pyrotechnics), **Gig Power** (Loaders, stage hands and spot operators), **Showtech Rigging** (all overhead rigging), **Australian Two Way Rentals** (Communications), **Harry The Hirer** (Kitchen structures, flooring and room fittings), **Spotless Catering** (Catering, food and

beverage), **Watson & Thomson** (Plants and foliage), **Aggreko Generators** (Generators, cabling and switch boards).

Key crew included:

Damien Stricklen (Show Director), **George Hanna / Lisa Trevellick** (Stage managers), **Tony Wilde** (Stage logistics supervisor), **David Platt** (Assistant production manager), **Michael Wickow** (Audio Director), **Chris Newman** (Lighting Director), **Peter Lothian** (Vari*Lite Operator), **Richard Grenfell / Alex Saad** (Audience Lighting Operators), **Pat Richardson** (FOH System engineer), **Bob Daniels** (Monitor System Engineer), **Sean (Motley) Hackett** (Lighting Crew Chief), **Graeme Trott / Bob Toth** (Video Technicians), **Noel Penn** (Camera Director), **Michelle McKendry** (Assistant to Production Manager), **Carly Griffen** (Assistant to Production Supervisor).

Audio Sound Centre

Last months article on ENTECH Award winning film sound recordist Ben Osmo referred to **Audio Sound Centre** by other names. Given this fine organisation realigned its name last year, we hasten to apologise for aiding and abetting any confusion out there. ASC: call (02) 9901-4455

INTERNET SITES

■ **CONPUB** is our address, more concisely set your system to go to www.conpub.com.au where you'll now find the Connections Links Page. We intend to make this a directory over time, so that you can go from there to anywhere useful. Log on and check it.

■ **IN MUSIC & MEDIA** is the new weekly internet e-zine, whereby music industry guru Phil Tripp posts all kinds of interesting and provocative material. The Australian music industry has proven time and time again it won't or can't support a print media trade magazine, so Tripp's new animal is well placed to work. In fact, the Australian music industry is such a divided and conflict riven creature it's a miracle that commerce involving music ever happens at all! Go to www.immedia.com.au and get the lowdown.

■ **COMPANIES ONLINE:** If you manufacture technology or distribute same, you'll be on the net sooner rather than later. Useful things you find on a company netsite: •Owners Manuals; •Product highlights; •Use-groups and trouble shooting tips; •Email links to service and support staff. Things you won't appreciate are big graphics which take forever to percolate down the wire, via multiple servers and hubs. Some recent new addresses:

DIGIDESIGN:

www.digidesign.co

ETC: www.etcconnect.com

BSS: www.bssaudio.co.uk

SHURE: www.shure.com

RANE: www.rane.com

SPIRIT: www.spirit-by-soundcraft.co.uk

■ **INFO ONLINE:** The nice thing about the net is people and associations make their own home pages which are sometimes very handy. Unlike the company sites above, these sites are usually piggybacked onto a university or commercial net site providers server. Thus they have long addresses, requiring keyboard care. Try these:

• www.cowan.edu.au/academy/lighting/lx-list.htm and:

• www.peg.apc.org/~samcomet and see conpub.com.au for more!

BARRATT BASH

■ At the wake following the funeral of Rober Barratt last June, many theatre people realised they hadn't all gathered in one place before. So the Barratt Bash was born, as an annual theatre industry party. It will run on Sunday 16th June at the Chameleon warehouse in Sydneys south.

Time: 11am. Cost: \$40, includes food and drink. No cheap wine they assure! It's a great chance to see people from your past and present!

The organisers are Christine Dunstan (02 552-3648), Ian Baseby (02 9906-6262), and David Kentish (02 439-8188). Send your \$40 payment now to PO Box 873, Artarmon 2064. It is needed in advance to fix the catering, or call.

MOVES

■ **STAGECRAFT** in Brisbane have moved, the new address is: Unit 1, 101 Newmarket road, Windsor QLD 4030. Phone 07 3357-9999 Fax 07 3357-8888.

■ **Electric Sunshine** are now located at 51 Nelson St, Annandale, ph 550 6000, fax 550 5500.

■ Staff additions at **Jands Electronics** in Sydney: joining the sales team under recently promoted sales manager Jeff Bolt is **Billy Mawer**, while **Graeme Young** takes the new position of technical adviser with the engineering and marketing dept.

■ Meanwhile the builders are hard at it over at the 'other' Jands, namely **Jands Production Services** at Kent Road Mascot. The old one-time poker machine factory is on a large site adjoining a quieter part of Sydney airport, and is being redeveloped to house a reunified Jands with both separate firms back together after ten years or more apart. The back half of the site is being built first, whereupon JPS will move into it while the front is built. When complete the complex will be large even by world standards for this industry, and Jands will enjoy some synergy from closer links between the users (JPS, who are Australias largest production firm) and the manufacturer/importers Jands Electronics (JE). The old JE site at St Peters will be sold.

PALA AT SINGAPORE NEXT MONTH

■ The 8th showing of the **Pro Ausio & Light Asia** trade show is on next month, July 10-12 at the World Trade Centre. This year the organisers have fixed roundtrip transfers from the official show hotels to and from the show, defeating a major problem of previous years whereby visitors roasted for some time in taxi queues. Call +65 227-0913 for more.

AUSMUSIC TROUBLES

■ As soon as Arts Minister Richard Alston announced Ausmusic funding would shortly be cut, the music industry fell upon the body and starting kicking it. The Ministers spokesman didn't help, saying Ausmusic itself says it didn't have a good reputation in the industry. Dubious letters appeared in the street press asking what Ausmusic actually was, and the chorus of support you'd expect for any body whose charter was to develop contemporary music was more like carrier wave.

Perhaps Ausmusic boss Pete Steedman actually did manage to get most of the industry offside - as well as both sides of politics. The Sydney Morning Herald says Steedman threatened Keating in a letter last February, regarded previous Arts minister Lee as 'inactive' and complained to Alston before the cut that the new Government was potentially stuffing a great organisation.

It remains to be seen if Ausmusic will survive in any form, meanwhile its a shame that yet again the music industry failed to support anything that may have assisted the collective good.

DIGI & AVID AS ONE

■ With the worldwide integration of these two pathsetting firms, it was inevitable the Australian operation would consolidate. Now all **DIGIDESIGN** sales and technical support will happen from the AVID offices on the banks of the Lane Cove Creek. Call (02) 9937-1800.

DOLBY FAX TIME PAYMENT PLAN

■ Dolby Fax is the system many studios use for transmission of voice overs, overdubs and sessions over ISDN lines to the world. Dolby Labs have announced a time payment plan to boost the system. The system is based on the Dolby AC2 algorithm, Warner Brothers, Disney, Polygram, Paramount, 20th Century Fox, EMI, Sony Music and BMG all use the system internationally. An interactive brochure on disk in PC or Mac format is available from Dolby, or can be downloaded from their web site. Go to www.dolby.com or fax +1 415 863-1373.

More News inside:

- Theatre News
- Hire & Production News
- Studio News
- Lighting News

Connections keeps you posted, now **EVERY month!** (except January)

DISCO WORLD WINNERS

■ The giveaway was timed for the end of ENTECH, and the massed forces were there to see who won. The winners were:

Mimma Parlato won a FG2000 smoke machine, Leigh Pettiford a Lytequest Strobe, Ariel Yahya BP-05G instrument belt pack, Paul Devery a DS-8 8 second sampler, and Michelle Smith a Platinum series PS-626 mixer.

B&K CATALOGUE

■ A new Bruel & Kjaer microphone catalogue and reference guide is available from Studio Supplies. Call (02) 9957-5389.

BBE LICENSING

■ The Californian manufacturer BBE, who make the Sonic Maximiser, has published a brochure outlining the benefits. They have licensed the technology to sony they say. Contact F. Payton & Son, (02) 439-1822.

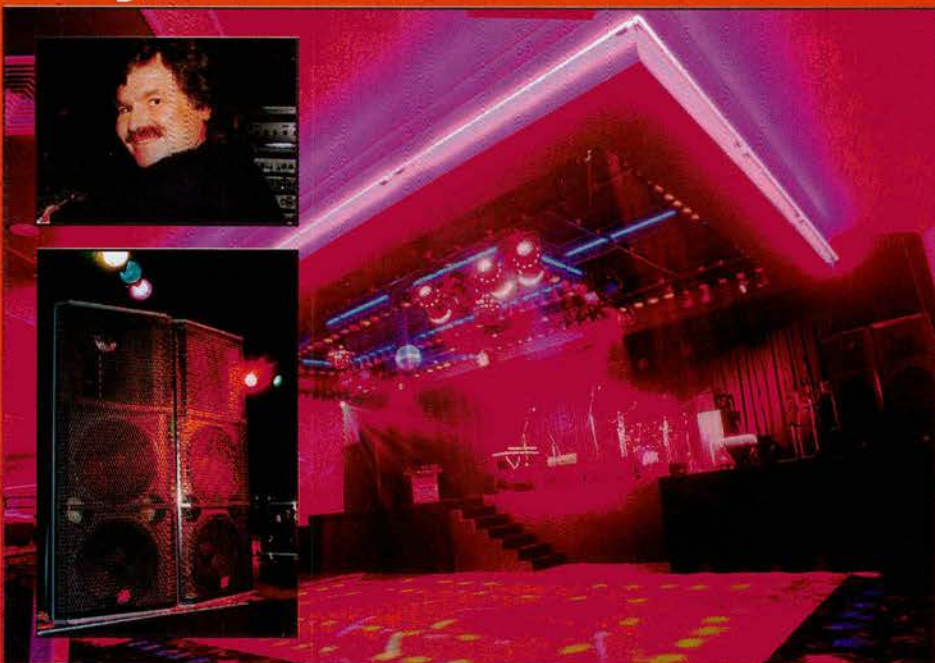
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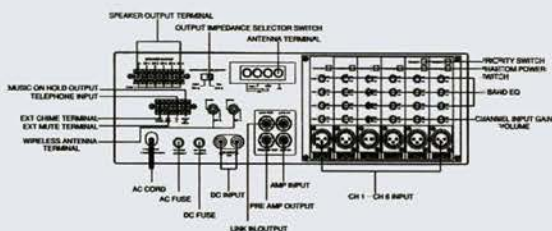
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- Amp + CD, (or deck)
- Amp + Tuner + CD (or deck)



Features Include:

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- 5 speaker zones • 4 tone chime • 24 volt
- Remote chime & mute control
- Telephone input & music on hold
- Module options tuner, compact disc, cassette deck

For more information on the INKEL range of products, contact your nearest INKEL dealer or phone:

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Australia:
Magna Systems & Engineering
A trading division of Silkstone P/L ACN 064 204 997
7 Gibbes Street, Chatswood, NSW 2067.
Phone: (02) 417 1111 Fax: (02) 417 2394

New Zealand:
Magna Techtronics (NZ) Ltd.
Level 4, 210 Khyber Pass,
Newmarket, Auckland.
Phone: (09) 307 3901 Fax: (09) 307 3832

Write in Reader Service Number: 143

Connections. June 1996

Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH

Don't wind back your clock...

...this is actually VERY serious audio design!

SYDNEY: There is a time and a place for everything, and according to John Burnett's Lenard manufacturing, the Black Opal systems time has come. This is a professional or domestic system, your choice, wholly driven by valve amplifiers. It is run actively four ways, which means each stack of speakers requires four amplifiers.

Lenard provide five, one for each of the 15" JBL woofers, one for the JBL 12" low/mid speaker, one for the 2446 two inch compression driver/horn assembly, and one for the ribbon tweeters on the high frequencies. Per stack. The amplifiers are



built into the vertical tower next to the stack at right.

The speakers are, as mentioned, by JBL. Lenard say the system is wholly integrated and so the result is music as you have never heard it before. The component crossover points are: woofers to low mid: 180Hz, lowmid to horn: 950Hz, horn to ultra-high frequency ribbon tweeters: 7kHz.

Amplifier outputs are 100 watts each, for a total of 10 x 100 watts. We suspect at amplifier towers may also double as space heaters.

Price? If you need to know, then you don't need it. It goes without saying this is one expensive system, but it is also extremely unique in approach.

Details from Lenard, call (02) 569-2702.

***FLASHBACK:** Lenard was ALSO the Aussie brand valve amp & PA firm which featured very heavily in the birth of Australian rock.

LEXICON'S PCM 90 DIGITAL REVERB

New effector joins ENTECH Award winning PCM 80, can be used together as a system

Lexicon has introduced the new PCM 90 Digital Reverberator as a companion to the PCM 80 Digital Effects Processor. The two units make a perfect combination for the ultimate in reverberation and effects.

The PCM 90 features a range of versatile high-quality reverberation programs which derive their

heritage from Lexicon's top-of-the-line studio processors, the 430L and MoCel 300. Its unique dual-processor architecture - featuring two of Lexicon's proprietary reverb DSP ICs, the Lexichip™ II, allows flexibility in reverberation quality and control. "The two units are designed to be able to be used as a system," says Lexicon's Di-

rector of Product Management, Steve De Furia. Both units feature true stereo capability with 18-bit A/D converters as well as digital inputs and a 24-bit internal digital bus. As a system, the PCM 80 and PCM 90 offer as many as 4 independent inputs and outputs, digital or analog. The PCM 90

(continued over)

PCM 80 at top, new PCM 90 below



CuBase 3.0 Updates

Music Technology have announced upgrade prices for all CuBase users. Stienbergs new CuBase version comes in six flavours for PC and Mac. The new CuBase 3.0 line now features digital audio in all pro levels. Hard disk audio recording can now be done on even the Windows version, adding to its Score and MIDI capabilities.

On PowerMac CuBase offer Virtual Studio Technology, (VST) whereby up to 32 tracks can be recorded without external hardware - while arranging and working on your MIDI recordings simultaneously. Naturally it offers score layout and printing too.

Range & Update costs are:

- 3.0 for Windows (from 2.8) includes sound card audio, pro MIDI and basic score printing. \$199 upgrade.
 - Score 3.0 for Windows (from 2.0) includes sound card audio, pro MIDI and pro score printing. \$199 upgrade.
 - Audio 3.0 XT for Windows (from Audio 1.6) includes sound card and external hardware audio, pro MIDI and basic score printing. \$199 upgrade.
 - 3.0 for Mac (from 2.8) features new diskset and VST Audio addendum, Sound Manager Audio, Pro MIDI features and basic scoreprinting. \$199 upgrade.
 - Score 3.0 for Mac features new diskset and VST Audio addendum, Sound Manager Audio, Pro MIDI features and pro scoreprinting. \$199 upgrade.
 - Audio 3.0 XT/VST for Mac features new diskset and VST Audio addendum, Sound Manager Audio, Pro MIDI features and pro scoreprinting. \$199 upgrade.
- Details from Music Technology, call (02) 369-4990.**

Write in 401 on Reader Service Card

JANDS

Australia's largest supplier of fabric, drapes, screens, tracking systems and stage machinery to the theatre and cinema industry

- **Theatrical fabric**
- **Cinema masking systems**
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Jands Electronics Pty. Ltd. AGN 187 847
578 Princes Highway, St Peters, NSW 2044
Phone: (02) 9311 3622 Fax: (02) 9311 1845

PCM90 (continued)

ships with 250 all-new presets.

The PCM 90 also features a unique KeyWord Search facility that enables the user to find a group of programs suited for a specific application - for example, if you chose the Live PA KeyWord, the PCM 90 will automatically find all of the presets that have been optimised for live sound applications. There are 50 KeyWords in all, including four user-definable groups of effects.

The PCM 90 features many programs derived from the Model 300 and 480L. In addition, there are several algorithms that are unique to the PCM 90, such as a new Concert Hall - with Spatial EQ and compression - Chamber/Room.

Like the PCM 80, the new '90 includes the Adjust Knob feature, where the primary parameter for a program is instantly available on one control. In addition, Lexi-

con's new Dynamic Patching™ Matrix which enables virtually any type of control source - almost 150 of them, including tap-tempo with rhythmic variations and 126 MIDI or other external controllers - to affect any parameter of the reverb. The PCM 90 also shares the PCM 80's Dynamic Spatialization capability, enabling reverbs to be placed anywhere between the speakers - or beyond them.

As with the PCM 80, a PC Card slot is provided on the front panel of the PCM 90, which can be used to store programs in transportable form or to add new programs, presets and algorithms. Cards are already available for the PCM 80 and more are planned in the future. RRP \$5995.

• **Contact Studio Connections (03) 9646 0544.**

Write in 402 on Reader Service Card

Pro Tools 4 previewed

Digidesign used the giant NAB convention to preview V4.0 of their popular DAW.

The merger with AVID is now bearing fruit, because Pro Tools 4 can share the same PCI hardware as Audio Vision 4. Conversely, AV4 can easily be added to PT4, giving users a full featured sound-for-picture post studio with integrated digital picture. Sessions are fully compatible between Pro Tools 4 and Audio Vision.

PT4's digital mixing capabilities have additions including mute automation, dynamic automation of TDM plug-ins, and separate touch and write automation modes. New edit tools include multiple edit playlists per track, and integration of AudioSuite, a new plug in

architecture which provides many Sound Designer II file-based processing features, and a new graphic in-er-face for crossfades with variable custom fade contours including new S-shaped fades. Pro Tools 4.0 will be available as an upgrade from September, or the core system comprises a PCI-based disk I/O and DSP Farm cards and the software - at a rec. retail of around \$13,495.

DOLBY GET COSY

Digidesign and Dolby Labs announce Pro Tools and Avid Audio Vision users can transfer work to Dolby Drive, the new film dubber. Additionally, Dolby will now supply a TDM plug in, adding surround sound capability.

• **Call AVID: (02) 428-5888.**

DAS for MAGNA

DAS Audio are a European manufacturer of speaker components and complete systems, having done so for over 20 years. Magna Systems have recently been appointed DAS distributors, and released the line at ENTECH '96.

DAS were amongst the first to use polypropylene enclosures, and

have refined this to an art form. The range includes the Factor series, and the MI Series - the most popular of which is the MI-12. The SUB 18 subwoofer completes the range. A full range of accessories, including ceiling mount and stand mounts are available.

• **Call Magna on (02) 417-1111.**

Write in Reader Service Number: 115

SHURE GO UHF WIRELESS

Shure's new UHF wireless microphone system offers reliable, professional performance and sound quality for high end installed sound, rental, touring and sound contracting applications. The new system means less interference from RF and television sources than VHF systems and allows users to change frequencies manually, doing away with the need to order factory pre-set frequencies.

The UHF components comprise body-pack transmitters which are compatible with a full range of Shure's lavalier and headset microphones, hand-held transmitters with Shure's industry standard mic capsules including the premium Beta 58A and Beta 87, dual and single channel diversity receivers, an active remote antenna kit, an antenna distribution system and cable accessories.

The receivers and transmitters can select between 188 separate

frequencies and at least 20 systems can operate simultaneously. Users can set parameters such as group, channel, frequency, squelch and power and frequency lock functions. Extensive monitoring keeps tabs on performance and battery life, and the receivers and transmitters include user programmable LCD displays for set-up, information and control. A networking port is also provided for future networking facilities.

The transmitters are powered by two AA batteries which typically provide 12 hours of life, and the UHF receiver incorporates an internal switching power supply which enables the system to be operated virtually anywhere in the

world.

Shown at ENTECH '96, Shure's new UHF system is distributed exclusively in Australia by Jands Electronics. Pre-packaged systems are priced from a recommended \$5195 (single channel) and \$8595

(dual channel), and system components are also available individually. • Info: call Jands Electronics on (02) 516 3622.

Write in 406 on Reader Service Card

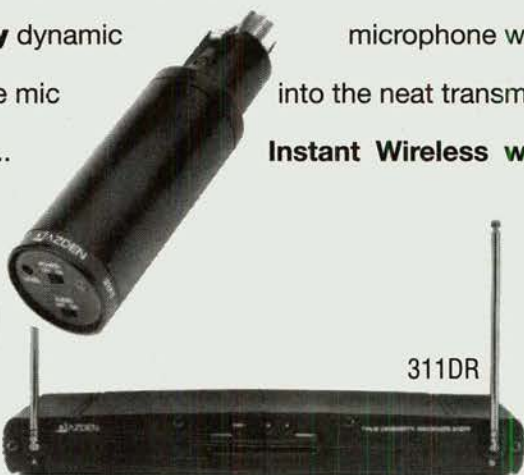


WIRELESS OR WIRED?

31XT Plug-in Wireless Transmitter System & 311DR Performance True Diversity Receiver

The **Azden** 31XT converts **any** dynamic microphone with an XLR to wireless operation. Yes - you plug **YOUR** favourite mic into the neat transmitter (shown sitting on top of the receiver, below) - and **presto...**

microphone with an XLR to wireless operation. into the neat transmitter (shown sitting on top of the receiver, below) - and **presto...** **Instant Wireless with the true sound of your mic!**



only **\$799^{.00}** RRP

M A D E I N J A P A N

- Makes ANY dynamic handheld microphone wireless
- Upgrade your microphone ANYTIME
- Quickly discard the transmitter and plug in a lead
- Available on ten VHF frequencies
- For use with all Performance Series receivers
- Full array of on-board controls
- Powered by a single AA battery (up to 10 hours operation)
- Sleek ergonomic design
- Durable ABS housing

From **C.M.C. Music** Call (02) 9905 2511 Fax (02) 9905 0189

Write in Reader Service Number: 149



YOUR EAR IS OUR JUDGE

**THEY DO MORE.
THEY DO IT BETTER.
THEY DO IT FOR LESS.**



COMPOSER MDX 2100

- General purpose interactive dynamic processor • Superb dynamic control, both live and in the studio • Adds energy to channels, subgroups and mixes • Prevents system overload • Fully automatic compressor • Manually set compressor • Expander/Gate • Clipper • Programme limiter • Fully automatic or manual attack and release • IRC circuit permits inaudible expansion/gating • Switchable true stereo or dual mono operation • Switchable external key inputs with key listen feature • Switchable +4 dBu / -10 dBV operating level • XLR and jack connectors



ULTRAFEX II EX 3100

- Improves presence and transparency • Improves intelligibility • Improves and widens spatial image even beyond the speakers • Produces more powerful, fuller bass • Increases subjective volume level • Reduces listening fatigue • Professional and multi application sound enhancement system • Unique natural sonic processor for unsurpassed sound improvement • Built-in noise reduction system • Bass enhancer produces incredible bass sounds • Surround processor creates real spatial enhancement • Automatic Level Control • Servo-balanced inputs and outputs • Relay-controlled hard-bypass with auto-bypass during power-down (failsafe relay)



MULTIBAND DENOISER SNR 2000

- Cleans up studio tracks and master tapes • Eliminates audible noise generated by electric guitars, electronic keyboards, digital effects processors and sound samples • Restores poorly recorded/damaged material • Unique Transient Attack Control Filter responds even to fastest attack signals • Multiband frequency analysis • Auto filter for quick set up • Adjustable filter cut-off • Dual mono or stereo modes

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the message becomes clear.**

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• TRADE ENQUIRIES WELCOME •

Technology

Alesis Introduces NanoVerb 18 Bit Digital Effects Processor



Alesis, in conjunction with Electric Factory have announced the introduction of the new NanoVerb 18 Bit Digital Effects Processor, according to Jim Mack, Alesis Director of Marketing.

"The NanoVerb is a classic example of Alesis' innovative, value oriented approach to effects processing design," said Mack. "In 1987, Alesis introduced the original MicroVerb, a definite breakthrough product which offered affordable 16-bit reverb performance in a 1/3 rack-space unit. The NanoVerb packs more power into a similar package, at a low price.

The NanoVerb offers 16 new Alesis effects algorithms, including hall, room, plate and non linear reverbs, true stereo chorus and flange, delay and three multi-effects

programs with chorus/room, chorus/delay/room and lesley/room.

It offers 18-bit A/D and D/A converters with a 20-bit internal processor that operates at three million instructions per second. Front-panel controls include input level, effects mix, output level, program select and a very useful program adjust control, which allows you to adjust a specified parameter for each program. Power/input and dual-colour signal input/clip LEDs are also provided. The NanoVerb packs its effects processing power into a handy ultra-compact 1/3 rack-space package. RRP \$379.

• **Info: contact Electric Factory at (03) 9480 5988.**

Write in 403 on Reader Service Card

Yamaha's new mini disc 4 track recorder

Shown in prototype form at SENTECH, the MD-4 uses a mini disc to store 4 track digital audio, with 37 minutes recording time. The big attraction is cheap and tough media, and being able to record and immediately access any part of your project. A four

channel mixer has 3 EQ control and aux send, and track assigns for each input. Tascam and Sony are rumoured to both be releasing 'similar' products.

Retail projected at \$1995, August release. • **Call Yamaha for more, on (03) 9699-2388.**



MORE BUSES, MORE PREAMPS, MORE EQ, MORE FEATURES. INTRODUCING THE NEW CR1604-VLZ.

Five years of user input, new materials, new technologies and the soul of our 8-Bus...at a super-low price of \$2995 rrp.



TRIM control on the channel strip! 30dB total mic gain; -10dB "virtual pad" for line inputs.

6 AUX SENDS per ch. Aux 1 & 2 switchable pre/post. Post-fader Aux 3-4 1/5-6 selectable via Shift switch.

HI EQ. ±15dB shelving at 12kHz.

SWEAPABLE MIDRANGE. Wide, musical peaking EQ with 100Hz to 8kHz range. ±15dB range.

LO EQ. ±15dB shelving at 80Hz.

LOW CUT FILTER is a must for live sound and acoustic (microphone) recording. Sharp, 18dB/octave @ 75Hz high-pass filter lets you add Lo shelving EQ to vocals without boosting undesirable mic thumps, stage rumble, wind noise, P-pops, etc.

PAN control with constant loudness to maintain stereo perspective.

MUTE switch. **MUTE & OVERLOAD LED.** -20dB SIGNAL PRESENT & SOLO LED.

SOLO. In-place AFL or PFL.

BUS ASSIGN for Subs 1-2, 3-4 & Main L/R.

60MM FADERS with 8-Bus log taper, special lip seal & long-life wiper material.

The original CR-1604 defined the modern compact mixer. Now we've "raised the standard" by adding over 20 new features like true 4-bus design, our famous mic preamps on every channel, flexible routing and monitoring, and swept mid EQ — for just scarcely more than the original CR-1604. Call for a free 40-page brochure.

5-WAY PHYSICAL CONFIGURATION via our famous rotating input/output "pod." In minutes you can switch the CR1604-VLZ between ultra-compact 8-rack space configuration with pod to back ①, rackmount jacks-to-top ② or tabletop/ jacks-to-back ③. Optional RotoPod-VLZ bracket places input/output jacks on same plane as the controls (tabletop ④ or rackmount ⑤).

MONO OUTPUT (bal./ unbal.) has separate level control.

RCA TAPE inputs and outputs- (unbalanced).

Separate **CONTROL ROOM OUTPUT** (bal./unbal.).

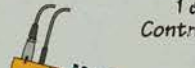
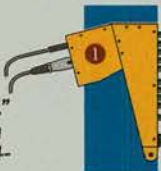
DIRECT OUTPUTS (bal./unbal.) channels 1-8.

SUBMASTER OUTPUTS (bal./unbal.).

16 STUDIO-GRADE MIC PREAMPS means the new CR1604-VLZ actually costs less than our classic CR-1604 & XLR10 expander combination!

VLZ (Very Low Impedance) CIRCUITRY developed for our 3-Bus consoles, further reduces noise and crosstalk in critical signal path areas.

SOLID STEEL main chassis. **SEALED** rotary controls.



AUX SEND 1 & 2 MASTERS.

Stereo **AUX RETURNS 1 & 2** with 20dB gain, above Unity for boosting effects **EFFECTS TO MONITORS** controls fold Aux Return 1 & 2 back into Aux Sends 1 & 2 so that on-stage performers can hear effects

AUX SEND 1 & 2 SOLO switches with LEDs Stereo **AUX RETURNS 3 & 4** Aux Return 3 **ASSIGN SWITCHES** to Main Mix, Subs 1 & 2 or Subs 3 & 4 Aux Return 4 **ASSIGN** to Control Rm./Phones

CONTROL ROOM/PHONES level control **TAPE INPUT LEVEL** control and **TAPE TO MAIN MIX** switch

SWITCHING MATRIX. This creative feature lets you route any combination of Tape, Subs 1 & 2, Subs 3 & 4 or Main Mix to Control Room/Phones bus. Lets you create custom headphone or broadcast mixes, monitor 2-track output or route a cue/click track to phones, create a second stereo main output with its own level control & more...check out the manual.

Global **SOLO** level control.

Global **AFL/PFL SOLO** switch.

SUB ASSIGN to Left or Right Main Mix.



MAIN MIX FADER.

BNC lamp socket. Global **AUX RETURN SOLO**

LED METERS with -30 to +28 range & **LEVEL SET LED.**

RUDE SOLO LED.

HEADPHONE output.

60mm SUB-MASTER log-taper faders.

BUILT-IN power supply. **PHANTOM POWER** switch.



Studio-quality **DISCRETE MIC PREAMP** on every channel.

Pre-fader **INSERT** on every ch.

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 P.O. Box 183, Durimbah, NSW 2258 ■ 043 291 711 ■ 043 291 747

Installation Mic, Beyer

The Beyer MPC 22/23 acoustic boundary mic is ready to install in a table or up in a ceiling. Beyer claim the 22 and the 23 provide higher gain before feedback than typical boundary mic designs.



The MPC 22 has semi-cardioid response, and it has an integral low-cut filter to reduce rumble and surfaceboard noise.

The MPC 23 offers a half-spherical polar pattern for uniform pickup, it is suited to single microphone installations.

Both microphones have a threaded body with mating nut, an XLR connector is fitted to the base. They come in black or white finish.

Rec. price: \$375 each.

• Info, Amber (02) 9975-1211.

Write in 410 on Reader Service Card



KLARK TEKNIK DELAY LINES WITH EQ

Klark Teknik has launched two new delay lines for sound reinforcement, theatre, studio and satellite broadcast applications.

The DN7103 is a one in/three out delay line and the DN7204 a two in/four out - both are user configurable and feature two bands of fully parametric equalisation on each output.

The DN7103 has a total delay time of 1.4 seconds, while the DN7204 has 2.8 seconds. Peak limiters are also featured on each output - these have no overshoot action and threshold setting in dBu or volts for easy amplifier matching.

Unit configurations and delay settings can be quickly and easily set up using the front panel controls and stored in any of the non-volatile memory positions.

Delay settings can be displayed in units of time or distance. As well as individual delay time for each output, a master delay time is provided on the input for quick and accurate alignment of delayed speaker stacks. When set in distance mode, a temperature compensation facility is incorporated.

Each output has an independent digitally controlled output level, adjustable from +6dB to -24dB in 1 dB steps, plus mute.

These are automatically stored with the delay settings in the user memories. For security, both delay line feature full control lock-out with user definable code number for function access.

Prices: DN7103: \$4150 RRP

DN7204: \$4590 RRP

• Info from Mark IV Pro Audio Group, phone (02) 648-3455.

Write in 408 on Reader Service Card

Perfect match for digital recorders

Two new LA Audio products have been as a match for digital recorders. The C8 offers 8 channels of clean auto-compression to optimise digital recording levels without risk of distortion.

Each channel of the C8 features threshold and output level controls, LED bargraph, gain reduction metering and channel bypass switch. Advanced programme dependent Auto-Sensing circuitry takes care of Attack, Ratio and Release, continually deriving the op-

timum setting for each parameter. Versatile linking allows channels to be configured in stereo pairs or as eight identical compressors.

The LA Audio V8 brings warmth to digital recording derived from 8 channels of active valve conditioning. The V8 offers 8 separate channels of valve conditioning for use on the front end of a digital recorder or during mixdown. Unlike some valve equipment which merely pass a conventional solid state signal through a valve stage,

the V8 employs two active gain cells per channel, thereby maximising the valve characteristics.

Each channel features Drive and Level controls plus +6dB overdrive and bypass switches, two LED's signal the onset of valve compressor and clipping.

C8: \$1,799, V8: \$2,595 rrp.

• Info: call Major Music Wholesale, Phone 02 525 4447.

Write in 407 on Reader Service Card



Moore MIDIMAN

MIDIMAN make those widgets you sometimes don't even realise you need. Other times you know you do. Anyway

4X4/S is a 4 MIDI in, 4 MIDI out PC Card. This reads, writes and regenerates SMPTE, it has all the features of an internal PC MIDI patchbay. It works with Win 3.1 and Win 95, is a 16-bit ISA slot card, and comes with software. It'll read and write 25, 29.97 and 30 drop or drop frame LTC SMPTE formats.

MIDIMAN say any SMPTE code offset can be set, it'll sync and regenerate.

Sells for \$499. • Info: Moore Music, call (03) 9419-0344.

Write in 409 on Reader Service Card



ELECTRO-VOICE'S NEW C02 MINATURE LAVALIER MIC

"IT IS BETTER TO BE HEARD AND NOT SEEN"

Electro-Voice introduces the C02 omnidirectional mini-lavalier microphone with features designed for broadcast, theatre production and presentation use.

The C02 is both the smallest and best performing lavalier in EV company history.

The C02 has a freq. response of 50-20kHz. The omnidirectional pattern reduces mechanical handling and wind noise, while maintaining uniform output regardless of its orientation. With a sensitivity of -61dBv, and a dynamic range of 128 dB, the C02 will handle virtually any source with maximum signal to noise ratio.

Both black and white versions are available, and its exclusive Tincture surface may be painted with acrylic-lacquers, allowing

custom colours for any situation. A full complement of mounting clips allow attachment of the C02 almost anywhere.

The standard 8-foot cable was designed to meet the rigours of production use. It provides over 10 times the strength of typical lavalier microphone cable which translates into higher reliability and less frustration in the field. The C02 is available with a phantom power electronic module or for wireless configurations, a TA4F connector or pigtailed can be ordered.

CO2: \$395.00 Rec Retail Price.

• **Info from Mark IV Pro Audio Group, phone (02) 648-3455.**

Write in 411 on Reader Service Card

PreSonus ACP-8 ...8 channels of compressors & gates

Australian Audio Supplies are pleased to announce that they are now the sole Australian distributor for the very innovative PreSonus audio products.

New release is the PreSonus ACP-8. An eight channel compressor/gate, housed in a steel, 2 rack space case. The ACP-8 features eight separate compressor/gates. Each compressor includes threshold, ratio (1:1-20:1), attack, release and gain. Each gate features

threshold, release and attenuation. The ACP-8 accepts balanced or unbalanced inputs and outputs

Every channel features a side chain jack, full gain metering, compression and gate threshold indication. RRP \$1995.

• **Info: call Australian Audio Supplies on (043) 291 711.**

Write in 412 on Reader Service Card



SONY®

MDR 7506



MDR 7506 Monitor Headphones

- Rugged Closed Design
- Flexible Coiled Cable with single sided entry
- 40mm diameter drivers for dynamic sound
- Fold-up Design - Compact storage

SMS-3



SMS-3 Near Field Monitor Speakers

- Accurate, Dynamic, Efficient
- Magnetically Shielded
- Compact 2-Way 20cm Design
- 300 watt power handling

A u d i o

MDR 7504



MDR 7504 Monitor Headphones

- Rugged Closed Design
- Flexible Coiled Cable with single sided entry
- Fold-up Design - Compact storage
- Soft Comfortable Earpads

M o n i t o r s

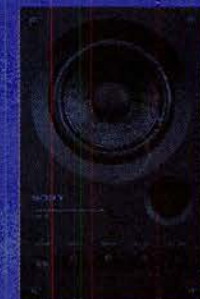
MDR 7502



MDR 7502 Monitor Headphones

- Rugged Closed Design
- Flexible Cable with 6.5mm & mini jack
- 30mm diameter drivers
- Soft Comfortable Earpads

SMS-1P



SMS-1P Powered Compact Monitor Speakers

- 15 Watt Power Amplifier Built-in
- 2 Inputs with separate level controls
- Bass & Treble controls
- 10cm speaker in bass reflex enclosure

Call Sony for the name of your nearest dealer

Sydney: (02) 887 6666 Melbourne: (03) 9264 0222

Brisbane: (07) 391 4077 Adelaide: (08) 234 3777

Perth: (09) 4-3 5050 Auckland: (09) 415 7777

D.A.S. AUDIO COMBINES STATE-OF-THE-ART SPEAKER TECHNOLOGIES WITH DISTINCTIVE PRODUCTION METHODS WHICH INCLUDE HIGH PRESSURE INJECTION MOULDING, TO OFFER YOU A VERSATILE SELECTION OF PROFESSIONAL SOUND SYSTEMS, LOUDSPEAKERS, DRIVERS AND POWER AMPS.



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Write in Reader Service Number: 143



Entertainer 100 System

The Electro-Voice Entertainer 100 Portable Sound System is a must for touring musicians who appreciate reliable operation and well-known quality sound.

The Entertainer 100 provides the performance you need in a compact, lightweight system at a price that is equally lightweight.



System Contains:

- *EV 100M Stereo Powered Mixer,
- *2 EV SX100 200 watt Speaker Systems
- *3 EV FN680 Microphones.

\$4495.00

Recommended Retail Price



Electro-Voice®
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Mark IV Audio (Qld) Tel: 07 3854 1831 Fax: 07 3854 1881

Write in Reader Service Number: 182

CAD Equitek E-300 Mic

Australian Audio Supplies say they are more than pleased to announce an addition to the CAD Equitek range of studio condensers - the all new, retro-style CAD E-300.

The Equitek CAD E-300 is a multi-patterned side address microphone that combines vintage capsule design with advanced head-amp electronics. This combination has given the E-300 a wide frequency response, an extended dynamic range, and a couple of bottles of really nice desert wine...just checking to see you were paying attention! Good.

The synergy of high speed, low noise, low distortion electronics



with the ultra smooth response of the gold-sputtered dual-diaphragm capsule has created the ideal microphone for most critical applications.

The features include transformerless balanced output • Cardioid, Omni and Figure 8 patterns • Handles 148dB SPL • Servo head amps • Remote operation without phantom power using internal batteries • 80 hertz high pass filter • Internal dual H frame shock mount • 20 dB pad • Wide bandwidth and low distortion. The CAD E-300 costs \$1995 rrp.

• **Info: AAS, (043) 291 711.**

Write in 404 on Reader Service Card

Bag End debuts in Australia

The long established US manufacturer Bag End have appointed Acoustisearch as their distributor for Australia and New Zealand.

"We couldn't be happier about our new association with Acoustisearch", said James P. Wischmeyer, Bag End President.

"It is a well established, highly respected firm".

Acoustisearch MD Graham Thirkell was equally enthusiastic; "the most important measure of a good speaker is how realistic it sounds - Bag End's are close to live acoustic sound. Their (ELF) extended low frequency system is a major step forward."

The new MM-8 nearfield monitor (*right*) debuted at ENTECH, it features an acoustic polarity switch and an EQ switching system.

It has true time alignment, an 8" woofer, and one 1.75" aluminium compression high frequency unit.

• **More info: Acoustisearch, call (03) 9568-4022.**

Write in 405 on Reader Service Card



Imagine what would happen if the audience understood your lyrics.

(You'd have to stop inviting Mum to your shows.)



There are two excellent reasons that Mother will hate LA325 Performance Audio loudspeakers:

1) With 600 Watts AES power handling and 131 dB SPL peak output, they're the loudest thing she's heard in her life.

2) Since LA325s are full range, three-way systems with dual 6.5-in midrange cone drivers mounted in a sealed subenclosure, vocal articulation is maximized. Which means that Mum - and everybody else in the audience - will hear every word. Even the naughty ones.

But we didn't make LA325s for your dear old mother. We made them for you and your band mates. Audiences will love them for the same reasons Mum hates them.



The same engineering that made EAW loudspeakers the world standard for touring musicians makes LA Performance Audio systems the new benchmark for band PA. The engineering process that created them was so comprehensive, even the ergonomics of a load-in figured in the design.

There's so much to tell you about LA that it could fill a brochure. In fact, it does fill a brochure. Call EAW at (03) 9415 1585 to receive your copy of the LA Technology Story: From The Concert Stage to The Next Stage.

And when you get your LA325s, do yourself a favor and watch your language.

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• Crest Audio info from Jands Electronics, call (02) 516 3622.

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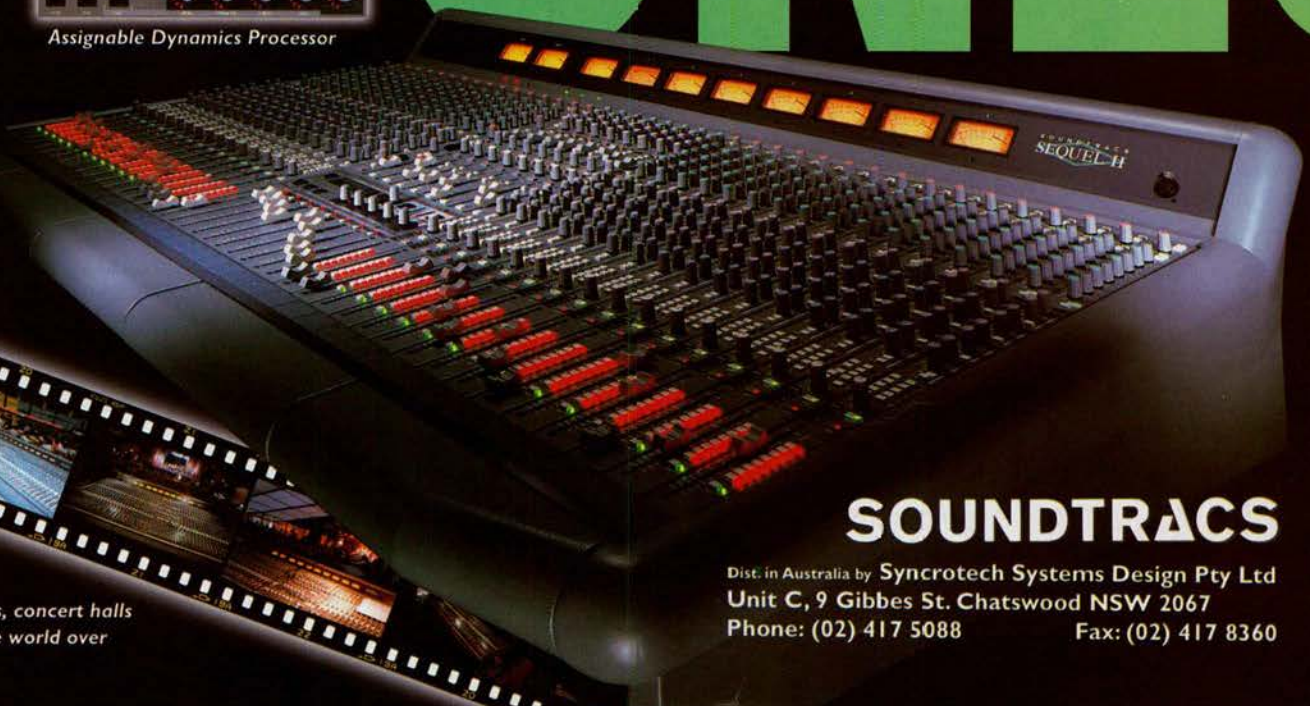
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Connections in the digital age

Last month I wrote about some of the pitfalls involved in hooking up an all digital studio. This month and next, I want to expand on that topic and give some practical tips about the various digital interface standards which you are likely to encounter. Like the military, the recording game seems to love the use of acronyms, so you'll find terms like SPDIF, AES and SCMS abounding. What do all these mean and how can you find your way through the alphabet jungle? Let me see if I can give you a guiding hand.

I'll begin by pointing out that the protocol, or data structure, of an interface is not the same as the electrical specification for that interface. For example, the S/PDIF interface (I'll explain it shortly) usually appears as an RCA connector on the back panel of a piece of gear. This means that the connection is unbalanced. Similarly, the AES interface is normally balanced and appears on an XLR connector. However, this does not mean that an AES signal will not appear on an RCA plug nor that an S/PDIF signal will not appear on an XLR connector. The point is that the meaning carried by the interface is inherent in the data structure and not in whether the

connection is balanced or unbalanced. The choice of balanced/unbalanced is part of the electrical specification of an interface and does not indicate whether the data being carried conforms to one standard or another.

So, what about those acronyms? Well... the AES is the Audio Engineering Society (North-American based). As the umbrella organisation representing the diverse technical, educational and R&D interests of the audio world, the AES has various sub-committees which work to develop standards which might be applied across the industry. The genesis of a given standard may be that a particular manufacturer has had great success in selling a particular product. Because that product is widely accepted by many users, the interface developed by that manufacturer becomes a defacto standard. The AES might then ratify what started as a manufacturers proprietary interface. Alternatively, the AES might see a developing need for a standard to which everyone is happy to adhere.

In the 80s, the AES began formulating a proposal for the interchange of audio data in a digital format. Although the AES standard as it now exists has seen quite a few modifications to the ideas

originally put forward, the basic principles have remained intact. So, when you hear the term 'AES' tossed about in a studio context, you'll know that it is a digital interface which is being referred to.

The 80s also saw the advent of the compact disc. Jointly developed by Sony and Philips, the CD was seen as a device which could be hooked into a wider digital setup. Therefore, they came up with the Sony/Philips Digital Interface, or S/PDIF. As you might guess, the AES standard was designed with the rigours of professional industrial-strength use in mind, whereas the S/PDIF standard was never meant to be anything other than an inexpensive way of connecting a stereo together. Well, as they say, you've come a long way baby...

But wait, there's more! The Europeans have a standards body of their own, called the International Electrotechnical Commission. The IEC are responsible for determining standards on electrical equipment made and sold in the EC. The IEC naturally promulgated a standard for the interconnection of digital audio equipment - this is known as IEC 958. This standard has two parts: type 1 is for professional use and type 2 is for consumer use. In essence, what

the IEC did was to say that 958 type 1 is the same as the AES standard and that 958 type 2 is the same as S/PDIF.

Just to recap, then, we have the following possibilities in connection standards: AES, S/PDIF and IEC958 in two different flavours. The AES interface is designed to be carried as a balanced signal - you would therefore expect it to appear on an XLR connector on, say, a DAT recorder. S/PDIF is supposedly unbalanced and appears on either an RCA or optical connector. The IEC specs, however, are woollier and various manufacturers have been liberal in their interpretation of what is allowed. Thus we have had the situation of manufacturers balancing an S/PDIF format signal and calling it AES - very naughty. Correspondingly, you will sometimes find an AES signal being unbalanced and appearing on an RCA connector. I well remember once spending a long frustrating afternoon trying to get the RCA digital output working on a DAT recorder before finding that it was actually an AES format signal.

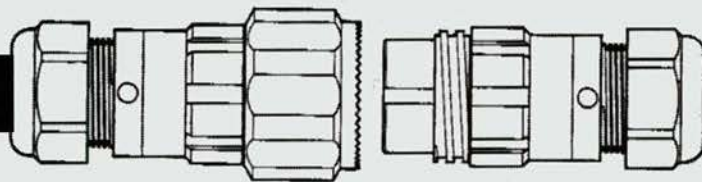
So, we know that our audio signals can be digitally encoded and formatted in such a way that they can be transmitted as a stream of serial data. However, there is

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WORKBENCH

plenty of room left in the data stream to encode other, non-audio, information. This information typically contains two other kinds of data: descriptions of the audio data itself and user information. Taking the latter first: given the right hardware and software, the user can modify a digital audio data stream in such a way as to insert information which is pertinent to some application which he has. This data will be ignored by the receiving device unless it knows how to decode and apply this information.

However, the bulk of the non-audio data carried on a digital interface is used to describe the audio data itself. This covers things like error codes, the validity of the data being transmitted and whether the data link is meant to be interpreted as professional or consumer. This data goes by the generic title of sub-codes. The data carried in these sub-codes can ac-

tually control the behaviour of the receiving device, determining, say, whether a DAT can go into record mode, despite what you may want. I'll have more to say about interfaces and sub-codes next month.

Food for thought: from an article by John Roberts in the Peavey Monitor Vol 14/1: "Properly designed and used within design parameters, an amplifier will not have a characteristic sound. The positive sound qualities attributed to vacuum-tube amplifiers are actually artifacts of non-ideal performance and musical sounding overload characteristics beyond electrical clipping". And this by John Watkinson in January's Studio Sound: "In my view all properly engineered amplifiers should sound the same. The output waveform should just be a larger version of the input waveform...". Tough luck if you're a tube-head!

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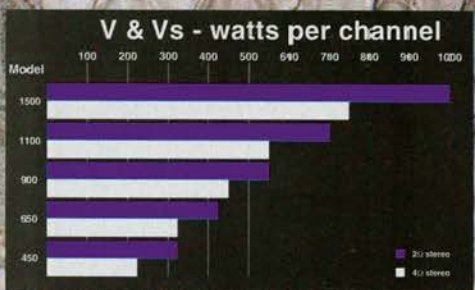
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Photo: Marty Williams

Santana played Melbourne Park in their latin and percussive style with the calming smell of incense drifting from the between the foldback wedges. It was a very cleanly lit show, and crisp sounding too.

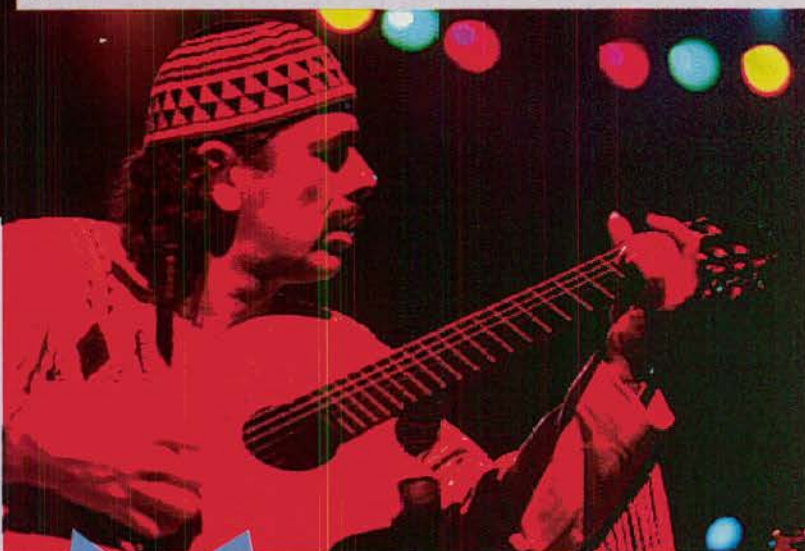


Photo: Jeff Busby

Melbourne Theatre Company's production of *A Cheery Soul* has been playing at the Playhouse, Melbourne. The designer was Dale Ferguson and the lights were by Rory Dempster.

SHOW SCENE

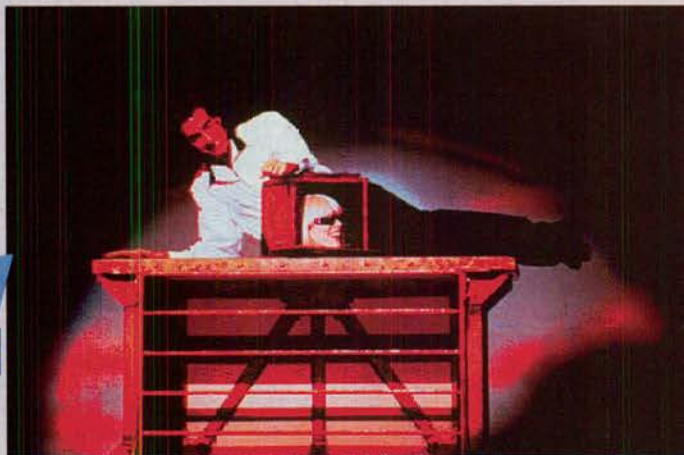
Southern Culture on the Skids, below, played at the Prince of Wales, Melbourne. Kentucky fried swamp rock with a touch of blues thrown in. The band played after a wrestling match was held with the ring occupying a quarter of the room.



The State Opera of South Australia's production of *The Pearl Fishers* has been playing at Adelaide's Festival Theatre. The designer was Kenneth Rowell and the lighting was by Donn Eynes.



Photo: Marty Williams



SHOW SCENE

David Copperfield has been touring Australia with his illusion show. And guess what? They wouldn't allow a technical writer to cover the show! Apparently all crew, security, catering and other personnel had to sign a secrecy document. But we do have some inside info, our lawyers are checking, watch this space!



LETTERS

*#//@%XX-?!

AWARDS RIGGED

The ENTECH Awards, which I attended, were blatantly fixed and rigged to reward Connections Magazine advertisers. The two obvious recipients eclipsed the rest of the field and it became embarrassing to see them return to the stage. Their tables were groaning under the weight of those cheap looking trophies by the end of the night. Who is Bruce Rowland anyway? You kept pointing out that 'leading industry accountant Bruce Rowland' was the returning officer, but where was he? Many others feel the same way. -'Brutus' NSW. (Name supplied but withheld by request).

**Thanks Brute. Bruce Rowland's practice is called Partlett, Chave & Rowland. Many of our readers know him as he does their tax. He was at the awards but didn't think it necessary to appear on stage. Over 400 people attended and there is always a negative view possible from one of them. The voting process has been explained by us many times. We do not choose the winners, our readers do. Some of the recipients (there were 36 product awards and no one company won any more than 8) were devoted non-advertisers in Connections. If the awards had*

been organised by Fred Hollows, officiated by Dick Smith, and handed out by Mary McKillop with the Pope as returning officer, people like Brutus would still have a problem. Those 'cheap' trophies cost over \$100 each- in bulk. Constructive criticism we welcome, your letter is not constructive.

IDIOT AWARDED

I've got a problem with your award for <technicians name deleted>. This person is not excellent, does not display technical brilliance, nor is at the peak of their field. In fact their work is average and nowhere near as good as <deleted> or <deleted>. You sure didn't ask me before making this award to that idiot. -Richard Savant, Footscray.

Next August, just like last August, we will publish details of how you, Richard, can get involved in the process. I deleted the name of the technician because it may have opened the way for a libel action against you and us. Your input is valued.

DRAWN TOGETHER

What a great occasion. I saw people from every corner of our 'enetch' industry, drawn together for the first time at the Awards.

No-one else could do it, Connections you deserve thanks and have my respect. The Awards themselves were delivered with style, Vince Sorrenti was highly amusing but a bit vulgar, and the music was great. I especially liked the band who started the night, it was a bit loud and at first I wondered what would come next, but they certainly held attention. I will certainly attend next year, and will now look forward to voting for the first time, having seen the recipients joy at winning such a good looking award.

John Anderson, JA & Associates, Gosford NSW.

RUDE, RUDE, RUDE

I'm still speechless after seeing Julius Grafton berate a table full of people at the ENTECH Awards. 'Shut up or f— off' indeed. But what else would you expect?

-'Agog', Coogee NSW.

• Were you there? What happened was that I got flustered while announcing the Roger Barratt Lighting Scholarship and said words to the effect of 'shut up or piss off'. I'm sure embarrassed, I was a bit tense because Roger Barratt was a good friend of mine. I apologise to anyone who drew offence, and hope people understand. -JG.

WORKED FOR ME!

I would like to take the opportunity to let you know how much I enjoyed the recent ENTECH conference and trade show.

It was a very professional show and had an extensive array of audio visual equipment that I found very interesting.

As I work in the audio visual area of a large convention centre, I understand the difficulties involved in organising such an event and would like to congratulate you on your efforts. In particular I would like to mention Elaine Auld for her assistance during the trade show.

Once again, you did a fantastic job and I am looking forward to next year.

Robbie Park, Audio Visual Manager, Fairmont Resort, NSW.

ENTECH & THE AV

Firstly I must congratulate you and the gang on the mag and the trade show. Excellent, really enjoyed myself and read Connections cover to cover when it arrives each month.

Now for a bit of balance I'd like to make comment about the seminars. If the two seminar rooms were supposed to be an example of how a staging company sets up

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MEYER SOUND

and runs a seminar room then we're in trouble! As others have mentioned the lighting was appalling, the sound carried distractingly between the two spaces and the blacks were oppressive. I don't know if the two companies involved were working to a specification or they colluded to make both rooms the same but the standard was very low and I was embarrassed to think that our overseas visitors would go away thinking that was our standard in OZ. The two companies involved should have been asked to compete against each other to provide a high level of presentation facility within the confines of the space provided. This was obviously not the case as the spaces could have been greatly improved for very little extra effort.

The other point is the Slides vs Data Seminar. I found this very disappointing. This is a subject that has been discussed back and forth since the introduction of the

first data projectors and computer based presentation systems. As this was conducted by two "slide" based people I wonder whether the seminar would have been better titled Slides vs Slides. It was basically an unadulterated ad for kodak and didn't give a balanced perspective on the pros and cons for each medium. They didn't even display any data images that were anything like the images that would be normally used in a sales conference where data presentations are at the leading edge of presentation technology.

Slides obviously have their place where there is a requirement for high resolution, medical and pretty pictures but data has its place as well. Computer generated speaker support material using bullet points, charts, graphs and diagrams and projected with "low resolution" video/data projectors has a large and growing place in the conference and seminar industries and should be seen as a

valuable tool. I realise you have very little control over the content of the seminars so this is not a criticism but rather me just letting off a bit of steam.

Keep up the good work.

-Bruce Brown. (email)

• *Ouch. We ran 20 Seminars, I must confess I haven't yet listened to the tapes of the one you mention. The average attendance at each of the 20 seminars was over 100 people. The AV firms had to cope with the environment, blacked off areas of the exhibition hall. As it was, everyone could hear but yes, if close to the back the adjoining theatre spill became annoying at times. Each theatre was lit with 8 Par 64's warming the blacks for room ambient, and two zoomspots for the presenter area. Clearly given the size of the theatres (which could handle 220 people each) the lighting was inadequate. It was simply an oversight, for which we apologise. -JG*

CAIRNS IS OK

I have just read John Kelly's letter in the latest edition of Connections in relation to my reported comments in the March edition of your magazine. I would like to apologise to John and the technical staff of the Cairns Civic Theatre. My comments were not aimed at Cairns in particular and were intended to simply indicate the sense of isolation often faced by Technical staff in regional centres.

I trust that I have now been able to clarify my statement to your reporter, which as far as I can recall went something along the lines of "if you are the technical manager of a centre as far away as say Cairns, you may not have a peer you can go and have a drink with....etc. etc.

Peter Owens
ROKPAK Manager

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Each month we list available representative equipment from all distributors. **Distributors: to get listed CALL ELAINE on (02) 876-3530.** Deadline 15th of the month prior.

Feb Studio Monitors. *Truss, Flying systems, rigging*

March Wireless Microphones, Video Projectors, *Moving Lights*

April EQ's, Crossovers, Limiters, Signal Processors, *Film & TV Studio lighting*

May Effectors, Reverbs, delays. *Effects Lighting*

June Live Mixing Consoles. *Profile, PC Spots*

July YEARBOOK. A fresh approach to industry resource information & entertainment technology sites!

August Studio Mixing Consoles. *Lighting control & dimmers*

September Microphones. *Fresnel spots, Floodlights*

October Amplifiers, Samplers. *Followspots*

November Loudspeakers. *Fog Machines*

Dec/Jan Recorders & software. *Scrollers, colour changers.*

*** TO GET A BACK COPY OF ANY ONE CATEGORY:** Check our Internet site first, (www.conpub.com.au) and if not there or if you are not online, send \$5 plus a stamped self addressed envelope to BG, PO Box 439, Epping NSW 2121.

MAJOR TRADE SHOWS

- **NIGHTWAVE '96.** June 1-4. Rimini, Italy. Call +39-541 711249.
- **Broadcast Asia.** June 4-7. Singapore. Call +65 338 4747
- **Infocomm International** Philadelphia, 13-15 June +1-703-273-7200
- **Audio Technology** London June 19-21. Call +44 1734 756218.
- **World Lighting Fair** Tokyo, June 20-22nd, '96. Call +81-3-3706-5687
- **SALA '96,** Bangkok, June 20 -22nd, '96. Call +662 9600-1413
One of 2 similar but fledgling shows in Thailand.
- **PALA '96 Singapore,** 10 - 12 July. Call +65-227-0688
- **NAMM Summer Session,** Nashville July 12-14. Call + (619) 438-8001
- **PLASA** London Sept 8-11 1996 and includes British Music Fair.
A world-great tradeshow! Call +44-1323-642-639
- **AES Melbourne:** Still no press release received. Why don't these people promote this trade show properly? Is it on?
- **Photokina,** Cologne Germany, Sept 18-23. +49-221-8210
- **AES 101st.** Los Angeles, Nov. 8-11, 1996. (New dates!)
Call +1-415-558-0391.
- **LDI 1996,** Orlando, 21 - 24 Nov. Call +1-212-229-2965
- **NAMM 1997:** January 17 - 20, Anaheim LA. Call + (619) 438-8001
- **ENTECH '97:** Melbourne Exhibition Centre, April 23 - 25, 1997.
Annual show, at Sydney Exhibition Centre on even years.
- **Venue Management Association Conference.** Melbourne Exhibition Centre, April 23 - 25, 1997. Held in association with ENTECH. Call (02) 876-3530 for details.
- **SMPTE,** Sydney Exhibition Centre. *Dates changed,* now July 1 - 4. Biannual TV/Film equipment trade show and convention.
- **AIMS '97 - Aust.** International Music Show 1997, Sept/Oct 1997.

Shows we will likely go to ourselves ... or, some rough ideas for you.

- PLASA. London in September is quite nice. This is a big show, and has a lot of attraction. Sadly run at the same time as our local AES.
- AES 101st in L.A. - a great chance to see Pro Audio at work, and much easier to attend than when it is held in New York. November.

DOLLAR HISTORY

HOW the A\$ has fared over time.

One Australian dollar would/will buy:

	\$US	Yen	£	DM	\$\$in
1965	1.14	403	0.39	4.46	3.25
1970	1.12	400	0.46	4.05	3.22
1975	1.33	392	0.59	3.11	3.15
1980	1.16	251	0.49	2.03	2.52
1985	0.66	165	0.51	2.02	2.10
1990	0.77	98	0.39	1.18	1.45
NOW*	0.79	85	0.52	1.22	1.12

30 day trend ▲ ▲ ▲ ● ▲ ▲ ▲
Trendline: fall means A\$ weakens, imports cost MORE, while exports earn less. And vice-versa. It takes TIME to take effect.

NZ\$ at publication: \$1.16 ▲

*At 22/5/96. All rates indicative only. Check with your bank.



World Weather trend, JUNE

*NOT a forecast!

Where?	Temp °C	Rain mm			
Auckland	14/9	137	Manila	33/24	252
Bangkok	33/24	171	New York	26/17	86
Beijing	31/18	78	Paris	23/13	54
Chicago	26/16	103	Perth	18/10	192
Dubai	36/25	0	Rome	28/17	37
Frankfurt	24/13	73	San Francisco	21/11	3
HoChiMinhCity	32/24	331	Seoul	27/16	169
Hong Kong	30/26	432	Shanghai	28/19	177
Jakarta	31/23	97	Singapore	31/25	171
Kuala Lumpur	33/23	126	Sydney	16/9	117
London	20/12	45	Taipei	32/23	322
Los Angeles	22/15	3	Tokyo	24/17	182
			Toronto	24/14	63

CASH!

Business Column

By Julius Grafton

Workplace hassles as detailed in our April issue can cost anyone who hires any staff - even one casual - a lot of anxiety and money. Although the new federal Government are reforming unfair dismissal laws, we STILL operate under the old system. And, the revised system will still impose tough conduct rules on employers.

If you employ staff, this is what you must do.

First, devise a Code of Conduct which everyone -together- is bound by. This is a general document, it can't become an Enterprise Agreement to replace an Award.

Rather it deals with conduct, use of company property, procedure for sick days, smoking, company car details (like who pays for speeding and parking fines) and details like this.

Second, appraise yourself with the unfair dismissal laws. These will likely STILL require procedural fairness before you can dismiss anyone. This includes three separate counselling sessions, written detail and clear warnings to be given during each session.

The feedback we have had here is that many employers are facing ambit and vexatious claims from former staff who have the law on their side. The law provides -still- for penalties to be awarded against employers, and we know for a fact that the penalties can go as high as six months pay. Plus legal costs.

Employees are entitled to a fair cop in the workplace too, everyone needs to be aware that WE ARE ALL affected by this.



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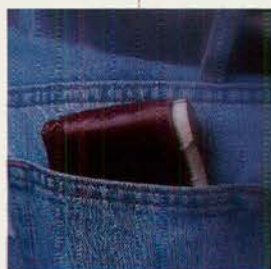
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Write in Reader Service number: 128

PRODUCTS

More Projection Options

Electrohome's ShowStar LCD Large Screen Projection System is now available with a number of really useful enhancements. Its optics capacity increases with the option of one of three interchangeable lens in fixed focal lengths of 1.5:1, 2:1 or 3:1. A new optical design provides more consistent back levels and gray scale, improved colour purity and an increase in brightness to 900 ANSI.

Upgraded operating software includes an on-screen hour meter, separate RGB adjustment and colour temperature control.

Details: Amber Technology, (02) 9975 1211.

Write in 415 on Reader Service Card

LCD Projector

From Barco, a light weight full colour LCD projector: the BARCODATA 2100. It is equipped with a 575w metal-halide lamp and one active matrix LCD with S-VGA (800 x 600) resolution. The BARCODATA 2100 produces clear and sharp images of more than 500 centre lumen on screens up to 5mtr wide.

A advanced video decoder and pixel map processor enable the display of all video sources (PAL, SECAM, NTSC) and computer video formats with resolutions up to 1,024 x 768 pixels.

In addition, the BARCODATA 2100 features on-screen menus, accessible through a backlit remote, and user facilities such as image size, shift, pan zoom, freeze and built in test pattern. Designed for large screen presentations to small or medium-sized audiences.

Rec. List: \$21,000 (inc tax)

• Details from Trace Pacific, (03) 9646 5833.

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Digital Video Recorder

The FED VMOD-100 Video Solution is a stand-alone digital Video Disk Recorder and is a 'drop in' replacement for analogue VTRs. It doesn't require a computer interface and offers digital operation such as random access and no signal degradation on re-takes.

Video signals are recorded in real time (like normal VTRs) and video inputs and outputs are on both composite and Y/C (S-Video) connectors. The signal can be viewed on a conventional video monitor.

The basic system is equipped with one MOD drive, two digital sound channels and one RS-422 control interface, which allows connection to conventional video editing systems. Variable M-PEG data compression is employed according to the desired picture quality. Broadcast quality video is available with a CCIR 601 option, which provides 4:2:2 serial digital video and employs removable hard disk drives.

• **Info from Amber Broadcast, (02) 9975-1211.**

Write in 416 on Reader Service Card



Send your Product News! PO Box 439, Epping NSW 2121 or fax (02) 876-5715

Jet Strobes and Microwave Links Nortel stand at Melbourne Expo



By Madeleine Murray

Strolling through the Melbourne Exhibition Centre, I couldn't help but notice that it is nicer than Sydney's. It feels like a real building, rather than a vast white space.

The Australian Telecommunication Users Group trade show, with the sexy acronym of ATUG, had many, many stands, but the one I spotted across the expanse of exhibitors was Nortel. Three blue triangular sails with blue jet strobes flowing along their edges, stood about ten metres in the air above the stand. Below, metallic shapes worked with varnished custom wood curves to form the shell, and inside a live interview was being directly transmitted onto the 16 monitors behind the subject. There was a microwave link to the Nortel technical support staff in the St. Kilda St. office.

Eighteen monitors in three banks of six around the outer edge of the stand carried montage of world wide Nortel activities, montage of sponsored groups, computer art images, and the interviews. Something called televisuals was also happening. In the middle of it all was an unlikely looking guest, a man with a long blond braid hanging to the waist of his teal sports coat.

He turned out to be Mark McClelland, the designer and producer of the show. So, what have we here? I asked him. (I get paid to do these things, just walk up to

anyone and start asking questions. It's great.)

"The stand itself is a steel frame hidden and clad. The top mast is rigged off the ceiling, and we get ground support from the columns, and it all goes together that way," McClelland said. "We've set the stand up to be like a little theatre in the round. Originally we were going to have it on a revolve, but the client pulled the plug on that, which is a shame.

"Instead of showing off heaps and heaps of product, we're really showing off Nortel as a company, the people that work for them, their customers, and telecommunications groups. We get them on the stand here, and we have Tiny, our presenter who interviews them throughout the day about their role in the telecommunications industry. We then have a live cross using a microwave link. We've hired the facilities for the microwave link from Channel 7 here in Melbourne. And we cross to Nortel's office where our co-presenter interviews Nortel employees."

On the central pole a remote camera is mounted, discreetly, which is shooting the interviewees. Chris out the back with joy stick controls drives that. "We've basically set up this television station, which is how things will go, or should be going in exhibitions rather than just static displays.

(continued over)

MICROTECH GEFELL



M900/M910

Revolutionary design provides superior off axis response. Great for recording in closed environments where reflected sound is likely to become a significant part of the recording. Switchable x 2.



M300

Microtech Gefell's smallest microphone. Extremely life-like performance makes it well suited for instrumental, soloists & live recording. A stunning small microphone with the ability to prove itself under many varied conditions. Gives producers the opportunity to purchase a Microtech Gefell microphone for less than \$899 (excluding sales tax).



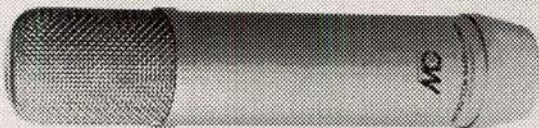
M295/M294/M296

Large metal diaphragm makes these models excellent with live recording of almost any signal. Lifelike recordings as you can only expect from a true capacitor condenser microphone. Special transformerless low noise output. Switchable x 2.



SMS2000

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UM92S

The original M7 equipped "Tube" (valve) powered microphone. It definitely made Georg Neumann a legend. Try one. It could make you a legend too.



UM70S

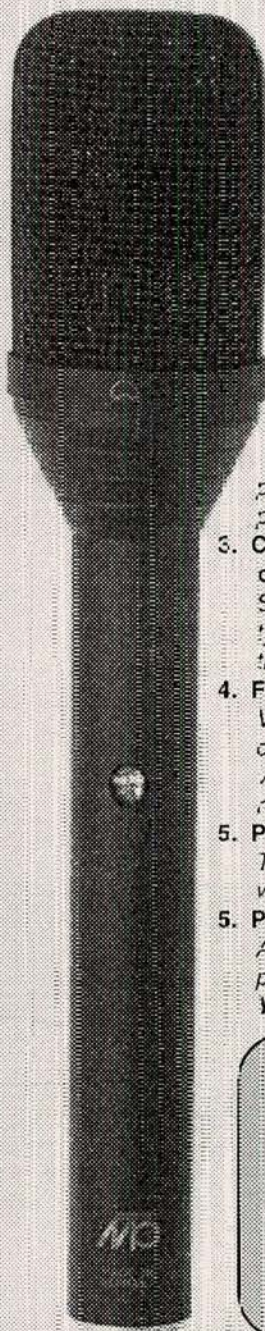
Some engineers regard this microphone as the new industry standard. A production favorite from one of the longest standing mic manufacturers.



M7 Capsule (in cut-away headshell)

The legend itself. There has never been a piece of audio equipment which has been appraised, valued, or revered, by so many professional studio owners, as the M7 capsule. "It will always be considered the standard to which others aspire".

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- 2. Transformerless output.**
Ensures maximum RF rejection. Great for those studios which suffer from problems with extraneous noise (power supplies, lighting, digital processors, PC's etc).
- 3. Cardioid Pattern with switchable base roll off and 10dB pad.**
Smooth response coupled with high sensitivity and improved signal to noise ratio, gives this microphone it's legendary "Air Presence".
- 4. FET designed pre-amp.**
Valve like sound created using FET circuitry coupled with surface mount technology provides extremely advanced design with ultra reliability. Max headroom & high gain output
- 5. Precision engineering.**
Total lifetime commitment to design and build with true calibration and quality control.
- 5. Price.**
At \$1085 (excluding sales tax), this microphone is unbeatable value. Your ears will not believe your eyes.

Don't buy one of those cheap imitation microphones. Send them back to Spain, Mexico, China, Taiwan (where-ever) and for the extra few dollars, buy an original model M300, for

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There should be an entertainment/interactive component."

Nortel sponsor the Australian Opera, the Australian Ballet, and the Essendon football club. "We've been interviewing people from those organisations on the stand, and asking them what Nortel sponsorship means to them, and about the marriage between their artistic or sporting fields, and telecommunications. Because telecommunications is such an exciting growing industry, it's really affecting everybody. We've been looking at those links, and trying to make it more of a human interest thing."

Two boxes also show some 'Pepper's Ghost' footage, where the image appears suspended in space. "It just a little eye-catching thing, a visual trick. They seem to capture people's attention."

LIGHTING

The lighting rig looked more

substantial than other stands. Subhired from Active Lighting in Melbourne, there were Golden Scan 3s throwing onto the sail, profiles, and four scan zooms.

McClelland confessed, "We like to light well. To tell you the truth, Madeleine, I'm a little disappointed in some of my detailing here. I've got a few shadow lines. But we only had five weeks to put the whole show together. I spent so much time organising the technology side of it, little things don't always get finished completely to my satisfaction."

TELEVISUALS

At a large bank of computers, Rob Sherrington was creating the televisuals. That is, a computer generated representation of the interview that was taking place. An image from the interview is taken and enhanced by the man at the computer. This can be thrown live to the monitors, or printed

out. "It's a piece of animated computer artwork. They're an incidental thing really, just to capture the mood, and give another bit of interaction."

{The gear} and the guys in the little room out the back

Seven sources were running to the monitors outside. Three pre recorded tape sources, live camera one on the stand, live camera two at the other end of the micro-wave cross to the St. Kilda Rd office of Nortel, computer one and computer two on the stand which are part of the televisuals.

"Because of the number of sources, we're running the show to a time code that's driven from the master tape rather than off verbal cues from the presenter. We spent the first couple of shows and rehearsals just getting the timing right. Tiny the presenter has to get out, and onto the next segment according to the time code.

If he runs over, the vision's not matching."

A Yamaha Pro Mix was doing the audio, with two Betacam lines in, a CD player, plus a cross line from the OB. Two Panasonic MX 50s mixing vision, two Pic 3 video wall controller, two computers, one operating Betacams for re-winding and cueing, and one operating the video walls for fades and crosses. Everything's synced up so the controllers can switch smoothly between images. The Betacam players were locked up by the RS 232 to 422 converters which take the signal from the computer.

THE HUMAN FACTOR

McClelland and his team put the whole show together in five weeks. "It should have been a three month job. It was too hard, I'm really wiped out. •

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Write in Reader Service Number: 116

○ **Adelaide Audio Services** have been busy with Wendy Mathews, Tommy Emmanuel, Rick Price, CBD and Peter Andre. They have been using their new foldback rig which consists of Martin LE 350s and LE 700s; QSC Powerlights and MX 3000a's; SCV graphics; BSS DPR402 Comp/Lim; Allen & Heath consoles. Contact: (08) 3622322

○ **System Sound** have been appointed audio engineers for *Sunset Boulevard*, opening in October at Melbourne's refurbished Regent Theatre. Peter Grubb will be the Sound Supervisor for the production. System Sound recently purchased a 29 channel Sennheiser 1046 wireless system which will be used on the V.S.O.s "Puccini Spectacular", playing Melbourne and Sydney. The radio mic system totals 39 channels, 24 distributed through the 40 strong chorus and the remainder on the soloists. System's new Meyer MSL4 speakers will be the centre-

piece of the sound reinforcement, with two PM400s FOH.

The VSOs touring schools show was the first application of Yamaha's MS150 self powered speakers, spec'ed by Peter Jago. The system had to be put together quickly by the performers often performing two times a day, five days a week. A Promix 01 was also used as Jago explains, "It allowed me to have a complex sound design and automation without an operator. All the memories, effects are used and the musical people are very happy."

Contact: (03) 9529 2633.

○ **Rossound Hire** recently supplied audio for the R.A.A.F. Base open day at Pearce, Western Australian. Total attendance was 55,000 people. Using a Mackie MS-1402 VLZ, Rossound mixed signal from sources such as Control Tower-Aircraft program, three commentators (using custom

configured headsets), general commentary using an Electro-Voice 2500 radio mic, and background music. Signal was then fed to some 40 Toa TH50s. A low powered transmitter was linked off the system using an ARX MaxiSplit and fed to receivers in more remote areas. All control gear was housed in Rossound's studio caravan. The system was designed and operated by Senior Audio Operator Chris Boyling. Contact: (09) 354 2354.

○ **C.L.S.** are busy preparing LDs David Murray's lighting rig for the V.S.O. production "Puccini Spectacular". Equipment includes custom curved trussing, Varilites, Icons and masses of pars. Also on the boil, a Morpheus/Pan command system for Barry Manilow. Recent rigging include events in the new Melbourne Exhibition Centre and rigging for a Jacki Chan movie, "Nice Guy". C.L.S. have also supplied BoJo Produc-

tions on the Gold Coast with 8 Cyberlights, Status Cue Controller, F100 Smoke Machine, DF50 Diffuser and a quantity of alloy truss and rigging. For *Sunset Boulevard* they are supplying customised chain hoist controllers and alloy box trussing. Contact: (03) 9646 8555

○ **Active Lighting** has expanded its hire and production facilities and now operates from new premises at 15-17 Queens Avenue in Hawthorn. The move was prompted by increasing hire and production activity and equipment. Some recent productions: The Prime Ministers Dinner at the Melbourne Tennis Centre; The Melbourne Comedy Festival; Cruel Sea; Yothu Yindi; 1996 Logies Awards. Recent purchases, Jands Hog 600, 14 Goldenscan IIs (now 26), additional 36 Selecon luminaires. Contact: (03) 94819 6912

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No cheese in Q-Mix

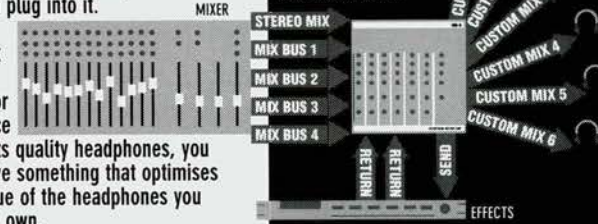
All inputs are balanced so there's no hum and noise. Each headphone amp puts out 160 milliwatts into a 60-ohm load...enough to completely toast your ears with any set of cans you can plug into it.

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Below: A typical hook-up: An overall stereo mix, 4 submixes from the console. An effects processor. And six musicians.



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Write in Reader Service Number: 168

Compiled by Dan Cole

Staging Rentals' April-May ran thus: opened with Planet Hollywood, then to Australian Swimming Championships and launched The Olympic Swimwear. Staging Rentals also provided for Super 12, The Australian Fashion Innovators, Entech '96 (the drape job from hell), George Thorogood, Coolio, Simply Red and finally The Furniture Awards.
Contact: (02) 519 6300

Dale Kennedy provided production for the Centenary of Mackay Port. An estimated crowd of 12,000 attended. Three performance/audience areas were created for. The main stage used 2 x JBL 4770s and 2 x JBL system 80s per side, powered by 4 x AM1600 s and 1 x AM 1k2 for foldback. The second area used 4 x JBL self powered 15" and the third area was covered by 2 x EVS200. According to Dale the main problems were isolating each area sounds, as well, due the time of year (Mackay, April) their 3 phase blew up so the local sparky had to dig for the underground supply and hardwire the PA with the catering tent full of hot food hardware.

He provided another production for the local Maltese community for their Mardi Gras, no production notes only that Dale Kennedy's lighting guy Allan Polard threatened to walk out because the Maltese flag was above the Australian flag, which is, apparently illegal.
Contact: (079) 573904

Audio Visual Lighting Australia has just completed the full installation of Perth's newest night club, *Excapedes*, with a full ARX system comprising 925 Subs, Powermax 2, Micro Max Speakers, SX Amplifiers, EQ 60s, processors. AVLA has recently installed a new Philips LCD projector and screen for the Eagles bar at Steve's Hotel. Contact: (09) 227 1399

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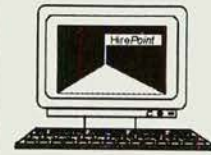
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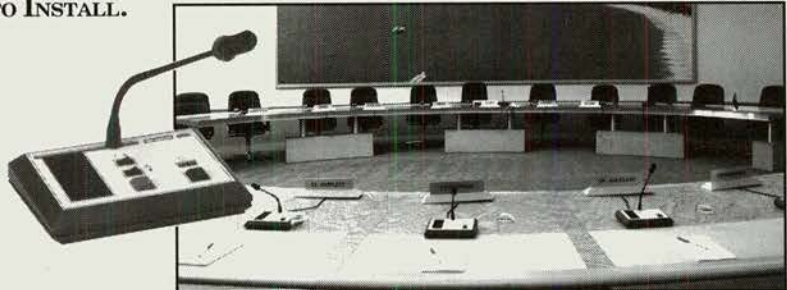
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Write in Reader Service Number: 163

THEATRE & CINEMA

The Resurrection of the Regent

A big moment for Melbourne

By Madeleine Murray

"I remember going to the cinema there. It was so wonderful. I think there were stars in the ceiling, or something," the taxi driver tells me as he drops me on Collins Street.

\$35 million has been spent on the Regent, which will open in October for *Sunset Boulevard*. The theatre has been closed and empty for 26 years. It almost became a shopping centre, or a TAB, but the Builders' Laborers Federation refused to demolish it. So it is being restored in time for the current fad of the mega spectacle theatre, which involves sweeping set changes, lavish costumes and lighting, live orchestras, and tie ins with travel and dinner.

The whole place is an Arabian fantasy, of ornate plasterwork imitating filigree carved marble a la Taj Mahal. Intricately detailed columns, balustrades, balconies, and casement windows go berserk in a rococo frenzy. There is a main theatre called the Regent, two lavish foyers, and a downstairs space known as the Plaza Ballroom.

David Marriner owns the Princess, Old State, and the Comedy Theatre in Melbourne. Marriner is leasing the Regent from the Victorian Government, and the City of Melbourne, who are funding the

restoration.

The Plaza Ballroom

The General Manager of the



Princess Theatre Group is Rob Robertson, an accommodating man with a technical background in theatre and opera. We walk together, wearing hard hats, through the Plaza, a cavernous lower space dimly lit and covered in scaffold.

The raked floor is going back to a flat floor, and the original ceiling is being restored. Bay windows along the walls will have backlit frosted glass in behind them.

The downstairs room has a small stage, with large kitchens behind. The lower area will seat 450, with tables of ten. More people can sit at tables on the upper levels. "It's a real banquet room,"

Robertson says. "But it can also seat about 900 in conference mode. The idea is that we can do pre show dinners in here, and sell all that as part of the *Sunset Boulevard* experience. There will be a Sunset gold package. They'll have a pre show meal here, they'll get complimentary drinks in the foyer during interval. Then come back down for supper after the show."

The room, with its small open thrust stage, 12m wide x 4m deep, will be used for entertainment. The floor will be carpeted, and a portable dance floor can come in. "The idea with these spaces is to have as much flexibility as possible, rather than be locked into a particular format, which then pre determines how the room has to work."

Dressing rooms up above, behind the romantic windows, will be shared with performers on the main stage.

The foyer

The main foyer is a lavish pot pourri of swirling carved balconies, painted arched ceiling, and mini Renaissance exteriors. "This is known as Spanish Gothic architecture, by Hollywood I suspect," Robertson says. They've enlarged the foyer by taking some seats out,

(continued on page 38)

Curtain calls

Compiled by Madeleine Murray

• Did you ever wonder how they got all those holes in the undulating set of *Jana Wendt's Witness*? One man, called Rudi, of **White Bay Studios**, Sydney, spent three days drilling them.

• The stage has been widened, and the seating refurbished in **Her Majesty's Theatre**, Sydney for Disney's *Beauty and the Beast*, which opens in November. The hi-tech, big budget musical was to run in the restored Capitol Theatre, but was pre-empted by *Miss Saigon*.

• **Ms. Rhonda Kerr, producer of *The Pajama Game* at the Civic Centre in Dubbo** has not been impressed with bookings for her show. She told the Daily Liberal local paper that, "Amateur theatre in Dubbo will die out eventually. We'll see out last live show here in a couple of years if audience numbers keep declining as they are. By the time a theatre is built in Dubbo, the existing theatre groups may have disappeared."

• **The Bathurst Council have been discussing a theatre** for four years. The Council's Theatre Committee recently recommended the City Hall as the site, and the hiring of a consultant. Council members are divided about the theatre issue, and the site.

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- The **Victorian State Opera's Puccini** should be humungous. The sound rig and the lighting rig are being assembled in airplane hangars. The stage takes up an entire warehouse, and that's only half of it. There will be two revolves, 60 VL5s, 21 Icon moving lights, 120 Pars, 12 follow spots and operators, as well as 50 chorus members, 12 dancers, a 60 piece orchestra, and last but not least, 6 sopranos and a tenor.

- **System Sound** are doing the sound, and communications for Puccini. The conductor is so far away from some of the singers that he is on big TV monitors. SS are doing radio contact for various operators around the place, such as the 12 follow spots, and all the automation people. They are using the Meyer sound system, with MSL4s as the main centre, with MSL3s and UPAs as well. 40 Sennheiser radio mics run on 2 Yamaha PM4000 consoles. 11 sound crew will work on the show. The sound rig is worth \$2.38 million.

- A new video about the history of the **Capitol Theatre, Sydney** is called *Once Upon a Dream*. It was produced by John Adey for the Australian Theatre Historical Society, with the Capitol. The one hour video covers the theatre from its beginning in 1893 as part of Belmore markets to the recent renovations. The Stages Theatre Shop, in the Capitol sells the video for \$24.95.

- The **Valhalla cinema in Melbourne** is closing and looking for another venue. The building will be taken over by a new art house cinema company.

- More cinema closures. The single screen **Mandolin** in Sydney closed after eight years. It had recently been bought by the NZ Rialto Group.

- Traders at **Forest Hill Chase shopping centre, Melbourne**, have formed a committee to protest against the proposed Hoyts 25 screen multiplex near them. The shopping centre has an operating cinema, and shop owners are afraid their business will drop drastically with a nearby mega complex.

- The **State Opera of South Australia** have moved into new premises in Netley. The space has a huge rehearsal area, with no columns. The cantilevered roof is one of the biggest in Australia. There is also room for new offices, a boardroom, and storage rooms.

- Recently, Worksafe ruled that Kev Moore, technician, and **Stuart McDonald-Woods**, tech stage manager had to have a rigger's ticket to carry out their work at the **Queen's Park Theatre, Geraldton, WA**. Ominous?

- A 73 year old woman has sued, and lost her case in Milwaukee. She claims that strange things started happening to her after a 140kg **electronic bingo board** fell on her. She started having spontaneous orgasms, sometimes in clusters. I'll have what she's having, please.

- Non profit organisations can no longer use volunteer ushers at the **Griffith Theatre**. The local coun-

cil has ruled that all ushers must be employed, and paid.

- What is four storeys high, 35m long, floats around Sydney Harbour, and acts as a theatre/performance/Olympic events venue? The answer is a controversial **floating theatre**, backed by the NSW government, and SOCOG. The theatre will seat 300, and building will start in '97. Sponsors names will be on the side. Harbourside residents are getting testy already. Architect Mark Pulham and theatre producer Jessica Machin are behind the idea, and have raised \$400,000. They need \$4.75m. The design looks like an ethereal barge of glass, steel and spangled space, and is a green concept, with recycled waste and solar energy. But it is still four storeys high.

- Victoria has a **new ticketing agency, owned by Kerry Packer and David Marriner**. Ticketek is a network of 30 outlets. They will sell tickets for *Sunset Boulevard*, and have secured the rights to all

Calder Park racing events.

- The **old woolstore in Geelong** has been turned into a 1500 seat venue called the **Great Hall**. The space was created from the roof down, by removing three floors, and leaving one huge lanolin soaked space, which overlooks Geelong Bay.

- **Sally Beck** has joined the Geelong Performing Arts Centre as Administration Manager. This centre really has its act together with good press releases, and the productions for the season printed down the side of the stationery. They just have a new wine bar, called Othello's, and I'll be there soon.

- The **Preston, Melbourne** has just used BOSE Modeller Computer system to relocate the speaker system in its theatre. The sound system had trouble with acoustic feedback. BOSE suggested new locations for maximum gain. PA People did the work.

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Write in Reader Service Number: 164

REGENT

which brought the seating capacity down from the original 3,300 to 2,100. Huge red velvet drapes will hang in the foyer, and there will be a merchandising area in one part.

The Regent

The Regent really is quite a sight. More frenzied plaster ornamentation everywhere. A16m wide x 12m deep stage with carved proscenium, space for 2100 seats, under a huge domed ceiling with hundreds of plaster relief figures on it.

"This is the grandeur of the whole thing," Robertson says. "We have the world's seventh largest Wurlitzer, which we found in America. That's being restored, and may actually be used in *Sunset Boulevard*. There'll be big red swags of velvet above the proscenium, and a red velvet house curtain. The cinema screen will fly in and out. A sound system will fit behind the screen, and speakers in the auditorium. We'll have all that in for the gala opening. We'll be featuring quite a lot of the cinema history of the building. Then it all comes out for *Sunset*."

Upstairs is another foyer, a dress circle, and a private dining area and cocktail bar. Eleven chandeliers will provide light, and a 2.5 tonne chandelier will hang in the middle of the dome.

Some details

Vision Design Studio in Melbourne are consulting on the technical aspects of the theatre. They are recommissioning the lighting control system around the dome. "They used to have a sunset at the beginning of the movie," David Bird of Vision says. "Behind each of the big domes in the ceiling are red, white, and blue light

globes. Instead of just fading the house to black, the coffers all went magenta, then blue, with only the candles in the chandeliers on, like stars. Then it faded out."

On the mechanical side, Rutledge Engineering are modernising the orchestra and organ lifts. ITE are putting in a new counterweight system. Bytecraft are installing a new dimming system.

System Sound have been advising on the sound, and will be putting in the system for *Sunset Boulevard*. Meanwhile Rutledge Engineering will put in all the cabling for closed circuit and talkback, paging to the dressing rooms, and some infrastructure of mains, ducting and penetrations for touring shows.

Greater Union Village Technology are putting in a cinema system. Bob Lucas is in charge of the job. 24 Krix surround speakers are already installed behind the plasterwork walls of the Regent. There will also be a full stage cinema system, which can run 70mm magnetic sound, with a Dolby CP65 sound processor, 3 stage channels, and 8 sub woofers. The sound system will be on wheels, so that it can be locked off in place, and removed when a play is on. The screen will be flown in.

Lincoln Scott are the consulting engineers for the project. Andrew Payne, executive director of Princess Theatre Group, is theatre consultant, working with the services.

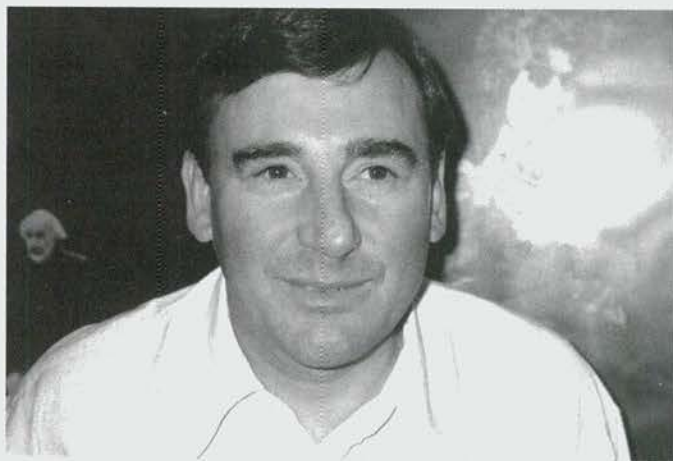
"The State Government, and Melbourne are making an investment in theatre, entertainment, and tourism for this city," Robertson says. "They're lucky they had a theatre to restore, because in Sydney they were all pulled down."

Julius Caesar on Twelve Monitors

Designer Shaun Gurton teams up with

Jamieson Lewis

By Madeleine Murray



Shaun Gurton is married. He has other qualities, I suppose. His wife answers the phone, and says he has the flu. "I'll see if he can come to the phone." Images of a gaunt, fevered figure swathed in tubercular rags dragging himself to the phone.

Cut to the chase. I meet him next day in an office of the Melbourne Theatre Company. "Get your head closer to her breasts," I say, as I pose him for a photo in front of a buxom actress print on the wall.

"Oh, God, Roger will know I've been in his office," Shaun frets.

We sit down to talk in front of his model for the new production of *Julius Caesar*. It's an imposing dark Third Reich style room, on a grand scale. The lighting, by Jamieson Lewis, is to be very cin-

ematic, like 40s film noir classics. Some of the lights are placed inside the huge fluted columns along the side walls. Twelve video monitors come down on a rig during the show. In the first half of the show, the set is fascist order, which then disintegrates into brute chaos.

Julius Caesar

The director, Simon Phillips, and Gurton, are making the play contemporary. Inspired by the intrigues around leaders like Ceausescu, and Thatcher, they see *Caesar* as a story of power, upheaval, and betrayal.

"We travel from huge, public spaces to intimate discussions," Gurton says. "We wanted fluidity, the sense of assassination, the power of the media, and the drama of black and white. We were very

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interested in lighting in terms of dramatic lighting."

Gurton was inspired by an image of Ceausescu's huge office, after it had been gutted and taken over by the military. In Gurton's design, the war comes inside, and destroys the sense of order and power. The curtains get ripped down with broken glass behind.

Lighting Caesar

The revolve is black carpet, and areas are isolated by small practical lights. The lighting means the set can change from being commanding and impersonal, to being intimate. The fluted parts of the side columns are concealed long light slots. "We get full purchase from the bottom to the top, both sides, so that at a given moment, light can just skim across," Gurton explains. "We can pick up people in isolation. There's a gap, so you don't see the source of the light. We bring the bars directly above the top of the wall, so you get a sense that's the ceiling. But all the side light is concealed. It gives a wonderful sense of intimacy."

Desk lamps, and glowing computers create little pools of light around the set. All the plugging is done on the stage, and the revolve moves slowly most of the show. Technicians have to be running

around in the dark, and replugging lights.

Gurton wanted to create a sense of movement, of people in the background busy, that the world of business and media is going on, even during an intimate conversation. The brief for Lewis was to get as much clarity of black and white as possible.

"I work very, very closely with lighting designers," Gurton says. "I've worked with most of the really exciting ones, like Jamieson Lewis, Nigel Levings, Nick Schlieper, Mark Shelton, Rachel Burke. I'm always interested in working with a designer who sees light as a visual property. I don't see lighting as just something you add. I'm far more interested in the light as another visual element. In this one, it's an architectural structure that feeds hidden light in."

Media

The production has a sense of the media, and how potent it is, lots of paparazzi, flashing bulbs, and flown monitors and mics. Two hand held video cameras, and a fixed one in the auditorium give an instant replay on the stage monitors. The speeches are relayed live to the audience, using close ups. "It becomes a nice way of allowing it theatrically to become a

very powerful media occasion. You see Marc Anthony over the body, and the cameras follow them as they go down to the body. When the war breaks out, and the whole room is destroyed, we use images like Sarajevo on the monitor."

Theatre in the 70s

Most designers studied art, architecture, or set design. Gurton started out as an actor. He joined the Melbourne Theatre Company in the late '60s. "It was great, a very exciting time. The MTC was only working out of Russell Street in those days, so everything was done there. For a young actor, Russell St. was a great mecca, a really, really important thing. In those days, NIDA was happening, but it still wasn't essential. I could come from being an amateur actor, and literally do an apprentice onstage."

In the early 70s, Gurton applied for a trainee directorship. He worked around Australia, in places like Orange, and Tasmania, and then landed a job at the South Australia State Theatre Company. "I must admit, most of the time, I was acting, and sort of sitting in on directors. In '72 George Ogilvie became artistic director, and this was a major event. Rodney Fisher came as associate director, and Helmut Bakaitis. It was a fantas-

tic period of time. We worked in theatres all over Adelaide, and the Festival Centre was being built, and the Playhouse, which I think is the best intimate drama theatre in Australia. Actors love it, it seats 480 so it's intimate. There's a wonderful relationship between actor and audience."

Gurton started fiddling around with masks, and commedia dell'arte, and getting interested in design. Particularly European designers like Gordon Craig, and Joseph Svoboda, and the use of minimal space. Then Ogilvie asked Gurton to fill in for a designer. "So I did it. It was one of those extraordinary things, that because the place was so full of creativity, there was no sense that someone was put on the rack. It was very nurturing. We did some wild, experimental stuff."

Gurton went to London in '77, hoping to learn more, and meet designers he admired, like Koltai, Tim O'Brien, and Jocelyn Herbert. "I sent them letters, saying I'd like to show them my work, and people were tremendous. That's something I try to do now, to be open to younger people."

He got a grant to work with O'Brien who was designing *Evita*, the first time that a major theatre was to be gutted for the first major Lloyd Webber epic.

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Write in Reader Service Number: 127

Big Dreams for Giant Screens

Maxvision plans more cinemas

by Madeleine Murray

Destination Cinema is a new one on me. For the uninitiated, it means a giant screen cinema in a tourist spot. The big screen provides the definitive, visceral experience of the area. And the tourists provide the numbers that a giant screen business needs.

Robert Whittingham (pictured) is the founder of Maxvision, a private Australian company. The Katoomba cinema is their first venture. Maxvision constructed the building, fitted out the cinema with the 300 seat auditorium, 24x18m screen, 70mm projector, 16 channel sound, a restaurant, snack bar, and shop. Maxvision also produced the 70mm film, *The Edge*. The cinema has been open for three and a half months, and over 100,000 people have visited.

I was one of them. They show 35mm films as well, and I saw *Casablanca* there last month. It was wonderful, the sound was brilliant, and the great faces of Bogart and Bergman were huge

The giant screen experience makes a normal cinema seem small and thin, something you peer at, rather than something that happens to you.

Maxvision have plans to build five more cinemas in Australia, but they are all in negotiation at the

moment, so top secret. They also plan to take the giant screen/destination cinema to New Zealand and Asia.

The man behind the giant screen

Whittingham receives me graciously in the meeting room of his Crow's Nest office. I am a bit distracted by the fact that he looks strangely like Conrad Black, the Canadian owner of Fairfax.

Whittingham had been involved in the Blue Mountains for ten years, with the hotel Lillianfels, and the Blue Mountains Hotel School, before he ventured into film.

"I was a fan of giant screen cinema. It became quite clear that this was a great opportunity to achieve what I was looking for."

The Katoomba set up cost over \$12 million, including the 38 minute film.

70mm is an expensive medium to produce a film in. The cameras are large and awkward, and one reel is only three minutes long. The film has to be sent overseas, because there are no processing facilities in Australia. The shooting ratio was about 15:1.

Maxvision is evaluating the whole process of how to produce further films, cost effectively.

Not Imax

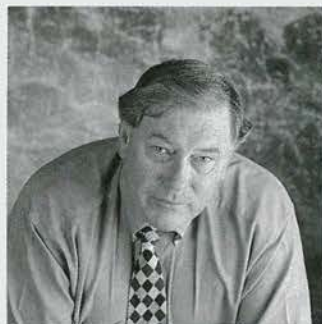
In case you wondered, Imax is

the name of a Canadian company, who make 15perf/70mm film, and equipment. It is not the generic name of the giant screen film.

There are a variety of large screen formats. The camera stock used on *The Edge* was 15perf/70mm. The final print was 8perf/70mm. The 15perf film has 15 sprocket holes along the top of each frame, so the picture runs through the projector horizontally. The 8perf has 8 sprocket holes along the side of each frame, and goes through vertically, like 35mm film.

The 15perf/70mm was developed 25 years ago by Ron Jones, a Brisbane engineer. The idea is to create an image which is larger than the field of vision. "Because of the quality of film stock now, it is no longer necessarily to have the 15perf format," Whittingham says. "You can achieve the same results, somewhat better results with the smaller 8perf frame, which is more cost effective."

"The use of giant screen cinemas around the world has been inhibited dramatically around the world because of the very high cost of the Imax format. In the last few years, there have been a number of new products on the market based around 15perf, and smaller



sizes, which enables you to create a very nice image at a lower cost.

"We're looking very closely at producing any future films on the 8perf stock."

Imax don't sell their projection equipment, they only lease it. "They get annual license fees. That puts very substantial cost burdens on giant screen ventures. It really has inhibited the growth of the industry." Most 70mm films have been done through institutions, such as museums. Until four years ago, when have a dozen competitors have emerged.

"We actually developed Maxvision. We spent two and a half years engineering our cinema, the sound, the projection, the design of the screen. Rather than buy the whole package from overseas, we developed it using Australian people and product - on the basis that we would be doing more than one."

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● Competing with *Red* music, is Village /Optus' music channel ARC. It's a joint between Village, Optus and Austereo, 20:40:40. On the subject of pay TV music channels, one pay TV industry person says "The concepts have a much better chance of working if they are perceived more as youth channels rather than music video "wallpaper"".

● Lookridge Pty Ltd successfully bid for the new FM radio licence offered by the ABA for Mildura. The new station will broadcast at 97.9 MHz. Lookridge paid the 10,000 reserve price due to the withdrawal of the only other bidder.

● Foxtel are in discussion with the CBAA (Community Broadcasters Association of Australia) regarding the setting up a national community channel. The material will be put together in Sydney by Metro TV and by equivalent organisations in other states. General manager of the CBAA Michael

Thomson welcomes the idea but is wary of US style community TV in Australia "which leaves editorial control in the hands of the cable operator", such as Optus' 'alternative' *Local Vision*.

● David Sun of Kingston Technology makes a billion dollars a year from memory. His company specialises in RAM products for as he says, "new software hungry for memory."

● Internet people Netscape calculate 65 million hits a day. They plan to open a Netscape Australia office soon.

● US consultants AT Kearny state home video usage exceed cinema ticket purchases by 3.5 to 1; more than 80% (76 million) of US households own at least 1 VCR machine. So the video cassette lives on — until at least mid 1996 when Digital Versatile Disk (DVD) is launched.

● Not to forget that Digital Audio Broadcasting is adapted to multimedia transfer. DAB is designed for a multiplicity of applications with a total possible data rate of up to 1.7Mbps. Experiments are under way in broadcasting high resolution images (640 x 480 pixels). The images are compressed JFIF files according to JPEG standards (JPEG: Joint Picture Experts Group)

● Australian Screen Sound Guild members Wayne Pashley, Libby

Villa, Anthony Gray and Julius Chan have been awarded the US Golden Reel for the best ADR (Automated Dialogue Replacement) in an animation for the feature film *Babe*. The American Guild of Motion Picture Sound Editors presents this award each year in recognition for excellence in sound editing and mixing.

● A new all-Australian music content radio station has started transmitting in Sydney. 2AM is located at 1620Khz. "We are transmitting a mix of 100%Aussie information and music... to show how easy it is to play 100% Australian content." says program Director John Hatwell. Contact: Keith Ashton (02) 524 8778.

● Sydney Intermedia Network provide exhibition, production assistance and equipment for the creative use of film, video, sound and other electronic media. Formed in 1990, its members now number more than 100. SIN also facilitate screenings and forums and offer well priced equipment hire such as cameras, projectors lighting, exhibition plinths. You must be a financial member of SIN (\$30 per year) to hire but there are other benefits including a newsletter and discounts. They have a web site <http://www.ozemail.com.au/~sinsite> or phone (02)264 7225.

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If you are looking for a way to finance your on-line, multimedia proposal or project try these contacts who provide finance for multimedia projects.

● **Australian Multimedia Enterprise (AME)**. Government funded established to encourage investment in mainstream platforms including CD-ROM and on-line services. The AME is required to make a commercial return on any investment it makes and expects to fund 300 concepts each year. It is expected to invest its initial capital base of \$45 million within three years. Contact: Australian Multimedia Enterprise, Level 9, 100 William St, Sydney NSW. ph. (02) 326 9099

● **Australian Film Commission (AFC)**. Funds are available for content creation and prototype multimedia. The AFC concentrates on the 'entertainment arts'. This includes interactive movies, innovative computer games, artists' projects and information based titles which take a critical approach to their material. Contact: (02)321 6444.

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Incorporating the **BASF** National Tracking Guide

Edited By Dan Cole

TRACKDOWN- the O2R and the new name



Trackdown's Simon Leadley; with Alex Jostons and Tony Desantis from Fat Music Productions. Pondering the O2R.

As part of the ENTECH festivities, Yamaha conducted a tour of the recently refurbished Trackdown Studios.

Trackdown's Simon Leadley was the guide and gave a detailed and concise overview of the Yamaha digital studio console O2R's features. As a demo he used a recent Trackdown recording from Robyn Dunn. Apart from the demonstrated effects and memory capacity of the desk, of particular interest was the small amount of memory required to recall the large number of moves for a complete mix, in this case 7K.

As well, when the 40 channel mixer in the main studio was replaced by the O2R in January, the amount of available work space was increased by approximately 40% making room for other hardware such as Pro-Tools and the three ADATs, one Fostex RD8 and two Alesis XTs.

Some hiccups though; the most reliable way they have found to keep the time code operating smoothly is to use the MIDI time code port on the O2R, as the designated port is unbalanced. As

well, they use the headphone socket to drive a pair of small speakers as the O2R provides for only one pair of monitor speakers. This was the only major fault he could find.

Trackdown is also involved in video post-production work and has set up Studio 2 using another O2R for this purpose. On this occasion their 3rd studio was being used to replace the American dialogue with Australian talent on an animation project

The evening proved to be very informative for anyone curious about the performance and features of the O2R and Simon Leadley was able to demonstrate many short cuts — with a fine selection of antipasto!

Other Machinery:

Otari MTR 90 MkII (Dolby SR), Tascam DA30, Fostex D10, Marantz three head cassette. Urei and Drawmer Gates and Compressor/limiters, Lexicon LXP15, Roland SRVs, SDEs reverb and delays. Monitors: Quested 210s, NS10s, amps: Yamaha PC1602 and Perreux 3000B. Nuemann, Sennheiser, Sony, Shure, EV,

RADAR for Perth

Gerico Recording Studio in Perth have installed an Otari RADAR 24 track recorder/editor. Gerico work primarily in advertising production sector, recording music and dialogue for radio and television. The recorder's ease of operation appealed to co-owner Derek Fernandez, "All of its functions are only a couple of keystrokes away. Another bonus is the ability to undo any drop-in or edit." The complete RADAR comprises of three components: the Recorder, optional RE-8 session controller and an external 8mm tape back up. RADAR is distributed by Amber Technology.

Derek & Gerry Fernandez of Gerico; with Cliff Blackburn of Sinclair Communications



Beyer, AKG dynamic and condenser mics.

• Trackdown Studios has changed its name to **Trackdown Digital** as they say, 'to reflect the digital nature of the service we offer our music, film and television clients'. With the name change brings a staff change as Marcus Leadley (cousin of Simon Leadley) steps in as Studio Manager. He takes over from Geoff Watson who has moved to Forest Interactive, a multimedia company.

• **Trackdown Digital**, 62-68 Church St Camperdown, Sydney, (02) 550 6890 fax, (02) 519 1258

STUDIO NEWS

● **T.C.N. 9's** Audio Department have recently acquired a new Euphonix console.

● **Megaphone Studios** (Sydney) have installed a Neve Console (circa 1970) to run with their Raindirk. The NEVE has 16 ins and outs with compressors on each channel.

● Reported last month is **Damien Gerard's** acquisition of a MCI JH24 2" making their tape format compatible with the majority of pro studios. Bands can track at Damien Gerards and mixdown at other studios, *no worries*. Their new 2 inch MCI recorder is also up and running.

● **John Reynolds Recording** in Adelaide recently recorded the soundtrack for Alby Mangles new series and Kate Ceberano recorded the sound track for a new Australian Film called "Brilliant Lies". Other band work includes Fuse and The Streamliners.

● A new recording facility has opened in Sydney, in the Rocks. Called **The Writers Hand**, the studio features a spacious 'live' room and control room and 24 hour access.

● **Vandersound Studios** are still working on their new control room, meanwhile they have acquired a Yamaha O2R console and 8trk Yamaha CBX-D5 with AES/EBU interface, Drawmer compressors and backline equipment. You Am I release long player *Hourly, Daily* on the 17th June. The album was recorded in Sydney at **Q Studios**.

● **Kakadu Studios**, Darwin have added a O2R digital mixer and 24 track capacity via 3 Tascam DA-88s.

Send news to: PO Box 439 Epping NSW 2121 or fax (02) 876-5715, or email mail@conpub.com.au

A Seed is Planted... By Marty Williams

MELBOURNE: When Metropolis closed its music recording studios last year, ex-employees David Warner and Tim Johnston decided to start their own studio out of the remains. They already had a strong working relationship at Metropolis, David as Studio Manager and Tim as an engineer. Their new studio is called Seed and is located in South Melbourne.

The choice of equipment with which they could have equipped their studio was vast. Aiming for the mid market they acquired the Harrison 3224 from studio 2 whilst the SSL went to Sing Sing.

The building that houses Seed Studios (like the equipment) is oozing audio history. The previous tenant was Roger Savage and his company Soundfirm. The studio floor was previously the foley room in Roger's set up (as well as Graeme Thirkle's nine layers of sound deadening and bass traps which had to be replaced).

Although the original structure remains, David and Tim spent a solid month renovating. Installing the Eastlake monitors in the new control room proved quite a challenge, being originally made for Metropolis. Perseverance won the day and the results are impressive, with bold and warm colours used for the decor throughout the building. The final studio measures 6 mts x 7 mts, with a live room 3 mts x 5 mts and vocal booth attached. The control room 6 mts x 3 mts. There is also a pre-production room which measures 9 mts x 6 mts and is equipped with a vocal P.A.

Some projects completed since opening last November have included; a live-to-air involving Radio Birdman for 3RRR, the recording of strings for the ABC series Mercury (orchestrated by John Clifford-White); some music recording for the Channel 9 series *Halifax*. Band recording includes; a one month lock-out by a Norwegian rock band called The Dumb Dumb Boys. They have also recorded Even, Manic Suede, Frenzal Rhomb, Melinda Schnieder, Something For Kate, The Painters

and Dockers. A band called The Waifs has also been recorded, produced by Jen Anderson and Michael Thomas of Weddings Parties Anything. This WPA connection is continuing with the band bringing back pre-production ADATs of their new album for further recording and mixing.

As part of their future equipment upgrades David considers that valve based effects units as the most appropriate for this studio. Also being considered is an expansion of the microphone stock. There are also plans to replace five input channel amplifiers on the console with Alan Smart pre-amps.

In the current studio environment David believes that they can find a niche in the mid-price market without resorting to installing equipment such as ADATs, preferring instead to concentrate on upgrades like automation for the Harrison console. David and Tim's 'reality' ambitions should be more than justly rewarded.

Some Machine Highlights:

Sony MCI JH24 24 track; Ampex ATR100 2 track, a Tascam DA30 DAT and 122 MkII cassette deck, and a Sony 5850 U-Matic VTR.

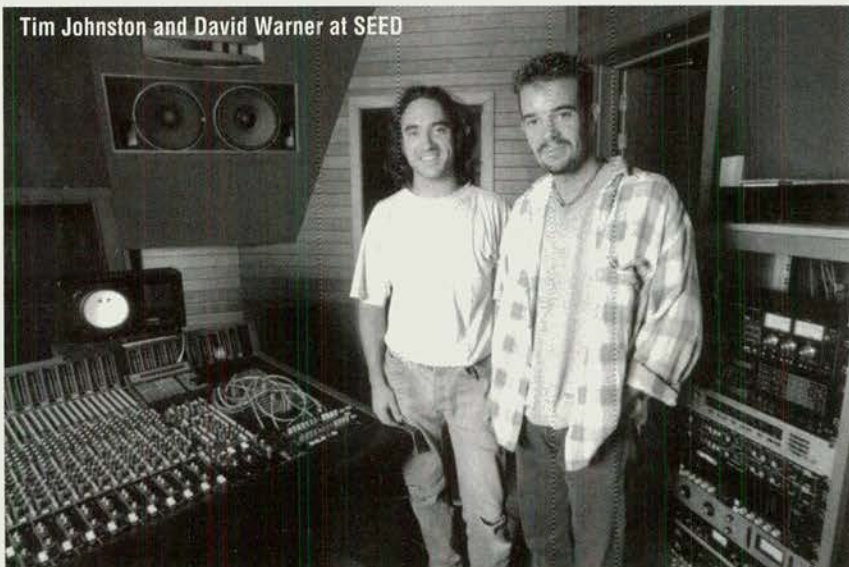
Urei 1176 Compressor/Limiter; Alan Smart modified SSL stereo compressor; Klark Teknik digital reverb; 2 x Korg SDD3000 digital delays; Roland SDD320 Dimension D Yamaha REV5 and SPX1000 processors. (There is also an Akai S1000 sampler which Tim currently has set up as part of a small MIDI studio away from the main control room.)

Microphones include (briefly) Nuemann U47, valve and condenser, TLM 170s, U89s, KM84s, KM140, M49, RE20s and PZMs.

Monitoring includes Sierra Eastlakes (main) and NS10s/ Aurotones.

Backline gear include a Hammond B3 and Leslie speaker, a Yamaha SY55 synth and a Washburn D20 guitar (a piano soon...)

• **Seed Studios, 169 Bank St, South Melbourne. (03) 9682 8488**



Sound Information
from
YAMAHA

by Chris Steller

More Smart Mixing...

The 02R and Pro Mix 01 digital mixers are equipped with fully parametric EQ on every channel, built-in DSP effects for adding ambience to sounds, and dynamics processors for controlling levels and adding punch to any audio signal that requires it. Having all of these functions built into the mixer provides many advantages over separate components - improved quality because all of the extra noise-adding cables for patching in and out are not required, and cost savings because you don't have to pay for the box and connectors that external processors normally require.

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That's more Smart Mixing!

If you require further
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EXPANSION FOR TRUE FORM STUDIOS

Staffers at True Form have got the Triton workbench out of the shed and put down a hardwood floor in their performance room. In addition Neil Grey and co are fitting extra bass traps and panel absorbers, no doubt to cope with the newfound acoustic properties of the shiny shiny surface.

Neil Gray started True Form 10 years ago he says 'as a response to the lack of facilities in Melbourne's western suburbs.' He kept the studio (then 4 track) ticking over through the rehearsal rooms with regular clients such as Boom Crash Opera, Deborah Conway. There are now five rehearsal rooms near the recording area.

Recent acquisitions in the control room include: an RD-8 ADAT (bringing the total available tracks to 20), Behringer compressor and a second DAT. This complements a neat package: Akai 1/2" 12 track, 24/8 Mackie, Tannoy and Yamaha monitors and microphones rang-



Ross O'Driscoll at the helm

ing from Neumann, Beyer, AKG and Shure; a range of reverbs, delays, effects and compressors to suit most requirements.

• **True Form Music Services,**
10/59 Hudson Rd. Spotswood VICTORIA.
Call: 03 391 0907

Back Beach put the grunge IN

According to our feedback, studio owners across the country have gone renovation crazy: building, upgrading and running down hardware shops' supplies of MDF and screws. No kidding. Facility re-working is an important part of studio ownership/management; there is always something to improve upon to remain viable and, to sound business like: competitive.

Back Beach Recording Company (Rye, Victoria) have doubled their working space by adding a new 5 x 5m control room with a cathedral ceiling.

"The studio is actually 80 kms from the city on the Sorrento end of the peninsula and then 100 mtrs away from the beach." says Mark Rachelle, Studio Manager. "People like want to get away from the city to record. We have on-site accommodation bunks, a games area and kitchen facilities."

At the moment they receive little record company supported bands they are nonetheless running at a 70% occupancy rate. This is impressive considering the amount of studios operating in Melbourne. Back Beach have attracted a niche market to their studio: Melbourne alternative bands, who seem to be spreading the word.

"Most of these projects are self funded; we have very little in overheads, so our rates are reasonable, which bands without label support appreciate. If they record here they have access to a 24 track 1" (with Dolby S) plus all the gear we have."

Back Beach have also replaced their 32/8

Mackie console with a 40 channel Allen & Heath GL4 (with meter bridge).

"It gives a great band sound: the Mackie was a very clean sounding which is good but indie music is generally not clean; it's grainy, grungy. When I mix I want colouration and like to drive the internal pre-amps to get *that* sound, and so the Allen & Heath is better suited. We also drive the tape fairly hard and we use Ampex 456 without any problems."

(Added grunge, that's new! -Ed)

"Sometimes recording is not about getting a pristine sound so distorting the drums, vocals is challenging. We have some analog digital delays and sometimes overload them so the converters crap out which sounds good. When I get county acts in it's straight by the book, clean and neat, so we can cater to most styles and sounds"

• **Back Beach Recording Company,** 418 Sandy Road, Rye, VIC, (059) 886 948.

SPACEMAN DIRECT TO DISK

Spaceman, a recent number one single in the UK, is the latest in a growing number of recording projects to have been produced using Fairlight's multitrack digital audio workstations.

Producer Mike 'Spike' Drake, who recorded the latest offering from Babylon Zoo, for EMI, at London's Townhouse Studios, kicked off the project by loading lead singer Jazz's 16 track tape demos of the song into the Fairlight. From then on it was entirely a tapeless studio project.

Committing an entire recording project to a DAW might be considered as unnecessary risk taking, except that the Aussie made MF3 is as robust as any digital multitrack tape machine.

"With the MF3 there are never any problems," confirms Spike. "It's extremely user friendly - you hit a few buttons and it gets on with it and, most importantly of all, it never crashes. The MF3 really speeds things up, I found going back to tape machines incredibly archaic".

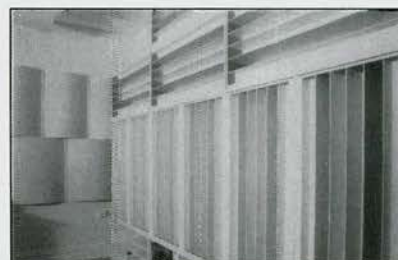
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Digital Editing

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BASF NATIONAL TRACKING GUIDE

ARTIST PRODUCER ENGINEER PROJECT

New South Wales

#Sharp Jeff Cripps (02) 534 4440 24 Track 1"			
Real Gone Cats	Jeff Cripps	Jeff Cripps	CD
Hereos from Heaven	Jeff Cripps	Jeff Cripps	CD
Riven	Jeff Cripps	Jeff Cripps	Demo
Nobby Kitchens	Jeff Cripps	Jeff Cripps	Ads.
38Express	Jeff Cripps	Jeff Cripps	Cassette
Airmotion Guy Dickerson (02) 550 6576 24 Track Analogue			
Jim Denley		Shane Fahey	Album
Quick and the Dead	Band	Ian Baldwin	Album
Scrub Hornets	Band	Craig Beck	Album
Unseen	Band	Fraser Stuart	Album
Pash	Band	Jason Blackwell	Album
Bush Tracks Ruth Miller (066) 891 290 Track Recording and Multimedia			
Vanya	Vanya/Highet/Miller/Major	Dave Highett	CD-ROM
Spiffmasters	Tonkin/Major/Highet	Dave Highet	CD-Plus Album
Peter Pix/Acid Pixies	P.Pix/Highet	Dave Highet	Album Tracks
Great Divide	Dutton/Vann/Highet	Dave Highet	Single
Kym Pitman	Kym/Highet	Dave Highet	Album
Shearwater Steiner School	Elizabeth Lord	Dave Highet	Album
Charing Cross Studio David Sykes (02)387 8362 - 24 Trk Neve 800 Series			
Even	Nick Launay	Greg Wales	Album Mixing
Supagroop	Greg Wales	Peter Jones	Album
Tom Thumb	Peter Jones	Peter Jones	Demos
Big Heavy Stuff	Dave Trump	Peter Jones	Album
Mental As Anything	Martin White	White/Jones	Album
Dave Sykes	Gordon Hervey	Keith Cooper	24 Yodelling Classics
Cloud Studios Parris Macleod (043) 532429 72 Track Digital/Analogue			
Alan Jones	Alan Jones	Parris Macleod	
Crystal Clear Studios Dave Tozer (02) 684 1152 24 Tk. Dig. Adats & BRC, 32 Ch. (66input) Console			
Swallow	Dave Tozer	Dave	Demo
Sole Damage	Dave Tozer	Dave	Demo
Facer	Dave Tozer	Dave	Demo
Lucid	Dave Tozer	Dave	Demo
Eternity	Dave/Don	Dave	Album
Craig O'Donnell Band	Dave	Dave	Demo
Damien Gerard Studios Contact Marshall (02) 660-8776 2 x 32" 24 Track			
Gadflys	Band	Russ Pilling	Album Tracking
Fragile	Simon Holmes	Jamie Carter	Demos
Choirboys	Band	Jamie Carter	Demos
Chris Masuak	Chris	Jamie Carter	Demos
Stone Dog	Band	Russ Pilling	Album Tracks
Ashtray Boy	Randall	Marshall Cullen	Compilation CD Track
Coud Studios Parris Macleod (043) 532 429 72 Track Digital/Analogue			

ARTIST PRODUCER ENGINEER PROJECT

Alan Jones	Alan Jones	Parris Macleod	Album Mix
Love & Rebellion	Parris Macleod	Parris/Phil Dracoulis	Album
Amsterjam	Parris	Parris	Album
Sign of the Times	Parris	Parris	Single
Doug Williams	Parris	Parris	Single Mix
Scott Leece	Parris	Parris	Album Mix
Crystal Clear Studios Dave Tozer (02) 684 1152 24 Trk. Dig. Adats & BRC 32 Ch. (66 input) Console			
Cyanide for Xmas	Dave Tozer	Dave Tozer	EP
Sweet Subterfuge	Dave Tozer	Dave Tozer	EP
Pure Cult	Dave Tozer	Dave Tozer	Demo
Savage Dog	Dave Tozer	Dave Tozer	Demo
Myriad	Dave Tozer	Dave Tozer	Demo
Radical Youth Services	Dave Tozer	Dave Tozer	Demo
Damien Gerard Marshall (02) 660 8776 2" 24 or 1/2" 16/32			
Apartments	Peter Walsh	Russ Pilling	EP
Mr. Blonde	Lan	Russ Pilling	EP
Phil Emmanuel	Phil	Randall Waller	Album
Roddy Rayda	Roddy/Chris W.	Russ Pilling	Album
Chris Masuak	Chris	Carter	EP
Evol	Band	Carter	Demo
David Hinds Recording Studios David Hinds (065) 81' 235 8 Track Analog Mixing to Dat			
Neale Johns/David Hinds	David Hinds	David Hinds	Wynn's Jingle
Lyn & David Hinds	David Hinds	David Hinds	AV Jennings Homes Jingle
David Hinds	David Hinds	David Hinds	Aussieweld Jingle
Balance	Lyn/David Hinds	Lyn & David	Album Track
Eclipse Music Studios Jode Sharp (02) 264 7734 Mits. 32 Trk Digi/Studer 24 Trk An. (Studio A) SSL Suite			
Lurch/Nick Freedman	Nick Mainsbridge	Nick/P.Munro	Mix Album
Beth Hutt	David MacGrath	Dave/Phil Munro	Tracking/Mix
Jennifer	Rick O'Neil	Rick/Mike Ward	Mixing Tracks
Love Me	Tim Rogers	P.McKeller/P.Munro	Mixing Trks
Bean	Martin White	Martin/Phil Munro	Mixing Tracks
Mark Wood	Scott Christie	Scotter	Mixing Album
Enterprise G.Storer (02) 564 3225 Midi/Advertising/Multi.			
The Racket	Band/Storer	Storer	Demo/EP
Channel 31	Storer	Storer	Station Promos
Robert Gallo	Storer	Storer	Album CD Mix
Ian Blackett	Blackett/Storer	Storer	Demos/Publishing
Festival Studios Catherine Knapman (02) 660 4022 2 > Analogue Multi-Tracks or Digital Multi-Track			
Swoop	Ashley Cadell	Mark Thomas	Single
The Exponents	Anthony loasa		



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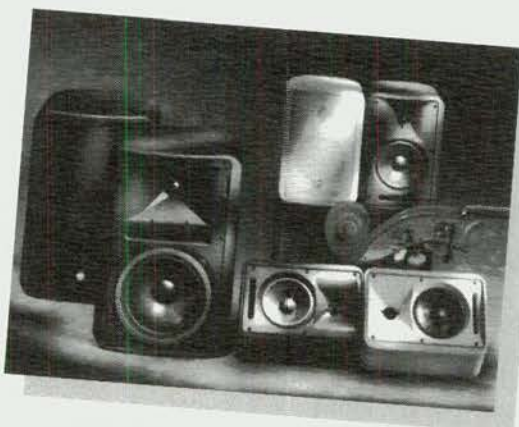
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UNLIMITED SOUND

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ARTIST	PRODUCER	ENGINEER	PROJECT	ARTIST	PRODUCER	ENGINEER	PROJECT
Wayne Goodwin	Wayne Goodwin	Matt Lovell	TV Ad.	Asteroid B612	Dave Trump	Dave Trump	Tracking Album
Ian Moss	Don Walker	Mark Thomas	Mix/Single	David Campbell		Glen Phimister	Album
"Paradise Road"	Bruce Beresford	Glen Phimister	Trk.Move S/Trk.	Brilliant Creatures	Jeremy Avom	Jeremy Allom	Tracking EP
Hullabaloo Glen Heaton (02) 9906 2933 24 Tk Analogue/8 Tk MDM/16 T. Pro-tools				Andrew Gander Trio	Band	Lien Chew	Demo
Let It Shine	Greg Skettrill	Geoff McGarvey	Fashion S/Trk	Tristan Chord	Craig Beck	Craig Beck	Mixing
Heaton/McGarvey	Heaton/McGarvey	Heaton	ABC TV Theme	Pathways Studio (02) 212 3101 Frank Kerestedshijan 24 Trk 2" Anal. & CD Mast.			
Heaton/McGarvey	Heaton/McGarvey	Heaton	Corp.Songs	Gang gajang	Band	Frank K	Album
Strum Jungle	Heaton/McGarvey	Heaton	Album Cuts	Waldo Fabian	Frank & Waldo	Frank K.	Album
Heaton/McGarvey	Heaton/McGarvey	Heaton	Disney Live S/Trks.	Caligula	Band	Frank K.	Drum Tracks
Infinity Digital James Novak (002) 672 3513 All Dig. Recordg. & Prodn.				Coral Box	Mark Callaghan	Frank K.	Album
CTC Cruises	Stefan Nowak	James Novak	Vocal Trk/Mix	James Blundell	James	Frank K/Greg H.	Demos
Ray Brooks	Ray Brooks	James Novak	Album	Ashok Roy	Band	Frank K.	Demos
Groovetown Prodns	Stefan Nowak	James Novak	Midi Prodn./Trkg.	Paul Bryant Mastering Paul Bryant 02.748 6055 Mastering Suite			
Strange Horizon	Strange Horizon	James Novak	Demo	Out of the Basement	Pink Toenail	Paul Bryant	CD Album
JMF Studios Fran Esther (02) 790 4097				Tania Rose	Tania Rose	Paul Bryant	CD Album
Blackfeet	Band	Ralph Ester	Demo	Burnt Earth	Grant Luhrs	Paul Bryant	CD Mini Album
S/Westn.Syd.Health Prom.	Mark Bonnici	Ralph	Ed.Tapes	Real Gone Cats	Jeff Cripps	Paul Bryant	CD Album
Rust	Band	Ralph	CD	Midnight Strollers	Rob Specogna	Paul Bryant	CD Album
Main Street Studio Rob Specogna 042 834 515 16 Track				Gilli Moon	Gilli Moon	Paul Bryant	CD Demo
Tania Rose	Tania Rose	Rob Specogna	CD Album	Powerhouse Studios Doug Henderson (02) 318 1220 32 Input Neve Console 24 Trk.Studer			
Vesna Malnar	Vesna	Rob Specogna	Demo	Leah Wilson	Powerplay Rec.	Doug Henderson	Album
Rimana	Rimana/Rob	Rob /Christian	CD Album	Mitzey	Powerplay Rec.	Doug Henderson	Album
Midnight Strollers	Mick Ferguson/Rob	R.Specogna	CD Album	Platinum Munk	Powerplay Rec.	Doug Henderson	Album
Warwick March	Warwick March	R.Specogna	Demo	Tyster	Band/K.Cooper	Keith Cooper	EP
Gairden Cooke	Gairden Cooke	Rob Specogna	CD Album	Trillion	Band	Steve Hartly	EP
Megaphon Studios Guy Dickerson (02) 550 6576 24 Track & 48 Trk Analog.				Brass Monkey	Band	Steve Hartly	EP
Leonardos Bride	Justin Stanley	Keith Cooper	Album	R. & R. Recording Robert Zimola (02) 672 4494 16 Track 1'			
Adrian Lee		Guy Gray	Album	CJMM	Mike Kerin	Robert Zimola	Album -CJ Turner
Maria Stratton	Guy Dickerson	Guy Dickerson	Album	Blacktown Chamber of Commerce			R.Zimola
Drop City	Nick Launay	Nick Launay	Album	Blacktown Promotion			
Mirage Gerry Nixon (02) 211 3915 24 Neve VR Dolby SR Focusright etc.				Rathouse Recording Studios Mark Macedone 018 270 731 16 Track			
Sue McCormack	Greg Macainsh	Tom Misner	Single	Knucklehead	Knucklehead	Mark Macedone	2nd Album
Leonardos Bride	Justin Stanley	Keith Cooper	Album	FM 95.1		Mark Macedone	Jingles
Powderfinger	Tim Whitten	Tim Whitten	Single/Album	Peter Jones	Peter & Mark	Mark Macedone	Jingles
Little Hornets	Mich.Browning	Craig Beck	Single	Rockinghorse Studios Grant Hilton (066) 884 131 (A) 48 Tk. Analog. (B) 24 Tk. Analog.			
Swirl	Tim Whitten	Tim Whitten	Album	Kalidayibe	Band	Leigh Win	Tracks
Mr. Solo	Virgin-Germany	Tom Misner	Retro Dance Mix	Matt Parmentia	Band	Keith Williams	EP
Nutown Greg Hopping (02) 516 3306 16 Track Analogue, 16 Track Digital				Dr.Suess' Signature	Band	Leigh Ivin	EP
"Shield" /L.Gordon	Hopping/Nevin	Worrall/Wilson	Single	Mild	Band	Leigh Ivin	Demos
Dungeon	Grose/Hopping	M.Worrall	Album	Screamfeeder	Band	Paul McKercher	Album Tracks
Caleb Packham	Greg Hopping	Mark Worrall	Single	Carmella	Carmella	Greg Courtney	Tracks
Pam Sheyne	Nevin/Wilson	Mark Worrall	Demo	School of Audio Engineering Jason De Wilde (02) 211 3711			
Elton	Lex Wilson	Mark Worrall	Demo	Frankenbarry	Jason de Wilde	Jason de Wilde	Album
Shazam	Greg Hopping	Worrall/Wilson	Single	Bottle	Jason de Wilde	Jason de Wilde	Album
Paradise Studio Ed Hughes (02) 357 1599 24 Track Analogue				Leonardos Bride	Justin Stanly	Justin Stanly	Album
Frank Bennett	M.Scully/Tony	Tony Wall	Singles	Powderfinger	Tim Winton	Tim Winton	Single & Album

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I need more outputs

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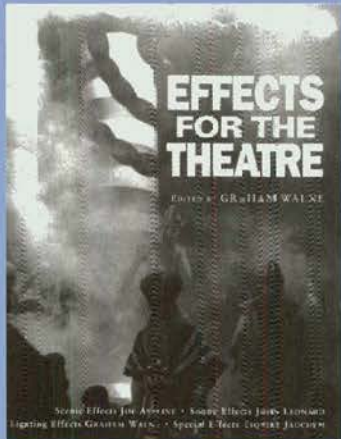


Vic/Tas: Tony Hosking 03 9888 6555; **NSW/Qld:** Iain Everington 041 118 3158; **SA:** Peter Asztalos 08 356 6601; **WA:** Ian Ross 09 354 3185; **NZ:** John Carter +64 (0)9 789 863 **ARX Systems**, 33 Advantage Road, Highett, Victoria 3192, Australia. Phone 03 9555 7859 Fax 03 9555 6747

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CONNECTIONS SHOP

OUR CATALOGUE, MID 1996



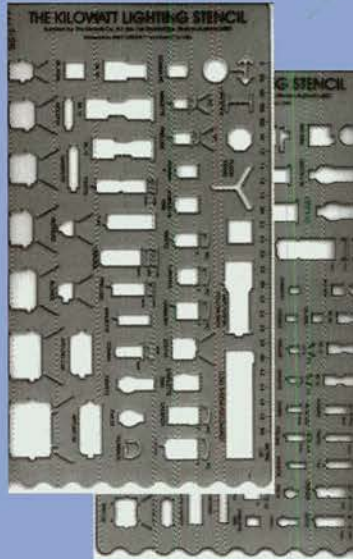
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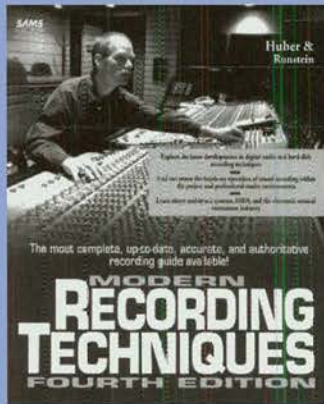
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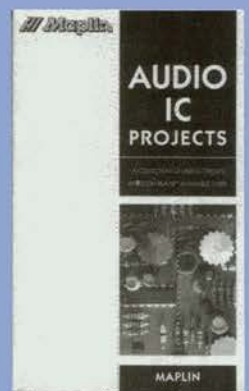
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IC Projects from Maplin Magazine. Over 20 IC projects, incl power amps, pre-amps & filters, and more. 191pp, 1994. **\$29**

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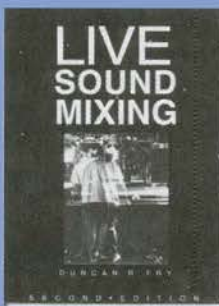
By Laurie Nethercote.
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102 pages illustrated.

Live Sound Mixing \$35



By Duncan Fry.
This Australian publication in its second edition and has sold well around the world, and has an easy style. It deals with everything PA in a matter-of-fact manner, and is a good reference work for those of us who forget what we know! 176 pages.

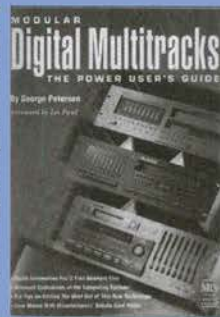


MIDI Systems & Control \$55

2nd edition. 1994. By Francis Rumsey. A book about... MIDI, yes, but for ANYONE who wants to understand the principles of MIDI control, also useful for people who design devices. Heaps of diagrams and illustrations, deals with implementing MIDI in studio, musical and lighting equipment, mixer automation, and jhas info on latest additions to the MIDI spec. 204 pages.

Modular Digital Multitracks \$49

120 pages, written 1994. This guy knows his chops, he is an editor at MIX, the world's greatest studio magazine. This book covers everything you need to know plus more. It details the ADAI, DA-88, RD-8, ADAM and DMR-8 systems, talks about tape, techniques and how to make your own cables.



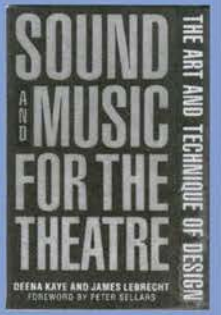
Project Studio Blueprint \$53

The essential do-it-yourself guide to help you put your studio ideas onto paper, and get them into reality. Budget the costs of building and maintaining a project studio, and create the best studio acoustics for your location. Deals with proper installation of audio connections and patch bays, and has a section on trouble-shooting equipment and connections; and on sound proofing. 236 pages.



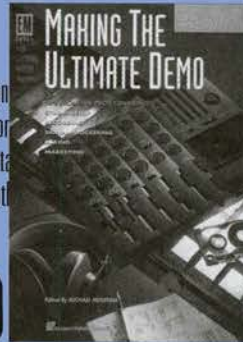
Sound & Music for Theatre \$44

By Kaye and LeBrecht.
Contemporary guide to theatrical sound, detailing the creative opportunities and practical considerations for composers, technicians and sound designers. Features chapters on researching and selecting sound materials, developing the 'sound plot', building audio cues and working with theatre co's. 196pp, 1992.



Making the Ultimate DEMO \$49

By Michael Molenda
128 pages, written 1993.
Find out how to record and market your demo tape, record killer vocal and instrument tracks, and improve your mother's cooking!



Sound for Picture \$39



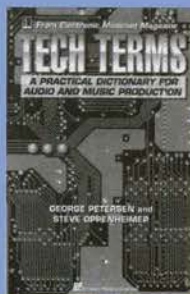
From the editors of MIX. 134 pages, 1993. An inside look at audio production for film and TV, with audio post. Details many recent productions. Includes a special section on sound effects, with case studies. 134 pages. Large format book, illustrated.



Concert Sound \$48

By David (Ruby) Trubitt, 166p, written 1993.
This is a very useful book, Connections say that if you are interested in, or work in, the live sound field, get it! details touring sound

for bands like U2, Stones, Van Halen etc. Has gear tips, rigging, pix of major systems, and is well put together! Illustrated. What more do you want? A large format book.



Tech Terms \$19

George Petersen and Steve Oppenheimer. 50 pages. 1993. For a quick, accurate definition on using music technology, this is for you. The practical dictionary of audio and music production terminology, explaining 300 of the most commonly misunderstood words and phrases. Get savvy!

Studio Seconds \$19

The comprehensive guide for the assistant sound engineer, or anyone interested in music and sound recording. Master engineer Tom (an Aussie resident) takes us through the studio with a detailed account of the equipment and procedures in a modern studio. 154 pages. It looks at the working relationship with the studio client & is fun too!



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Top Music Producers **\$39**



Editors of MIX Magazine talk to 24 top producers, including Don Was, Phil Ramone, Jeff Lynne, Daniel Lanois and others. They tell how they got started, how they mediate between artists and labels, what equipment they prefer, analog vs. digital and much more. 128pp, large format.

Electronic Projects for Musicians **\$39**

This book is for anyone with a bit of skill and a soldering iron! Build your own preamp, compressor/limiter, ring! modulator, phase shifter, noise gate, talk box, tuning standard and 20 other things. Said to be easy to understand. 220 pages.



Making Music with your Computer

\$39 Whether you're a computer user entering the world of music and sound or a musician searching for the right computer, this book will bring you up to speed and help you get the most out of today's modern music technology. An Electronic Musician book. 128 pages.



The Best of Duncan Fry

Connections Magazine popular columnist Duncan Fry chronicles his road stories, including some XXX rated, never before published! Dunk writes about life at the gig, after the gig, and no-where near the gig - it is sometimes a chronicle of the world through Duncan's eyes. Duncan Fry ran his own PA and Lighting rigs through the 'golden era' of the Australian Rock Industry. Today he is co-owner of ARX, the Australian PA equipment manufacturers.

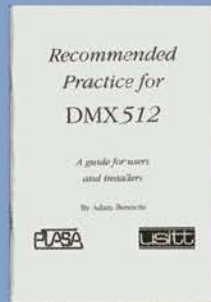


100+ pages, \$15.00



Basic Stage Lighting \$17
By Mark Carpenter. Written in 1982, but a good introduction to the art of lighting the stage. 114 pages, illustrated. Covers everything except DMX and Moving Lights. And, it's written by an Aussie and published in Australia. *All books usually in stock.

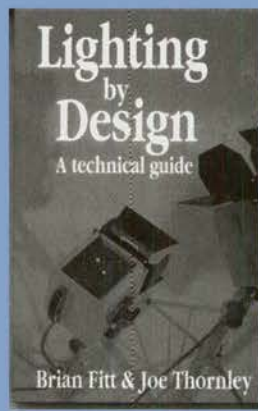
Basic Stage Lighting **\$17**



Rec. Practice For DMX 512 \$19
By Adam Bennette. A Guide for users & installers. Explains the DMX512 specification and offers advice and professional advice on how to set up a successful DMX512 system. 80 pages, illustrations. An authoritative study of the standard Lighting Control protocol.

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LIGHTING BY DESIGN

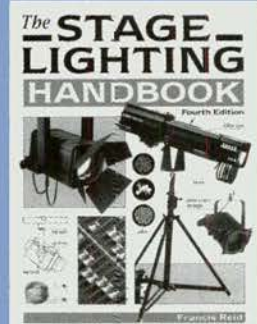
A Technical Guide, is a weighty volume of 321 pages. Written by Brian Fitt and Joe Thornley, it is full of p.x, charts and illustrations. For stage, TV, film.

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Control Systems For Live Entertainment **\$86**

\$86

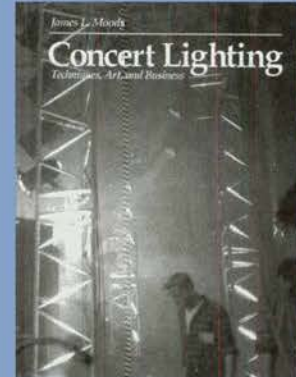
Walk into most large shows today and you see computers at work. All too often systems for lighting, sound, staging and machinery are not connected. This book discusses how different systems can be integrated, and details most different protocols in use today. Invaluable, says Connections editor. 292 pages, illustrated. By John Huntington.



Stage Lighting Handbook **\$39**

Fourth Edition, by Francis Reid. The Standard guide to stage lighting. The book appeals to beginner and pro alike, and in this fourth edition incorporates recent advances in technology. The material on the process of designing and implementing the lighting for a production has been completely revised. In 1974, Connections editor Julius Grafton read the first version of this book and went out to light a professional stage play. It's true, it can be done, and this book will help you do it! 208 pages. Plenty of helpful drawings.

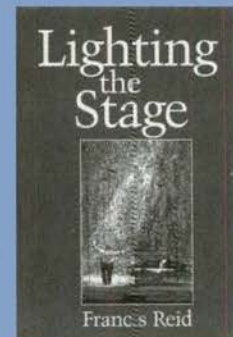
Concert Lighting Techniques, Art & Business. **\$94**



This hard back, large format book is a quality item, the first book we have seen to deal solely with large scale concert lighting. Author James Moody is the ideal person to write this, he goes beyond the tour and discusses applications of concert

lighting equipment, techniques to other fields including film, theatre broadcast TV and corporate theatre. Some quotes: "down to earth, honest, easy to understand, information not found in today's books on lighting. This man KNOWS concert lighting" This book has colour six sections on overseas touring, pre production, business, stage Design, dealing with problems and much more. 'Highly recommended by Connections'. 190 pages, large format, quality reproduction throughout!

Lighting The Stage **\$36**



Previous books on stage lighting have tended to concentrate on the factual aspects of design and technology. But for young lighting designers and all those concerned with lighting - directors, choreographers, set designers, costume designers, stage managers and specialist technicians - the equipment and the design processes are only the start. It approaches stage lighting from the human angle. 114 pages, 1995. By Francis Reid.

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Mr. Solo	Tom Misner	Tom Misner	Virgin UK	Monaro	Tony Wall	Tony Wall	Demos
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Human Nature	Paul Behaud	Simon Tonx	Single	Sav Manzini	Sav	Will Rout	Backing Tracks
Barry Crocker	Dave Macrae	Ross A'Hearne	Album	Glenwood Players	Thomas Gough	Ian Cooper	Radio Play Shakespeare
Tim Robinson	Tim Robinson	Ross A'Hearne	Album	Greg Haybittle	Greg	Ian Cooper	Demo
Robert Vicencio	Robert	Louise Taylor	Single	Probois	Band	Ian Cooper	Demo
Sound Level Joe Breen (02)552 3200 16 Track Digital Tascam DA88				David Williams	David	Ian Cooper	Corporate Video
Dean Cochran	Dean/R.Franz	Randy Franz	EP 16 Tk.Dig.	Rhianna & Natasha	Will & Connie	Will Rout	Demo
Seamus Carille	Randy Franz	Randy Franz	Demo 16 Tk. Dig	Woolly Mammoth Nik Sanning (02) 557 2721 16 Trk. Digital W/Midi			
Deluxe	Deluxe/Jorden	Jorden	Demo 16 Trk.Dig	Eco	Jens Norved	Nik Sanning	Demos
Duster	Duster/Jorden	Jorden Brebach	Demo 16 Trk.Dig	Gordon Hunter	Gordon	Nik Sanning	Demos
5 Guys Named Shmoo	Randy	Randy	EP	Freezer Burn	Band	Nik/Adrian Stubbs	EP
Lead Belly	John Soane	John Soane	Live to DAT	David Bullock	David	Nik Sanning	Album
Soundwarp Meredith Brooks (02) 9905 7144 Mastering				Queensland			
Solar	Solar	Meredith Brooks	CD Master	Digital Paradise Ian Peters (07) 5527 0722 32 Trk. Dig. Rec.Studios			
Panacea	Panacea	Meredith Brooks	CD Album	Lee Conway/B.Cadd	Lee Conway	Ian Peters	Demo.New Alb.
Eco	Meredith/Bill	Nik Sanning	Album Track	One Eyed Milman	Ian Peters	Ian Peters	Demo. New Alb.
Starbelly	Fraser	Meredith Brooks	CD EP	Hi-Class Company	Steve Cummins	Ian Peters	Album Tracks
The Drunk, The Monk & The Spund J.Willstead		M.Brooks	CD Album	Infanticide	The Band	Ian Peters	Demo Tracks
Circus Zombies	Band	Meredith Brooks	CD Album	Alva Turner	Alva/Ian Peters	Ian Peters	Corporate Audio
Studio Arts Productions (042) 849128 Ed Lee. Independent Recording Studio				Outlaw Records Jerry 0070 576 742/018 772 380 16 Tr. Digital			
Blind Side	Ed Lee/Band	Ed Lee	Demo	Simon	Simon	Uncle Jerry	Album
Altered States	Ed/Band	Ed Lee	Album CD	Gypsy & Admiral	Band	J.J.	Album
Moment	Ed/Band	Ed Lee	Album - CD	Terry Doyle	Terry	J.J.	Mix - Promo.
Corey O'Connell		Ed Lee	CD	Simon	Uncle Jerry	J.J.	Demo
Denise & Marianne	Ed/Band	Ed Lee	CD	Prodigious Audio (07) 557 11400 Richard or Marty. Hard Disk & Dig. Tape, Untouchables			Mark/Band
Studio Shift Nonda (02) 398 4268 24 Track Analog Recording in a Living Room				Mark Munro	Rap EP		
Bone People	W.Workman/V.Lucas	Nonda	Final Mix	Michael White	Michael White	Mark Munro	Album Pre-Prod
Tom Kazas	Tom	Tom	EP	Spotlight Theatre	Roberts/Michael	Mark & Richard	Theatre Score/Arr.
Andy Timmins	A.Timmins	Nonda	Album	Studio 19 Allen Castleton (077) 757 375 16 Track			
Frances Greening	Tom Kazas	T.Kazas	Tracking	Cathedral School	R. Loubrien	A.Castleton	Mini Album
Helen Mottee	Helen/Nonda	Nonda	Album	Marissa Grimsley	Marissa	A.Castleton	Scholarship Perf.
Me & My Big Mouth	Band	Nonda	Album	Lost Souls	N. Shaun	A.Castleton	Band Demos
Tracking Station Rec. Studio Kylie McKenzie (02) 281 8899 2' 24 Trk. Dolby SR Hard Disc Editing				Sunshine Studios Leon Prescott (07) 844 6844 36 Channel Neve			
Anthony Field	Anthony	Chris Brooks	Album	Strange Fruit	Leon Prescott	Leon Prescott	EP
Troy Horse Michael Levis (02) 319 1799 24 Track 2'				Dream Killers	Mark McElligott	Mark McElligott	EP
Nic Dalton	Nic	Bruce Waite	EP	Sean Sennett	Leon Prescott	Leon Prescott	Single
Jetta Black	Band	Colin Wright	EP	Melon Bliss	Mark McElligott	Mark McElligott	Single
Sweet Lip	Tim Whitton	Tim Whitton	EP				
Peter Kennard	Peter Kennard	Colin Wright	Album				
Hindsight	Band	Russell Kilbey	EP				
Lawnsmeil	Gina Arena	John Vittoria	EP				
Velvet Sound Dave McCann 0414 227 325 24 Track							
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Ben Burton	Eric	Ben	Demo
Craig Ellis	Eric	Craig	Demo
Ken Forbes	Eric	Ken	Demo
Peta Andrews	Eric	Eric	CD Plus MM
South Australia			
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Sin Dog Jelly Roll	Band	Neville Clark	Mastering
Adelaide Ch.Singers	Crossin	Neville Clark	Rec/Mastering
Nielson & Goels	Neilson	Neville Clark	Mastering
Falling Trees	Band	Neville Clark	Mastering
Pembroke School		Neville Clark	Mastering
John Reynolds Rec. Studio Nick Love (08) 410 3044 24 Trk.Dig/16 Trk.Analogue.			
Fuse	Nick Love	E.Sikorski/Love	Album CD
Polly Xeni	Nick Love	Nick Love	CD Alb/Film S/Tk
Andrew Firth	E.Sikorski/Firth	Eddie Sikorski	CD Album
Kate Ceberano	Ashley Cadel	Ashley Cadel	Movie S/Track
Chunky Custard	Band	Band	Comm/Movie S/Trks.
Streamliners	Nick Love Prod.	Eddie Sikorski	CD Album
Mixmaster Productions Mick Wordley (018) 822 986 24 Track 2"			
Jason Waldron	Jason Waldron	Steve Fieldhouse	Tracking
Jeff Lang	Kerryn Tolhurst	Mick Wordley	Mix
Boss Rhino	M.McSorley	Evan James	Mix
N.Vall	G. Lehman	Mic Wordley	Mix
Super Jesus	Band/Mick	Mick Wordley	EP
C.Finnen/J.Lang	Finnen/Land	Mick Wordley	Live Album
Victoria			
Big Beat Studios (03) 9898 5815 John 'Shadow' Toth 16 Trk. Analog. 1", 32 Trk. Auto Session 8 Hard Disk			
Amanda	John Toth	Borgeest,Williams	Demos/Single
J.F.K.	John Toth	Borgeest/Williams	Single/Alb.
Blue Tongue	Toth/Borgeest	Dave Borgeest	Demo/Remix 12"
Grayce	John Toth/J.T.	Borgeest/Williams	Demo
Taylor Made	John Toth/DJC	Dave Borgeest	Demo
Water's Edge	Toth/Williams	Ben Williams	Demo
C'est Ca Norman (03) 9419 1506 Automated 24 Track			
Gillian	Bizzi/Siiri	Siiri Metsar	CD EP
Linn Van Hek	Pen.Swales/Siiri	Siiri Metsar	Demos
Penelope Swales	Penny/Siiri	Siiri Metsar	EP/Album
Misguided Angels	Band/Siiri	Siiri Metsar	Demos
Elenor Rayner	Elenor/Siiri	Siiri Metsar	CD EP
Fortissimo (03)9699 5811 Melita Jagic/Adam Quaife 2" 24 Trk.Auto. Harrison Cons. 40 Ch.			
Chris Copping	Chris Copping	Melita Jagic	Jingles
Dreadnaught	Band/Ernie	Ernie	Mix. Album
Mick Harvey	Graham Lee	Melita Jagic	Alb.Trk.Rec/Mix
Emma Paki	Angus Davidson	Angus Davidson	Alb.Trk.Mix/Rec.
Arcane	Arcane	Adam Quaife	Alb.Trk.Rec/Mix
Gotham Audio Tom Kehoe (03) 987 99400 SSL Console/Sony 48 Track Digital			
John Farnham	Ross Fraser	Doug Brady	Additional Mixes
C.D.B.		Tim Dougfield	Remixes
Frank Strangio	Frank	Doug Brady	Film Score Mix.
RB-X (Aust) P/L Bevan Quelhurst (03) 9429 6199 24/48 Track SSL Cons.			
Solace	Solace	Ethan Cook	Demos
A.F.L.	Greg Mills	Mark McDougall	AFL Cent.Perf.
Club Vegas	Adam Dion	Mark McDougall	Stage Rec.
Headcase	Headcase	Ethan Cook	Demos
Greg Champion	Greg Champion	Melita Jagic	Songs
BIB Productions	Mike Brady	Melita Jagic	Advert. Jingles
Sing Sing Kaj Dahlstrom (03) 9428 4622 SSL, Neve 24/48 Trk. Dig. & An.			
Vicki & Linda Bull	Jeremy Allom	Jeremy Allom	Mix Single
Tiddas	Joe Camilleri	Lawrence Maddy	Mix
Monique Brumby	David Bridie	Simon Pollinski	Mix
Automatic	Nick Laurnat	Nick Laurnat	Rec/Mix
WPA	Cameron Craig	Cameron Craig	Mix
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The Giving	C. Turkman	Charles Turkman	CD EP
Tibet		Charles Turkman	Album Tracking
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T.I.S.M.	Trevor/Band	Jeremy Smith	Mixes for Live Video
Screaming Jets	Trevor	Adam Quaife	Liv. Recording
Studio 52 Paul Higgins (03) 9417 7707 Studio A - 32 Tk. Studio B Adat 16 Tk			
Cinema	Tevor Carter	Trevor Carter	Album Mix
Frank Perry	Frank	Trevor Carter	Tracking Only
Andrew Roberts	Andrew	Trevor Carter	Jingle for Blockbuster
Akin	Rowan Jarl	Rowan Jarl	Docum.S/Track
Black Mary	Rowan Jarl	Rowan Jarl	Demos
Stale Fish	Rowan Jarl	Rowan Jarl	Demos
True Form Music Services Neil Gray (03) 9391 0907 12 Trk. Analog, 8 Tk Digital			
Thimbley	Band/Ross	Ross O'Driscoll	EP
Bang Lassie	Band	Neil Gray	CD
Inertia	Neil Gray	Neil Gray	Album
Politenessman	Band	Gray/A.Davidson	Mix EP
Rhythm Junction	Band	Neil Gray	Demo
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J. Gibson	Gibson/Tripodi	Barrie Clissold	Counselling Tape
John Ablett	John	Barrie Clissold	Tracking
TAFE	B.Clissold/TAFE	Barrie Clissold	Instructional Tape
Gidgee Rock	R.Stewart/Band	Barrie Clissold	Demo Tracks
Merryn Shelton	Merryn/Clissold	Barrie Clissold	Album Tracking
Western Australia			
Bonsal Recording Studio Tom Thorpe (09) 246 4408 24 Track			
Matt Williams	Tom Thorpe	Tom Thorpe	Demos
PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles

ARTIST	PRODUCER	ENGINEER	PROJECT
Planet Sound Studios Denise Preston (09) 382 2211 48 & 32 Trk.Dig/24 Trk.Analog.			
Gary Edmonds	Nunzio Mondio	John Villani	Album
Jebediah	Chris Dickie	Chris Dickie	EP
Lyndsay Hammond	Glen Goldsmith	John Villani	Single Mix
Don Gomez	Don Gomez	Villani/Williams	Album
Tropo Sound Mick Connolly (091) 922 394 24 Track Dolby			
Pigram Bros.	Band	Alan Pgram	Debut Album
Thundermuts	Band	James Edwards	'Froth' Album
Witzend Recording Studio Alan Dawson (09) 3311818 16 Track			
Mardi Picassos	Band/Alan	Alan Dawson	Album
Blush	Band/Alan	Alan Dawson	Demo
Plough	Band/Alan	Alan Dawson	Demo
Northern Territory			
CAAMA Music Richard Micallef (089) 529 205 24 Track Automated			
Warumpi	Mark Ovenden	David Lumsdaine	Full Album
Kakadu Studios Ken Hutton (089) 411 344 02R Digital Mixer, 24 Track Dig. DA88s B1 Tascam			
R. Blacker	Ken Hutton	Ken Hutton	Orig.Album
Mosquito Bay	Ken Hutton	Ken Hutton	Orig.Album
Yuendumu	Ken Hutton	Ken Hutton	Compil.Alb.

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VIC: CATS (03)9529-3177, Chapple Tape (03)9580-6620, DEX Audio (03)9372-2266, MTA & Assoc (03)9819-6455.

SA: Adelaide Tape Duplicators (08)212-7111, Pro Music (08)278-8703.

WA: Ausmag (09)314-1953, Pro Copy (09)375-3902.

QLD: Musiclab (07)862-1633, Tek (07)239-4000.

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STUDIO MIXING CONSOLES COME IN AUGUST

Prices quoted are Retail including sales tax, as supplied by Distributor at 15th May 1996. All care taken, but Connections is not responsible for any errors.

ALLEN & HEATH A.R. Audio Engineering (02) 810 5300

GL-2 \$3950 10 Mono/2Stereo Input Rack Mount Mixer, 4 Sub-Groups, Left/Right/Mono Outputs, 6 Auxiliary Sends, 4 Band EQ with 2 Sweeps. Can be linked to other A & H consoles via SYS-LINK.

GS-2 \$3950 6 Mono/6 Stereo Input Rack Mount Mixer, 4 Sub-Groups, Left/Right/Mono Outputs, 6 Auxiliary Sends, 4 Band EQ with 2 Sweeps. Can be linked to other A & H consoles via SYS-LINK.

GL-2000/12 \$3995 12 Input FOH Mixer, 4 Sub-Groups, Left/Right/Mono Outputs, 6 Auxiliary Sends, 4 Band EQ with 2 sweeps. Can be linked to other A & H consoles via SYS-LINK.

GL-2000/16 \$4995 20 Input (12 Mono/4 Dual Mono) FOH Mixer, 4 Sub-Groups, Left/Right/Mono Outputs, 6 Auxiliary Sends, 4 Band EQ with 2 Sweeps. Can be linked to other A & H consoles via SYS-LINK.

BEHRINGER Audio Visual Design (02) 281 2444

MX-2802 \$1545 8 Mono, 6 Stereo Channels, +4 Stereo Line Inputs, 2 buss, 3 band EQ, 4 aux Sends, inserts, Direct outs, Phantom.

MX-2642 \$1745 8 Mono, 4 Stereo channels, +4 Stereo Line Inputs, 4 Buss, 3 Band EQ, 6 Aux sends, inserts, direct outs, Phantom.

DOD Central Musical Instruments P/L (003) 9315 2244

DR-822XL \$1149 8 Channel Bass, Mid, Treble, EQ. 2 Aux Sends, 1 Monitor Send. Rack mount model available.

DR-1222XL \$1499 12 Channel Bass, Mid, Treble, EQ. 2 Aux Sends. 1 Mod. Send. Rack mounting model available.

DYNAMIX Musitronics Australia (07) 3822 3906

20:2DD Powermix \$4950 16 Mic channels + 4 Sub Group, 3 Band EQ, 4 Stereo

Input, 2 Band EQ, 2 A.R.T. Effects Panels (16 Effects/Channel). Powered 1200 Watts (600/channel). Also unpowered \$1200 less.

8:2/600 \$2700 As per 20:2DD with 4 Mic Channels + 4Sub Groups powered at 300 watts per channel or unpowered \$1200 less. 12 and 16 channel models in between with or w/out digital effects.

DUO 200 \$1995 200 Watt Cabaret, Duo unit with 4 on board speakers, 3 Band EQ, 3 Spring Accutronics Reverb, Foot Switchable. Top hats for mounting. Dual speaker cabinet, slaved for stereo separation.

STAGE SERIES \$2500 As Duo Series with 6 channels, ART Digital Effects, 600 watt (300/Channel) Also other models down to 125W.

ELECTRO VOICE Mark IV Audio (02) 648 3455

DM From \$1249 Frame Sizes 12, 16, 24 channel. Stereo mixer, three bands EQ,

three auxiliaries, PFL on each channel, phantom power.

LX From \$3395 Frame Sizes: 16, 24. Four subgroup stereo mixer, three band mid sweep EQ, six auxiliaries on four knobs, PFL/Mute on each channel, phantom power.

MCX 1900 \$3399 Frame Size: 20 Channel 19" R/M. Twelve microphone inputs with 3 band mid sweep EQ, four stereo inputs with 4 band EQ, four auxiliaries, PFL, Phantom Power, Stereo output, extensive patching etc.

ELX 1 \$2149 Frame Size : 4 Ch. Rack Mount. Four balanced microphone inputs plus line in, metering, transformer balanced mic/line out, on board limiter, oscillator, clip, headphone, low cut.

FENDER Fender Australia (02) 656 5077

PX 2212D \$4,499 12 Channel, 3 way EQ, 2 Effect, 2 F/B sends Phantom power, Stereo 9 band graphics, 60mm

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Write in Reader Service Number: 171

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Link - MACKIE - OMNI MOUNT

Write in Reader Service Number: 133

faders, 2x300w power amp & digital effects all built into own roadcase/stand. Made in USA. 5 Year Warranty.

PX2216D \$4,999 As for PX 2212D but 16 Channels.

PX 2208D \$3,999. As for PX 2212D and PX 2216D but 8 Channel and Power Amp is 2x150w.

PX 2208 \$3,499 As for PX 2208D but has spring reverb, not digital.

MACKIE Australian Audio Supplies (043) 291 711

MS1202-VL2 \$995 Very low impedance (VLZ) Design, 4 mono Mic/Line channels, 4 Stereo Line Channels, 2 Aux Sends/Ch. 2 Stereo Aux Returns, 3-Band EQ, Low Cut Filter Mutes on every channel, XLR + 1/4" outputs, PFL Solo.

MS1402-VL2 \$1495 6 Mono Mic/Line Channels, 4 Stereo Line Channels, 3-Band EQ, Low Cut Filter, 2 Aux Sends/Channel, 2 Stereo Aux Returns, 60mm Log Fader. Balanced XLR + 1/4" outputs, PFL/AFL Solo.

CR1604-VL2 \$2995 16 Mono Mic/Line Channels, True 4 Bus Design, 1 Aux Sends/Channel, 4 Stereo Aux Returns, Mid Sweep EQ (100Hz to 8kHz), AFL, PFL Solo, Pre Fader Inserts, 5-Way Physical configurations, 60mm Faders.

SR24-4 \$3995 20 Mono Mic/Line Channels, True 4 Bus Design, Sweepable Mid EQ, Low cut filter, AFL/PFL Solo, 60mm Faders. 2 Stereo Line Channels.

PEAVEY Australis (02) 6984444

UNITY™500 \$899 The rack-mountable 500 has six Low-Z (XLR) and High-Z (1/4" jack) mic channels with TRS patch points. There are four stereo line channels (1/4" jacks). Each channel has high and low EQ, two aux sends with stereo returns, pan, and level control. Mic inputs have front-end gain control and phantom power. There is also a tape in/out section with RCA jacks.

UNITY™2002 (12) \$1499 (16) \$1999 (24) \$2399 The Unity™2002 series mixers come in 12, 16 and 24-channel models. They feature low noise discrete transistor low Z balanced XLR mic preamp, high Z 1/4" line input, input gain control, 3-band equalization, 2 aux sends, 2 effects sends, high reliability 60mm fader. Effects have master send and return level, pan, effects to monitor, 60mm left and right faders for returns (left/mono and right) tape in/out with level controls (RCA jacks), stereo headphone level, switchable +48V Phantom power.

VERSAMIX \$1999 16Ch, Rack-mount/console mixer 6 x XLR, 16 line inputs. Mic inputs feature phantom power all channels have gain pre amp, insert point, pan and 3-band EQ. Stereo tape (RCA) and aux returns and a separate I/C module that can be attached in six different locations.

RSM 1662 \$4499 16Ch rack mount console mixer. All channels feature two mono and two stereo pre or post aux



Phonic M1642. \$3395

senders, 3 band EQ, XLR/jack input, 48V phantom power, mute switch, pan, insert point, Ch solo and 60mm faders. Two stereo tape returns (RCA) and 4 stereo aux returns each have level and pan.

PHONIC CMC Music Pty. Ltd. (02) 3935 2511

M1642 \$3395 16 Channels, 4 Subs, 6 Aux sends, 3 Band EQ with sweep mids.

M2442 \$3995 As for M1642 but with 24 Channels.

PMC 2402B \$2095 24 Channels, 3 Aux Sends, 3 Band EQ.

PMC 16023 \$1550 As for PMC 2402B but with 16 channels. Also available in 8 channels (\$950) and 12 channels (\$250)

RAMSA Ramsaudio Pty Ltd (02) 477 7377

WR-54412 \$3280 12 Channel, 4 Sub Sends, 3 Band EQ, Mid Sweep, 4 Aux Sends, Dir send each channel, Individual returns each channel, Stereo and mono returns.

WR-54416 \$3880 16 Channel. Other features as per WR-54412.

WR-54424 \$4980 24 Channel Model of SR-54422 and WR-54416.

ROSS Central Musical Instruments P/L (03) 9315 2244

RCS-14C2 \$849 14 Channels, 4 Stereo, High Mic and Low EQ, 2 Auxiliaries.

RCS-802 \$879 8 Channel Bass, Mid and Treble EQ, 24 Aux sends, 1 Monitor send available. In 8, 12, 15, and 24 channel configurations. 60mm faders.

SOUNDTRACS SYNCROTEC SYSTEMS Tel: (02) 417 5088

TOPAZ MINI RRP: \$995 09 4 Mono + 2 Stereo inputs, 3 Band EQ, 2 Aux Sends, +48V Phantom power, LED output metering, 2 Stereo FX returns, Solo, 2 Master outputs. Balanced throughout.

TOPAZ MACRO RRP: \$1,435.00 10 Mono + 2 Stereo inputs, 3 Band EQ, 2 Aux sends, +48V Phantom power, LED output metering, 2 Stereo FX returns, 60mm channel & output faders, Solo, 2 Master outputs, Balanced throughout.

TOPAZ MACRO PLUS RRP \$2,315.00 22 Mono + 2 Stereo inputs, 3 Band EQ, 2 Aux sends, +48V Phantom power, LED output metering, 2 Stereo FX returns, 60mm channel & output faders, Solo, 2 Master outputs, Balanced throughout.

throughout.

TOPAZ MAXI 24-4 / 32.4 RRP \$ 4,494.00 / \$ 5,208.00

22 or 30 Mono + 2 Stereo inputs, HPF, 4 Band EQ (2 mid sweeps), 8 Auxiliaries; +48 Phantom power, Inserts & Direct outs, LED metering on Aux, Groups & Masters, 4 stereo FX returns, Talkback, 4 groups Stereo + mono outputs, Peak LED's on channels, 100mm faders, Balanced throughout.

SPIRIT Jands Electronics (02) 516 3622

FOLIO NOTEPAD \$595. 4 Mono & 2 Stereo inputs, 2 Band EQ on Mono inputs, post-fade aux, global 48V phantom power, separate mix & monitor outputs, peak & Vu metering.

FOLIO SX \$1995 12 Mono & 2 Stereo inputs, 4 subgroups, 3-band EQ with mid-sweep, 3 aux's (with up to 2 pre/post fader), table-top or rack mountable, global 48V phantom power.

FOLIO RAC PAC \$2995 10 Mono & 2 Stereo inputs, 4 Subgroups, 3-Band EQ with mid-sweep, 6 aux sends, global 48V phantom power, PFL on every input channel.

LIVE 32 16 Ch. \$4495 16 Mono & 2 Stereo inputs, separate mono bus, 4-band EQ with 2 swept mids, 4 aux's (up to 3 pre/post fader), EQ in/out (bypass).

YAMAHA Yamaha Music Australia (03) 9699 2388

MX200 \$1595-\$2995 8/12/16/24 inputs; 3 band channel EQ; 4 aux sends; channel PFL & ON switches, 2 stereo aux. returns; ch. inserts.

MX400 \$2495-\$4595 8/12/16/24 mono inputs plus 4 stereo ins; 3 band ch. EQ with sweepable mid; 5 aux sends; 4 group busses; PFL & ON switches per channel; inserts and direct outs on mono channels.

MM1402 \$995 6 Mono inputs; 4 stereo inputs; XLR ins & 3 band EQ on mono chs. phone jacks & 2 band EQ on stereo chs; 2 aux sends.

PRO MIX 01 \$3995 16 inputs (8 XLR/8 TRS); stereo in; 3-band fully parametric channel EQ; 2 internal effects; 3 dynamics processors; motorised faders; all parameters can be stored in 50 scenes.

Mackie 24:8 \$8,995



BUYERS GUIDE

LIVE MIXING CONSOLES under \$10,000

STUDIO MIXING CONSOLES COME IN AUGUST

Prices quoted are Retail including sales tax, as supplied by Distributor at 15th May 1996. All care taken, but Connections is not responsible for any errors.

ALLEN & HEATH A.R. Audio Engineering (02) 810 5300

GL-2000/24 \$6595 28 Input (20 Mono/4 Dual Mono) FOH Mixer, 4 Sub-Groups, Left/Right/Mono Outputs, 6 Auxiliary Sends, 4 Band EQ with 2 Sweeps. Can be linked to other A & H consoles via SYS-LINK

GL-3000/16 \$7450 16 Mono Input FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 8 Auxiliary Sends, 4 Band EQ with 2 Sweeps, 2 Stereo Returns, 10x2 Matrix. Can be linked to other A & H consoles via SYS-LINK

GL-3000/24S \$9950 28 Input (20 Mono/4 Dual Mono) FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 8 Auxiliary Sends, 4 Band EQ with 2 Sweeps, 2 Stereo Returns, 10x2 Matrix. Can be linked to other A & H consoles via SYS-LINK.

BEHRINGER Audio Visual Design (02) 281 2444

MX-8000 Euro Desk \$5795 Balanced 48 Ch in line, 8 Buss, 4 Band EQ, 6 Aux sends, 24 Ch meter bridge option, Cybermix Automation option.

DDA Mark IV Audio (02) 648 3455

INTERFACE \$7995 Frame Size : 8,16,24,32 Channels. Fully modular, four subgroup. Phase, phantom, pad, roll off, mic/line, on/off, PFL, input metering. Four band EQ with dual mid sweeps, six auxiliaries, four subgroup with matrix out. Stereo, Digital, 6 into 1 module options.

CS 3 \$7795 Frame Size: 16,24,32,40. Modular, four subgroup with LCR assign. Four stereo returns above groups, six auxiliaries, full parametric EQ, individual subgroup assign, all outputs balanced on XLR with insert point.

FENDER Fender Australia (02) 666 5077
MX 5216 \$5000 16 Channel, 4 Subs, 3 way EQ with mid sweep, Stereo or Mono out, 4 Aux, sends, 2 Monitor sends, Separate Power Supply, Made in USA. 5 Year Warranty.

MX 5224 \$6,500. As for MX 5216 but 24 Channel.

MX 5232 \$8,500 As for MX 5216 and MX 5224 but 32 Channel.

MACKIE DESIGNS Australian Audio Supplies (043) 291 711

16.8 \$6995 16 Mono/Mic Line Channels, 100mm Faders, EQ: Parametric Hi-Mid, Swept Low-Mids, High and Low Shelving, 8. Bus Design, Mix B Section, 6 Aux Sends/Channel, 6 Stereo Aux Ret.

24.8 \$8895 24 Mono Mic/Line Channels, 100mm Faders EQ: Para Hi-Mid, Swept Low-mids, High & Low Shelve, 6 Aux Sends/Channel, 6 Stereo Aux Retns, 8. Bus Design, Mix B Section, Expandable, Automation optional.

MIDAS Mark IV Audio (02) 648 3455

XL88 \$8979 Frame Size: Rack Mount. Eight by eight rack mount matrix mixer, input meter ramp, muting, PFL, Modular, all inputs/

outputs balanced on XLR transformer option available.

PEAVEY Australis (02) 698 4444

SRC2400 \$5699 XLR/jack input with gain control and insert point, 3 band EQ with sweepable mid, PFL and Solo on each channel. The SRC also features 6 aux sends, 4 submasters 48V phantom power and stereo record and master output. Also in 16ch (SRC 1600).

ROSS Central Musical Instruments

(03) 9315 2244

RCS-2842 \$5999 28 Channels, 4 Sub Groups, High, Low and 2 Sweepable Mid EQs, 8 Aux sends, 120mm Faders, SKB Road case.

SOUNDTRACS SYNCROTECH SYSTEMS Tel: (02) 417 5088

TOPAZ MAXI 24-8 / 32-8 RRP \$ 7,964.00 / \$8,938.00. 22 or 30 Mono + 2 Stereo inputs, HPF, 4 Band EQ (2 mid sweeps), 8 Auxiliaries, +48 Phantom power, Inserts & Direct outs, LED metering on Aux, Groups & Masters, 4 stereo FX returns, Talkback, 4 groups Stereo + mono outputs, Peak indicators on channels, 100mm faders, Balanced throughout, Switch to 24 / 32 x 8 monitor console.

SOLO Live 24/4/2 RRP \$8,025.00

24 Mono inputs, 4 Band EQ (2 mid sweeps), 6 Auxiliaries, +48 Phantom power, Inserts & Direct outs, LED metering on Aux, Groups & Masters, 4 stereo FX returns, Talkback, 4

groups Stereo + mono outputs, Peak indicators on channels, 100mm faders, Balanced In / Outputs, built in PSU.

SOUNDCRAFT/SPIRIT

Jands Electronics (02) 516 3622

SPIRIT LIVE 3mk2, 24 Ch. \$5995 24 Mono & 2 Stereo inputs, Separate monitors, 4-band EQ with 2 swept mids, 4 aux's (up to 3 pre/post fader) EQ in/out.

SPIRIT LIVE 4mk2- 24 Ch. \$7995 24 Mono & 4 Stereo inputs, 4 subgroups, 4-band EQ with 2 swept mids, 6 Aux's (up to 4 pre/post fader), 4 mute groups, 6 x 2 Matrix section, individual phantom power, phase rev, EQ in/out.

SPIRIT LIVE 4mk2 - 32 Ch. \$9995. 32 Mono & 4 Stereo inputs, 4 subgroups, 4-band EQ with 2 swept mids, 6 aux's (up to 4 pre/post fader), 4 mute groups, 6 x 2 matrix section, indiv. phantom power, phase rev, EQ in/out.

SOUNDCRAFT K1 - 24 Ch. \$9995 24 Mono & 2 Stereo inputs, 4 Subgroups, 4Band EQ with 2 swept mids, 6 aux's (switchable pre/post fade), 4 x 4 matrix, individual phantom power, phase reverse modular in banks of 4.

YAMAHA Yamaha Music Australia

(03) 9699 2388

MC04II \$6499-\$13,495 12/16/24/32 input channel versions; 4 group busses; 4 aux busses; 2 stereo returns; 2 mix matrixes (6 x 1), 4 band channel EQ (fixed hi/low).

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CREST
CONSOLES

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LIVE MIXING CONSOLES OVER \$10,000

STUDIO MIXING CONSOLES COME IN AUGUST

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ALLEN & HEATH A.R. Audio Engineering (02) 810 5300

GL-3000/32S \$12,450 36 Input (28 Mono/4 Dual Mono) FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 8 Auxiliary Sends, 4 Band EQ with 2 Sweeps, 2 Stereo Returns, 10x2 Matrix. Can be linked to other A & H consoles via SYS-LINK.

GL-3000/40S \$14,950 44 Input (36 Mono/4 Dual Mono) FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 8 Auxiliary Sends, 4 Band EQ with 2 Sweeps, 2 Stereo Returns, 10x2 Matrix. Can be linked to other A & H consoles via SYS-LINK.

GL-4/24 \$14,950 24 Input FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 10 Auxiliary Sends, 4 Band Full Sweep EQ Plus Lo-Cut Sweepable Filter, 8 Returns on Faders, 10x2 Matrix. Available in 32 & 40 Ch.

GL-4/24S \$16,450 32 Input (16 Mono/8 Dual Mono) FOH/Foldback/Dual Role Mixer, 8 Sub-Groups, Left/Right/Mono Outputs, 10 Auxiliary Sends, 4 Band Full Sweep EQ Plus Lo-Cut Sweepable Filter, 8 Returns on Faders, 10x2 Matrix. Available in 32 & 40 Ch.

CREST CONSOLES Production Audio Services P/L (03) 9415 1585

Vx 52 x 8 \$97,695 Vx 52-channel with 8 VCA controlled groups, 8 Aux sends, 12 x 8 matrix, metre bridge, L-C-R panning, 4 band EQ, and phantom power on all channels in a relatively small chassis. Also available in 20, 32 and 40 channel versions.

GTx 52 x 8 \$73,292 GTx 52-channel, includes meter bridge, 8 discrete group bus assignment, true L-C-R, 8 send aux system, switchable bandwidth, 4 band EQ, sweep pass filter and 5 seg. LED channel signal metering. Also available as 20, 32 or 40 systems.

LMx 52 x 22 \$99,900 LMx 52 x 22 monitor console, w/meter bridge, switchable mono or stereo sends, up to 22 mono outputs or 11 stereos. Also available as 40 x 22 and also LM without meter bridge.

TC 16 x 4 \$15,570 TC 16 channel (available also 24, 32, 40 or 52 ch.) with 4 sends (also available w/8 sends) Includes dedicated mono bus, four band EQ in a small frame.

DDA Mark IV Audio (02) 648 3455

FORUM \$30,850 Frame Size: 16, 24, 32, 40, 48. Fully modular eight group console, four band mid sweep EQ, six auxiliaries, 8 x 10 Matrix, eight mute groups, Midi mute stereo modules available.

FORUM MONITOR \$29,750 Frame Size: 22, 30, 38, 44. Twelve plus two moni-

tor board, four band dual mid sweep EQ, stereo send on fader, flexible matrix on group outs.

Q2 \$50,300 Frame Sizes: 24, 32, 40, 48. Fully modular eight group, eight auxiliary, four band dual parametric mid range. Matrix output, Left/centre/right assign. eight mute groups, VCA option available.

MACKIE DESIGNS Australian Audio Supplies (043) 291 711

32.8 \$10,795 32 Mic Line Channels, 8 Bus Design, 100mm Faders, EQ: True Parametric Hi-mids, Swept Low-mids, High & Low Shelving, 6 Aux/Channel, 6 Stereo Aux Returns, Expandable Automation optional.

SR40.8 \$16,995 40 Mic/Line Channels, 8 Stereo Line Channels, 8 Aux Sends, EQ: Swept Hi-Mid and Low-Mids, High & Low shelving, 100mm Faders, 11 x 4 Matrix Mixer, 8 Sub Groups, 100 Snap Shot Mutes.

MIDAS Mark IV Audio (02) 648 3455

XL 200 Frame Sizes: 16, 24, 32, 40, 48, 56. Fully modular eight group, eight auxiliary, four band dual parametric mid range. Matrix output, Eight mute groups, VCA's, dual power supply with auto changeover.

PEAVEY Australis (02) 698 4444

MARK VIII(24) \$23,999 (36) \$29,999 36 or 24 channels. Each channel module has a high and low Z balanced input, pre and post send and returns, -20dB pad, phase, 0 dB to 60dB variable input gain, phantom power, 4 band sweepable EQ, EQ bypass switch, HPF, LPF and 8 aux sends, 8 sub-groups and 8 aux returns each with level, EQ, pan control and led display.

RAMSA Ramsaudio Pty Ltd

(02) 477 7377

SX-1 \$115,000 48 Mono, 4 Stereo channels, 125 Patter Memory, 10 VCA groups, 10 mute groups, 20 Aux, Lightweight, 4 Band EQ all sweepable.

SOUNDTRACS SYNCROTECH SYSTEMS

Tel: (02) 417 5088

SEQUEL II RRP \$40 - 80,000

Fully modular 24 - 48 mono inputs, 4 band FdB Quasi parametric EQ, Assignable dynamics to all input channels (gate / Expander / compressor / auto panner), Optional stereo & matrix modules, 8 VCA groups, 8 mute groups, 8 stereo FX returns, 10 VU meters, 4 segment LED in all channels, 2 way comm's, Available in various frame sizes.

MEGAS II Stage RRP \$20 - 50,000

Fully modular 30 - 54 mono inputs, 4 band EQ, 6 mute groups, 4 stereo FX returns with EQ, 10 VU meters, 4 segment LED on input channels, Options: stereo inputs (4 band EQ) & 11 x 8 matrix module, Available in various frame sizes.

MEGAS II Monitor RRP \$25 - 35,000

Fully modular 30 - 54 mono inputs, 4 band FdB Quasi parametric EQ, 10 Monitor sends + Stereo fill, Parametric EQ on outputs, 13 LED Meters, Peak LED on input channels, 2 way comm's, Available in various frame sizes.

SPIRIT/SOUNDCRAFT Jands Electronics (02) 516 3622

SPIRIT LIVE 8, 24 Ch. \$11,995 24 Mono & 4 Stereo inputs, 8 subgroups, 4-band EQ with 2 swept mids, 6 aux sends (4 pre/post fader), individual 48V phantom power, 8 x 2 matrix, meter bridge as standard.

SOUNDCRAFT K1 - 32 Ch. \$12,995 32 Mono & 2 Stereo inputs, 4 subgroups,

4-Band EQ with 2 swept mids, 6 aux's (switchable prepost fade), 4 x 4 matrix, individual 48V phantom power, phase reverse, modular in banks of 4 channels.

SPIRIT LIVE 8 - 40 Ch. \$17,995 40 Mono & 2 Stereo inputs, 8 Subgroups, 4-band EQ with 2 swept mids, 6 aux's (4 pre/post fader, individual 48V phantom power, 8 x 2 matrix, meter bridge as standard.

SOUNDCRAFT K3 Theatre 32 Ch. \$35,995. 32 Mono inputs, 8 subgroups, 4-band fully swept EQ with switchable Q & bell/shelf, 128 MIDI controlled mute scenes, 8 discrete aux sends with pre/post switching in pairs.

YAMAHA Yamaha Music Australia

(03) 9699 2388

M2000 \$22,995-\$39,995 16/24/32/40 input channels + 2 stereo channels; 8 groups; 13 x 4 submix matrix; 128 scene channel; on/off memory with MIDI control; 4 band channel EQ with sweepable low-mids & high mids; 6 aux sends.

PM 3500 \$108,000-\$120,000. 24/32/40/48 input channel versions; 4-band full parametric channel EQ w/hi-lo shelving; 8 VCA assigns; 128 mute scene memories with MIDI; 4 stereo input modules come standard; 12 way mix matrix.

PM4000 \$110,000 - \$160,000+ 24/32/40c/80c input channel versions; 4 extra stereo input channels; 11 x 8 mix matrix; 8 VCA groups with VCA muting; 4 band channel EQ.

PM 4000M \$180,000+ 36c/44c/52c input channel versions; as per PM 4000 with 18 group mixing busses; 2 stereo busses with fully assignable control.

Yamaha's PM4000, probably the most used concert console in the world today





Duncan Fry

Flaps away, chaps

Got them old 'workin' at the car yard' blue

As soon as I started doing gigs, I realised that as well as putting a PA together, I desperately needed a truck, since renting them to do gigs was turning out to be horrendously expensive and left me with little or no profit. However, I didn't have enough money to buy a truck and the bank wouldn't give me a loan because I didn't have a job. Then, as now, to a bank manager being self employed meant that on the social scale you were maybe just one rung above begging in the streets, and definitely not personal loan material. No job no loan.

So, I had to get a job, to show that I had a steady income to pay back a loan. I scoured Saturday's Age looking for something that paid well but didn't require any thought. Suddenly I saw it; the perfect job for a person of my qualifications. I rang up, got an interview straight away, and got the job.

8 o'clock Monday morning I started work washing cars at Reg Grunt's 'Kilometre o Cars.' And by crikey old Reg must have still had his first dollar framed on the wall, because he worked all the car washers like there was no tomorrow. Half an hour for lunch, a ten minute coffee break morning and afternoon, and that was it. From eight in the morning to five thirty at night I washed cars, cleaned out the insides, vacuumed the carpets, and steam cleaned the engine compartments. Two or three nights a week I would do gigs and try to stay awake long enough to get paid.

As boring jobs go, it wasn't too bad apart from the long hours. In fact I even got promoted, from not

just washing secondhand cars but putting mudflaps and towbars on new ones. Sometimes I even installed the occasional electric aerial, because I was one of the few people who could read the instructions. Most of my fellow washers were new arrivals who didn't speak much English, nor were they aware enough to complain about the conditions.

But mainly I fitted mudflaps. Lots and lots of mudflaps! So many that my nickname at work was 'Flaps'.

The way of life at Reg Grunt's was very similar to being in primary school. Everything was controlled by a system of bells that rang, and if you needed a new sponge, or bucket, or whatever, then you had to get a note from the foreman to go down to the

The way of life at Reg Grunt's was very similar to being in primary school.

store. You weren't allowed to be outside of your 50m circle working area without an appropriate note.

The foreman was from Lower Slobbovia or somewhere. Although he had lived in Australia about 30 years, he spoke less English than I do Lower Slobbovian, and he could read none at all. His name was unpronounceable - it sounded like someone choking on a dog hair, so by consensus we all called him Bill. The first time I went to him I had to write the note out myself, and he scribbled his name at the bottom.

Pretty soon I twigged that no matter what I wrote, he would still sign it.

So the next day I wrote a note, got him to sign it, and took it down to the store. When they read

it they pissed themselves laughing, since it said "Please give Dunk a new sponge. P.S. I am a f**king idiot. Signed Bill"

From that day on I would add a little something to the bottom of every note; it was one way of making the day go faster. A childish trick? Perhaps. A shitload of fun? Definitely!

The cars to be washed were parked in a long line down a fairly steep incline. Once you had washed it you were supposed to start it up, slowly drive it down the slope and turn either left or right depending on where you were taking the car next; paint department or steam cleaning and vacuum. You had to turn right or left since there was a brick wall stopping you from going straight ahead.

There was a new guy on the cleaning line, a Russian who spoke no English whatsoever. He was washing a Mini, and in big letters on the windscreen it said 'NO BRAKES'. Unfortunately this was lost on Ivan as he could read no English either. So, when he finished washing the car, he jumped in and started it up. Revving the engine, he put it into gear and raced down the slope.

His broad grin rapidly turned to a look of absolute horror as instead of slowing down at the bottom for the corner he was actually accelerating. We could see him pulling on the wheel and madly pumping on the brakes, but to no avail. The last thing we saw was his eyes popping out in disbelief and then frantically putting his arms over his face, as he slammed into the brick wall at about 30 miles an hour! There was a God awful crash, the windscreen popped out, the driver's door flew open, and Ivan stumbled out.

Steadying himself against the wall, he lurched and weaved his way across the washing area and out into the street. He never came back! As soon as I had the job I went back to the bank, showed

them my pay slip and got a loan. Ten weeks later I left the job, convinced that I could earn more that Reg Grunt was paying if only I could stay awake at the gigs!

The last day at work, my mind must have been elsewhere. I was busy fitting a towbar to a Commodore, and drilling the holes in the boot floor for the bolts. Suddenly I smelt petrol. Putting down the drill, I peered under the car.

There was a God awful crash, the windscreen popped out, the driver's door flew open, and Ivan stumbled out.

Whoops. I had put a hole straight through the petrol tank. Shit; what was I going to do. The customer was waiting in the showroom to drive his new car away! There would never be time to change the tank, even assuming there was one in stock.

So, it was out with the windscreen caulking gun. A big blob of black sealer over the hole and it was as good as new, and would stay that way for at least, oh, 2 or 3 days! Of course, once the petrol oozed its way through the sealer the customer would get lousy mileage out of the car, since half of every tankful would find its way straight on to the ground! Still, by then I'd be long gone.

Sort of puts you off buying a new car, doesn't it, knowing that someone like good old 'Flaps' Fry might have been working on it!

• Duncan is a director of ARX.

His two books, *Live Sound Mixing*, and *Tales of the Road* are available from Connections.

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CLUBBLAND & DJ NEWS

Young Turk at the Beach Palace

Making a new venue work for everyone

Andrew Jolliffe comes from a dynasty of hotel owners. His father and cousins had the Toxteth Hotel in Glebe, and his mother's family had hotels in the country. He managed the Courthouse Hotel, in Oxford St Sydney for two years.

"I haven't been shielded from hotels. It's something that comes easy to me, and I enjoy doing. It's still a very dynamic industry to be involved in. It's different than when my father and his cousins worked. You've got to do more now. Everyday you have to be looking around and getting ideas from other hotels and other people. That interests me, and I like the personal contact with people."

At 23, he is the licensee and manager of the Beach Palace Hotel on Coogee Beach. Jolliffe is a hard worker. The hotel is open seven days a week, and he is there most of the time. "It's a very hands on place. It's only new so it's not a place that can carry a lot of upper level management that aren't going to be here."

In a typical day, he arrives to do the cellar work, then bookwork, banking, setting up the bar for the days trade, rostering, serving, and promoting.

Who are they, and what do they want?

Like many hotels these days, the Beach Palace is trying to fathom the market. Years ago a hotel owner simply served beers to die-hard drinkers. That was before random breath testing, feminism, political correctness, and recreational drugs. Drinking and pubs now face competition from all sides, like changing lifestyles, casinos, nightclubs, video, pay TV, and BYO restaurants where the food is the only focus. The folks who would go down to the pub for the night, and eat a meat pie that



Andrew Jolliffe

had been sitting in the glass warmer for six hours are a disappearing breed, particularly in the cities.

Jolliffe took over the site six months ago, and is trying to make it a happening thing. The view is spectacular, over surf breaking onto rocks, Coogee Beach, and the open sea. The huge L-shape room has a restaurant along the windows, a bar in the centre, and five medium pool tables and a stage on the other side. Twelve videos dotted high up around the room play music videos, and SKY channel. A black pipe with ten pars runs across the ceiling.

"Our problem is trying to fit the bar, restaurant, pool tables, and live music into one room, and try to reach all those areas of the entertainment market in our opening times. That's our biggest hurdle, because the people that might want to eat in a restaurant may not necessarily want to have pool tables all around them, or a band pumping out live music. So we're trying to attract a broad spectrum, have people eat, then move over to a game of pool, then later listen to live music. That's our challenge, and we think it can work, but it's not without its difficulties, we've discovered.

"The band needs time to set up,

the stage has to be set up, there has to be enough room for the people, but you can't have that going on when you've got a house full of people trying to have dinner. So there's a transformation problem."

I suggested that it could be difficult trying to provide too many services to too many different people, which is a problem hotels face these days. "I think the hospitality industry now is a place where you have to do more than just one thing, if you want to succeed. We want to provide an overall night of entertainment, a meal, a game of pool, drink at the bar, and then see good live entertainment. The hurdle is to do this without shooting yourself in the

foot in other department. But it's worked so far, so we're pretty confident we can do it."

Jolliffe and his business partner Jce Saleh are aiming for the local beach crowd in their 20s. Cover bands play as well as original bands like 'Things of Stone and Wood.' "There is a local market here, that is looking for a new venue that can offer all these things, and on a scale larger than what is now in the Eastern Suburbs area, and smaller than the Coogee Bay Hotel. We think we fit in there quite nicely," says Jolliffe.

The opening hours are 11am to midnight monday to wednesday and sunday, 11am to 1am thursday, 11am to 3am fri and sat. Live music cover charge is \$8-10.

The Beach Palace is on the corner of Dolphin and Beach Street, Coogee. • *By Madeleine Murray*

Club Profile

Daily Planet 303 High Street Penrith NSW

Daily Planet opened in Penrith (NSW) on 6 May after \$500,000 of renovations. The owners are a father and son team, Trevor and Matthew Jones, who ran the club formerly known as Bootleggers.

The club has video screens splashed around the room. Within a year, they plan to show overseas club acts by live satellite link. Daily Planet will also have some of Europe's latest computerised light shows.

"What we're trying to head for is using the latest technology in clubs," said John Alsoop of Rock Circuit Promotions. "Probably in about a year, DJs won't be using

hardly any vinyl, or CDs. The new thing will be CD video, which is a compact disc. DJs will be able to play video all night from CD, with perfect sound and visual quality." RCP are also working on using the internet for live links.

Promoters: Rock Circuit Promotions: Harry Della/ Marc Christowski.

Lighting Designers: Rock Circuit Promotions/ Total Concept Productions

Sound Design: RCP/ TCP

Lighting Operator: Andy Willmott, Matt Cohen

(continued over)

Daily Planet

DJs: Hooley G, Dennis Duggan, DJ Fiction

Decor/Interior design: Modern Miracle/ RCP video

Typical Door Charge: Wed \$10, Sat \$7

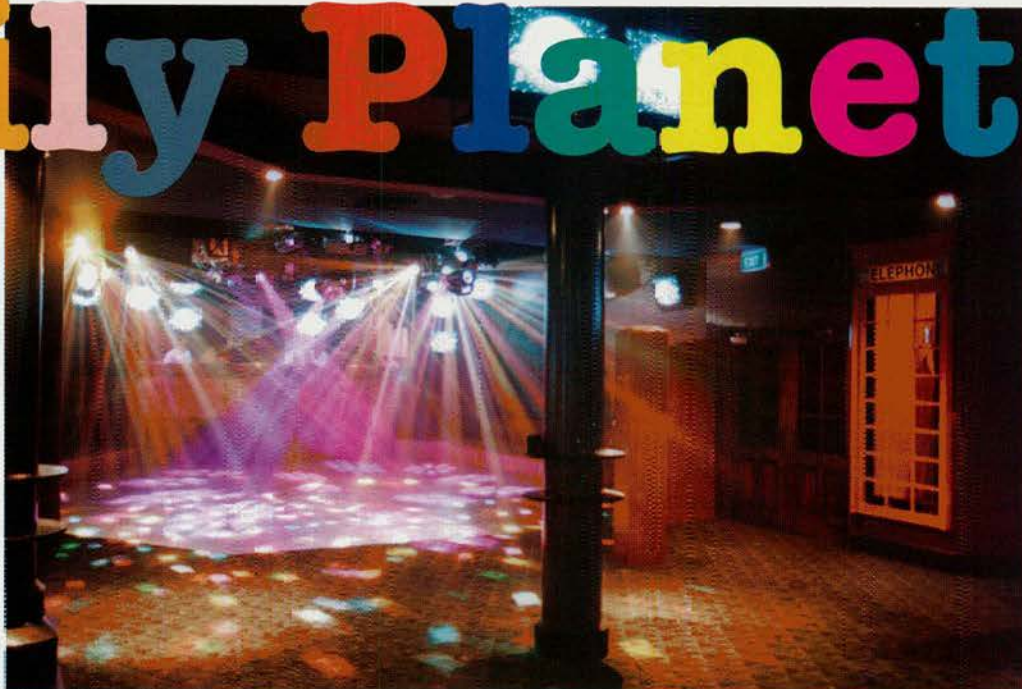
Entertainment: Dance club/ live acts with dance club, eg Deni Hines/ guest DJs

THE SPECIFICATIONS:

Lighting 2 Comets, 12 Coemar Mini-ultra scans, 1 Mini ultra scan controller, 1 Mercury controller, 2 Astroraggis, 1 mirror ball and rotating motor, 2 Geni strobes, 4 x Four Flower, abstract neons, 1 diffusion fogger.

Video RCP's video tek concept, 40 monitors, Q-Master computer visuals, VDA amp, CIT switching units, 3 VHS, RCP graphics, 4 DJ box mixing monitors.

Audio 4 Delta Max speakers (top and bottom end), 6 EV amps, Yamaha graphic equaliser Denon 2000 CD, DJ Pro Mixer, Rare MP24 mixer, 2 Technics 1200 turntables.



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Connections



LIGHTING MONTHLY

June 1996

Edited by Catriona Forcer

Celco Relaunch in Australia



Colin Whittaker of Celco, David Mason of Electronic Systems and Keith Dale* of Celco at their Entech stand.

Electronic Systems used ENTECH to relaunch Celco, manufacturers of lighting and video control products, in the Australian market.

Said Keith Dale, Business Manager of Celco UK "Most professional lighting designers will be familiar with the Celco '88 Range and Gold lighting consoles, which can be found throughout Australia but few would have seen our Adventure Range of consoles, or video products. Now, following several months of market research we have reached an agreement with Electrosonic Systems to distribute our products throughout their Australian offices. Needless to say, we are entering the market again with all seriousness and as such are able to offer our range of products at very competitive prices."

* Disclaimer: Dale & Lighting editor Cat Forcer are related by marriage. (continued on page 62)

Dr Light Clarifies The Jands Situation

When Mike Tanner became a member of Chameleon's staff there was a fair bit of surprise in the industry as well as the usual rumours. In fact lots of rumours have been circulating about Chameleon and so a visit from Connections was deemed necessary.

The truth is that Mike Tanner had already resigned from his position as Lighting Product Manager at Jands Electronics before he was offered a similar position with Chameleon. He left Jands for personal, family reasons which are none of our business.

"I still have a good working relationship with Jands and I wish to pursue that," he told me. "At Chameleon I'm working with a motivated group of lighting individuals which was a natural attraction as was the flexibility of the organisation. Tony and I have always had a



Mike Tanner and Tony Davies

ULA's Le Maitre Fogger Exclusive

Universal Lighting & Audio (ULA) and LeMaitre have announced that ULA have been officially appointed the sole Australian Distributors of the Le Maitre Smoke Machines and accessories.

ULA managing Director Cuno Biviano welcomed the decision, stating that now they can focus on providing the Australian market the full range of smoke machines from the small MinFog pump to the high powered C300 smoke/haze machine.

The distributorship also involves the manufacture of the Le Maitre range of smoke fluids under licence- made in JLA's warehouse.

In addition to the smoke fluids ULA say

they carry a wide range of spare parts for all machines ranging from pumps and blocks to heaters and fluid coils.

Universal Lighting & Audio would like to stress to customers that anyone having purchased their machines from previous official importers will be able to have their machines serviced by any one of ULA's warranting agents.

ULA are now setting up new dealers for the range of Le Maitre smoke machines. Anyone interested in stocking the range of smoke machines for distribution should contact Universal Lighting on their free call 1800 062 828 number.

good relationship and if you'd asked me five years ago what I'd be doing in seven years time, I probably would have said working with Tony Davies. I've been watching Chameleon grow and grow.

"I suppose when you are with a company for so long and you leave, it's natural for other people in the industry to beat things up, whether to score points or satisfy their own muck-racking lives. Coming from a press based family, I quite enjoy it as long as they spell my name right!"

Chameleon are one of Jand's biggest domestic lighting customers and they admit that it would be suicide to 'put on big hob nailed boots and go stomping around the place' and that's not what they are about.

"A lot of development that went on at Jands

continued on page 63



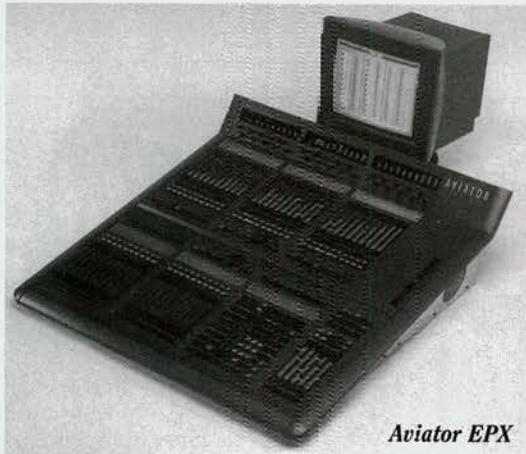
CELCO in Australia

(continued from page 61)

David Mason, Divisional Manager of Electrosonic Systems, which is part of Evans Deakin Engineering Ltd., said "We are pleased to have the opportunity to distribute Celco products, particularly as the video and lighting markets are ready to converge and our experience in the videowall and architectural lighting market is already well established.

"We intend to appoint a limited number of specialised dealers and to support the Celco line, including stock, service, spares and upgrade support for existing product, throughout Australia. We are also ideally placed to service New Zealand with local support provided by Corr Systems based in Auckland.

"We may be a new name in the entertainment lighting sector, but our experience of distributing high quality imported products was an important criteria when Celco made their choice and we were similarly influenced by the strong emphasis on product development at Celco, which will lead to exciting



Aviator EPX

Pathfinder EPX is a theatre/concert console with 60 channels and a svga monitor output, chase-maker and other effects with a keyboard included. Price ex tax: \$7500.

All none EPX versions of Aviator, Explorer, Pathfinder and Navigator can upgrade to the latest specification. Prices, ex tax, from \$2500.

The all digital Fusion dimming system is suitable for all types of fixed dimming installation and accepts control inputs from consoles producing either DMX512 or 0-10v analogue. Price ex tax: \$4000.

Celco Video M9 is a videowall controller that can be run from any console that produces a DMX512 signal and controls nine monitors. Multiple M9's can control walls of up to 6 x 6. It does not require any special knowledge to set it up or to make it function. Operators used to the techniques required to control moving lights should find the operation of the M9 very simple. Price ex tax: \$9400.

For further info and colour brochure call: Electrosonic Systems (02) 870 7155.

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introductions later this year."

The 'Adventure' range of lighting control products from Celco include Aviator EPX for television, theatre, concert and multipurpose. Aviator has control of 512 channels, an integral moving lamp library, DMX512 patch to 512 dimmers, 1000 cues, 25 lists of 999 entries each, 100 sequences of up to 99 steps each, 20 submasters or theatre rate playback and channel output limits. Price ex tax: From \$37,000.

The Navigator EPX is a moving light console for 60 lamps plus a svga monitor output, trackball and keyboard. Price ex tax: \$7500.

The Explorer EPX is aimed for television, theatre, concerts and multipurpose events. It has 120 channels, a svga monitor output, stack-maker and other effects, sophisticated time fades. A keyboard is included and there's an optional floppy drive. Price ex tax: \$8900.



Navigator EPX

Bits

L.S.C. Electronics (03 9561 5255) report:

● L.S.C. have supplied 40 Isoports to the Sydney Opera House. The Isoports have been installed to provide isolated DMX512 distribution for control of DMX512 based equipment.

● Aquinas College have ordered an Axiom 36/72, 5 Wallpak dimmers and a heap of Selecon fittings from LSC for their new theatre.

Universal Lighting & Audio (07 5532 9922) have been busy with the following:

● Disco Supplies in Melbourne recently purchased 4 x JB Varyscan 3 Special Plus and Varyscan DMX controller as well as several other Abstract lighting effects which they installed into a Geelong nightclub.

● Hot House Productions in Cairns have purchased 4 x Futurescan 2 CE's and a Futurescan controller which they have installed in Club Troppo's.

● The Trinity Christian School in Canberra purchased 4 x Futurescan 2 CE's and several other Abstract lighting effects for their theatrical department after having seen them at this year's Entech.

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Chameleon Story

(continued from page 61)

was through dealing with people like Tony," said Mike. "They've had a lot of input on products as well as putting us in touch with a broader market sector."

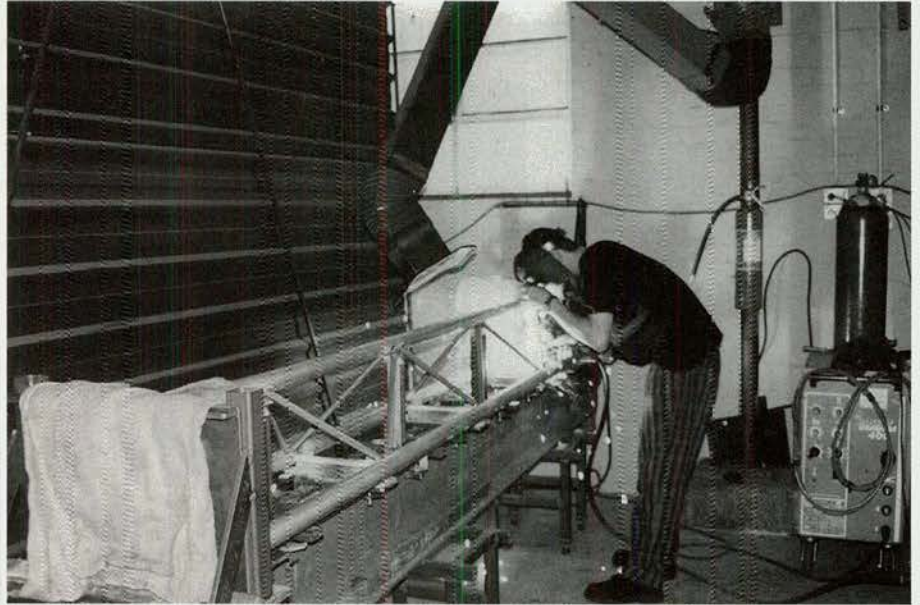
"The Jands HP dimmers got into the market by lobbying the head electricians of major new shows and people like us buying the product," said Tony. "They're now on *Beauty & The Beast* (JPS), *Miss Saigon*, *Les Mis* (CLS) tour of Asia and the *Phantom* tour. Up until that run of shows, every dimmer was either a Strand or Bytecraft dimmer."

Chameleon want to be known as a 'resource' company incorporating sales, rental, production and manufacturing (ALE). They also construct staging and build exhibition stands.

"It's so broad, you can't easily sum it up under one definition," said Mike Tanner.

However, the guys are very keen to push Altman products which will be reviewed in depth in a further issue. They have just secured the contract to supply the lighting for the touring version of *Phantom of the Opera* this year and will be supplying a large Altman rig.

"From a sales point of view that's quite an



Busy welding, even on a Saturday

achievement for us but it's only one element against all that Chameleon does," stressed Mike.

The 250 Altman Shakespeares on the show will be joined by Rainbow Scrollers, and Jands HP dimmers. Chameleon want to stress that they will always stock products other than just the gear they are selling.

"We aim to give the client what the client wants," continued Mike. "By servicing those needs is where Chameleon has been successful to date. If we're doing a long run theatre show, like *Miss Saigon*, we start with new equipment rather than just pull stuff off the shelf. That means at the end of the run we get back equipment in reasonably good order and that further validates the investment we make. I don't want to give the impression that everything we do is on that basis we trim our sails to suit the cloth."

At this point Tony Davies joked that some of their gear

is actually of historical value!

"It's a mixture of both," he continued. "We can afford to buy the new gear for the big, mainstream shows but smaller producers, who are more interested in the number of lamps as opposed to the make, benefit further down the line."

Chameleon tend to be associated with theatre but that is actually only about 10% of their business. Film, TV, and rock but particularly corporate and special events make up the annual turnover.

"They don't have a high profile so for every show someone hears about we probably do ten others," said Tony. "They are the jobs which are our bread and butter and keep the operation alive."

Chameleon supply gear for a quite a few 'pub rock bands' and every year do some of The Big Day Out.

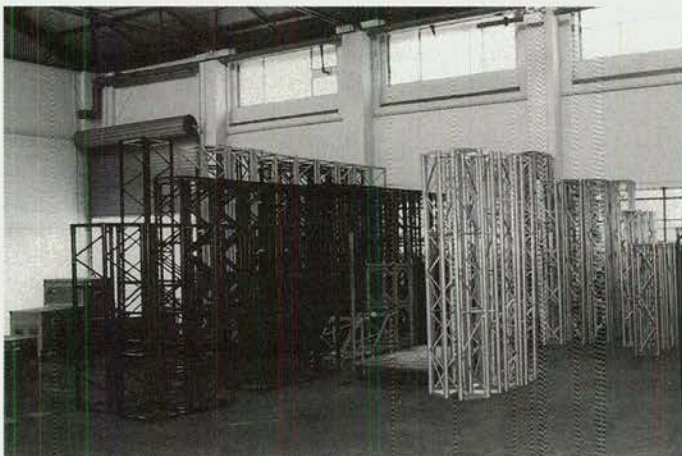
"We can take or leave the rock stuff," said Tony. "That market is more geared for companies like Revolver and Jands who can supply a total lighting and sound production."

Tony and Mike said that they try to keep politically neutral in this business, which is not easy, and they prefer Chameleon to stand apart. At the moment Chameleon are not actively pursuing products to add to their sales inventory although manufacturers are coming to them and Tony admits that they are always interested in looking at what's available in the market. They don't want to give in to the temptation of taking on too much and entering the area of 'grey marketing'. However don't be surprised to see some new additions in twelve months time.

For further info call: Chameleon (02) 310 5222.



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Stowaways

French master illusionist Philippe Genty tours Australia with his new show

The Australian production *Stowaways* by French master stage illusionist Philippe Genty has been touring the country to much critical acclaim. Genty, a visual theatre magician, creates images from dreams and nightmares released in a strange voyage of self discovery

Philip Lethlean has built a solid reputation lighting puppetry and so it was no surprise when Genty hired him to light *Stowaways*, a production which uses an Australian team. Whilst Philip's career is based firmly in theatrical lighting, he also encompasses corporate theatre and permanent installations.

The show had an amazing four months of construction and rehearsals as well as another month of rehearsals on stage at the Playhouse in Adelaide!

"All my mates in theatre thought it was really decadent!" said Philip. "But it was a great process. I thought Philippe would act the master but in fact he was just a person trying to make a bit of foam rubber do the impossible! They started in the October and I didn't join them until December. My big contribution was the venetian blind look at the back of the stage in front of the cyc but by the time I got there they had already gone over budget and cut it.

They were going to replace it with a couple of tabs but there was no other look on stage apart from the blonde wood floor and the cyc and it needed to be broken up. I did a few drink coaster drawings and got the venetian blinds back in which was a big relief."

By the time the show got into the theatre for a month of rehearsing, it still was not finished and consequently the music had not been composed. But Philip still had to get the rig up and in because the first thing that has to go in at the bump-in is a raked wooden stage floor 12m wide x 8m deep. Obviously the rig has to go up before the stage floor can be put down as a Cougar couldn't be put on the raked floor to focus.

"I just put up a generic rig with thirty specials, some side lighting and some cyc," said Philip. "It



came to about 120 channels with the view to trimming it down to 84 channels for touring. Once they were up and in, I watched the first week of rehearsals and did a rough plot with Lorraine Wheeler on the desk. I then went away for two weeks while the composer worked with them and they worked out the mechanics of the show. During the last week I hammered the square peg of the rig into the round hole of the show.

"Because of the blonde wood floor and the sepia tones of some of the memories in the show, Genty wanted to go with a woody-yellow look but I wanted a cold, crisp look. I put in a fair bit of 103 and a little bit of 201 but by opening night that balance had turned about completely to a cold look. There are buckets of saturated red and yellow on the cyc which gives warmth as well as 195 blue."

Philip admits he went a bit berserk with the colour on the cyc as he felt his brief was to do 'Australian Postcards' with lots of flat blocks of colour.

"When the carnival freaks come out of the father, I tried to get a completely none theatrical look," said Philip. "The freaks are all in a washed out sepia tone, all very romantic and I tried to go against that by making it urban and alien. So I lit it with a single metal halide lamp which gave great shadows and a greeny glow everywhere but we had a lot of trouble controlling it with spill going everywhere. We spent about a week playing with that but eventually it was just too uncontrollable and too much of a contrast with the rest of the lighting. I ended up lighting it with a load of steel blue 117's which gave a similar feel but without the imperceptible flicker you get from a discharge lamp."

The show was unusual for Genty as he tends to work in black theatre with tightly focussed corridors. *Stowaways* was on a blonde wood floor with a cyc and all the magic happened out of traps in the floor.

"It was difficult trying to discuss visual theatre in a second language although his English is quite good," Philip said. "But when you're talking about visual theatre you are talking about abstract notions so you end up using analogies which are absolutely oblique. We got on well, drank a load of whisky and talked about all sorts of things."

The tubular ripple effect was used and a little bit of gobo work. Control desks varied as to which theatre the show played in.

"It's a difficult show to tour because the balance of the side lights to the cyc is so critical," said Philip. "You've got to pull focus on to single objects on the stage and some objects are only 30cm high or less. And it's against the blonde wood floor and the cyc so the focus is really quite critical and they're doing some fast bump-ins. The crew that are touring it are fantastic and really dedicated but it's almost impossible to do and I'm sure they've had a few headaches."

● Cat Forcer

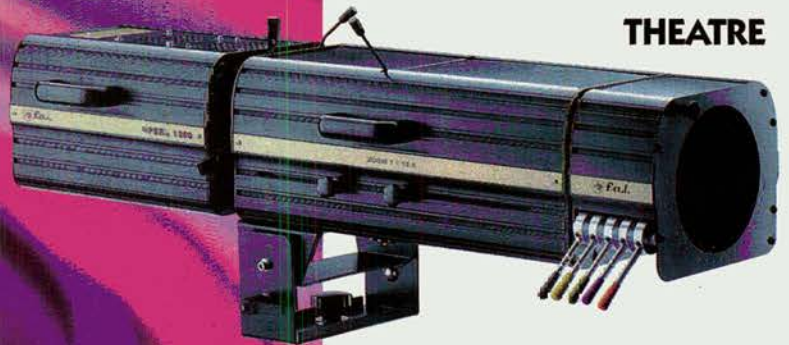
Crew
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LX *David Green* Production Head Mechanist
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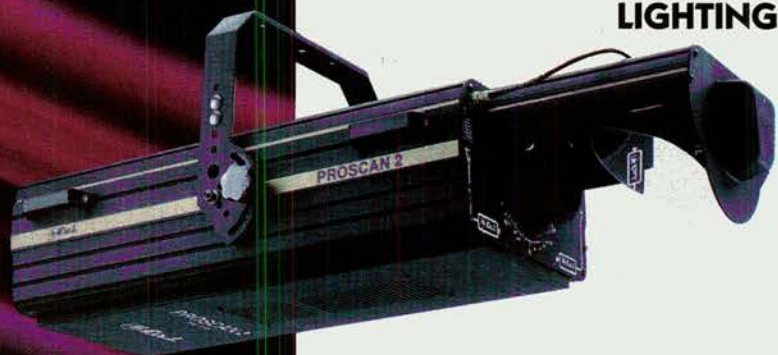
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Hilite 23 150W discharge spot using long life, low energy MBI-T lamp. Integral ballast and ignitor. 26° beam spread, hard edged beam for gobo projection, ideal for display. \$296 ex tax.

Quartet 25 650W 25° beam angle profile using T26 lamp. Peak/flat beam distribution adjustment, toggle action handle for soft/hard focus setting. Ideal for theatre, school, display. \$296 ex tax.

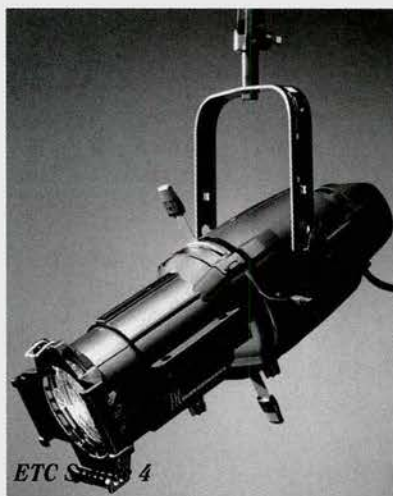
Leko 50 1000W ellipsoidal using CP77 lamp. High output, fast focusing; ideal for touring, exhibitions and stage. Lightweight and rugged. Also available as 15°, 20°, 30°, 40°. \$460 ex tax.

COEMAR

Coemar De Sisti Australia Pty Ltd (03) 9467 8666.

Centro 25° beam spread. Wattage: 300/500W GY9.5. 3m-12m working distance. Complete with framing shutters. Options include: iris, deflecting mirror, gobo holder, coloured glass.

\$355 ex tax.



ETC

Jands Electronics (02) 516 3622

Source 4 50° ETC's 575W ellipsoidal spotlights with an output comparable with 1200W units. Uses less energy and produces less heat. Also available in 36°, 26° and 19° at same price.

\$811.50 ex tax.

Source 4 10° same as above.

\$1221 ex tax.

Source 4 5° same as above.

\$1385 ex tax.

F.A.L.

ELSTA (02) 5682100

INSE HMI 575-N HMI 575 lamp, 4 colour filter holders, beam divergence is 14°, fan cooled, iris control, extruded aluminium finish. \$1,229 ex tax.

PF036 T27 650W lamp, steel shutter blades, extruded aluminium finish, beam spread 16-30°.

\$420 ex tax.

PF037 CP70 1000W lamp, steel shutter blades, beam spread 22-40°, high efficiency quartz reflector.

\$537 ex tax.

ZOOM PROFILE SPOTS

ALTMAN

Chameleon Touring Systems (02) 310 5222

Shakespeare 15-35 Zoom features as per the Shakespeare fixed beam angle range but with 15°-35° zoom lens system. Output comparable to 1200W units.

\$1000.00 ex tax.

Shakespeare 35-55 Zoom, as above with 30°-55° zoom lens systems. Output comparable to 1200W units.

\$1229.00 ex tax.

PROLITE

Various distributors, phone Prolite (076) 327312

PR5-2PM 500/650W T25/27 lamp, 16/28 beam angle, weight 6Kg. Australian made. 26/40 wide angle unit is same price.

\$348.00 ex tax.

PR10-2PM 1000/1200W T19/29 lamp, 16/28 beam angle, weight 7.8Kg. Australian made. 26/40 wide angle unit is same price.

\$553.00 ex tax.

PR22-2PM 2000W CP43/72 lamp, 16/28 beam angle, weight 19Kg. Australian made. 26/40 wide angle unit is same price.

\$756.00 ex tax.

CCT

Rosco Australia (02) 9906 6262

Minuette 650W, 21-36°/17-36°/30-48° compact unit accepts T26 lamp, weighs 4Kg. \$400.00 ex tax.

Silhouette Turbo 1K/1.2K T29 lamp, 11-26°/15-32°/28-58° rotatable shutter set, easy lamp change, rugged aluminium extrusion and front reflector for added luminance. \$850.00 ex tax.

Silhouette 2K/2.5K, 28-58°/15-32°/11-26° rotatable shutters, two position yoke, exter-



nal 'peak' and 'flat' adjustment.
\$1350.00 ex tax.

Freedom HX600W axial lamp, new design 15-32°/28-58° fully rotatable lens, accessories include plug-in DMX dimmer, white beam for gobo projection.
\$850.00 ex tax.

STRAND LIGHTING

Bytecraft (03) 9587 2555

Quartet 22/40 economical zoom profile with 22° to 40° beam angle. Uses T26 650W lamp. Ideal for theatres, schools, museums and display lighting.
\$377 ex tax.

Prelude professional specification 650W spot available as 16° to 30° or 28° to 40° variable beam. Uses T26 lamp. Suitable for small to medium venues.
\$498 ex tax.

Cantata 18/32 1200W zoom with 18° to 32° variable beam angle (also available with 11° to 26° and 26° to 44°). Popular range for theatre, concert hall and touring. Uses T29 or T19 1K lamp.
\$867 ex tax.

Alto 2000/2500W high specification spotlights for larger venues. Available as narrow 8° to 16°, medium 14° to 32° and wide 20° to 38° beam angle. Uses CP92 or CP91 lamps.
\$1750 ex tax.



Selecon Arena Zoom 2000

COEMAR

Coemar De Sisti Australia Pty Ltd (03) 9467 8666.

Accento available in two beam spreads - 20°/35° and 16°/30°. Wattage: 500/650W GX9.5. 3m-12m working distance. Complete with framing shutters and colour frame. Options:

motorised colour wheel, iris, gobo holder, UV glass.
\$500 ex tax.

TAS

Coemar De Sisti Australia Pty Ltd (03) 9467 8666.

Profile 22/40 22°/40° beam spread. Wattage: 650/1K/1.2K GX9.5. 4m-11m working distance. Complete with framing shutters and colour frame. Options: iris, gobo holder, safety wire guard.
\$933 ex tax.

Profile 15/28 15°/28° beam spread. Wattage: 650/1K/1.2K GX9.5. 6m-17m working distance. Complete with framing shutters and colour frame. Options: iris, gobo holder, safety wire guard.
\$952 ex tax.

SELECON

Refer to distributors in their advert

Acclaim Zoom short throw 650W ellipsoid, powerful 18-34° = 70,100 CD, 24-44° = 78,600 CD supplied c/w T/27 650W 240v lamp, microswitch safety cutout and DIN Std 125mm colourframe.
\$465 ex tax.

Zoomspot 1200 FOH standard 1200W ellipsoid, powerful 18-34° = 205,000 CD, 24-40° = 160,000 CD and 8-16° = 310,000 CD supplied c/w T/29 1200W 240v lamp, microswitch safety cutout and DIN Std 185mm colourframe.
\$895 ex tax.

Condensor 1200 1200W 4 and 5 lens Condensors with projector like optics, FOH 9-21° = 347,900 CD and 12-28° = 279,000 CD, onstage 15-31° = 208,250 CD and super wide 28-52° = 67,500 CD c/w T/29 240v lamp.
\$990 - \$1020 ex tax.

Arena Zoom Entech award winning high performance 2000W-2500W FOH ellipsoids, longthrow 9-18° = 661,000, medium throw 14-32° = 509,600 CD and 20-37° = 298,900 CD supplied c/w CP43 2000W or CP91 2500W 240v lamp.
\$1580-1770 ex tax

F.A.L.

ELSTA (02) 5682100

PF1245 theatre lamp, T27 650W lamp, zoom from 20-40°, steel shutter blades, high efficiency quartz aluminium reflector, optional gobo holder, throw 2.5 x 10m.
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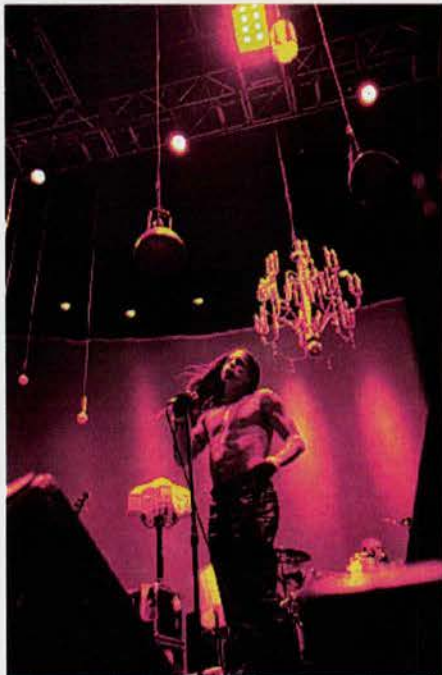
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Red Hot Chili Peppers

The Red Hot Chili Peppers performed a blistering and wild set at Sydney Entertainment Centre, sending the crowd into a frenzy right from the first note.

Even the most uneducated punter would not have noticed the lighting - or lack of it. In a brave move, lighting designer Spike Brant stripped the rig of zillions of par cans and effects, supplementing the look with a number of household lights, both suspended and on stands. It came as no surprise to learn that Spike was co-designer on the Pearl Jam tour last year, the one where candles became a major light source much to the annoyance of the photographers in the pit.



Photos: Marty Williams

had to be cancelled. When the tour resumed, some of the set pieces were retained and Spike designed a new rig but the band hated that too. Back to the drawing board, and Spike came up with a totally new concept.

"The concept of using the household lamps is all Grier's idea (Grier designed the projection work)," said Spike. "I just took his idea and turned it into a lighting rig. I knew I didn't want any par cans so I've just got six Icon, six Washlights at the front of the stage and some VL5's as well as some Molefays."

Items like the chandelier, which dominated the stage, tend to be picked up locally. Also on the stage is a television and cut out figures of Andy Warhol and Magik Johnson. The background is a large white cyc for the projection work and play with shadows.

"It's always a



Spike Brant, LD.

little different as the lights are randomly hung every time," said Spike. "There's tons of shit which hangs down - six scoop lights, two pool table lights, bare bulbs, two different household lights hanging down, and the chandelier comes way down."

I suggested that they could do with a few bedside lamps. Spike replied that there were some. The LSD strobes were bought over by the band as well as the curved traveller track but most of the gear came from Jands and Bytecraft. Control was by the Icon console.

"The music is very upbeat so there're a lot of chases," said Spike. "But there's not much movement as far as panning and tilting. I try to make it as un-rock as possible."

(continued on next page)



Grier Govorko

Spike was raised in Arizona, USA, where he started doing the lights and sound in his local church because he didn't want to be in the choir. It must have been a pretty impressive church because it had a Meyer PA and a Yamaha console. Although interested in sound, Spike got a job in lighting as there were no sound positions available. Eventually he ended up working with LSD in 1987 as 'the sixth man on a five man crew' for Bon Jovi. Since then Spike has designed for Pearl Jam, Primus and operated Seal for Roy Bennett. The Red Hot Chili Peppers is Spike's most major tour to date.

Originally, when the tour started in Europe in October 1995, the lighting was designed by Roy Bennett but the band decided they didn't like it. The tour continued with the Roy Bennett design to the States where one of the band broke his wrist and the tour



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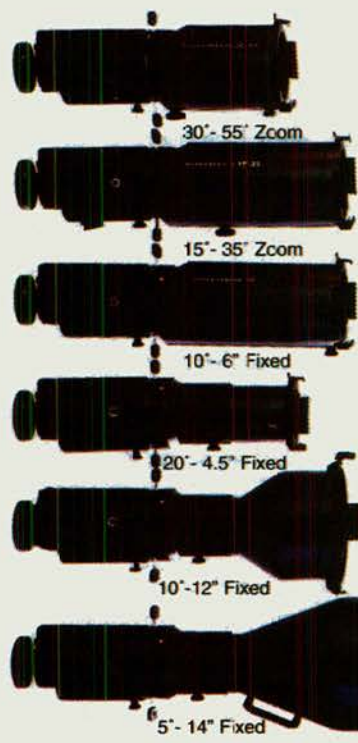
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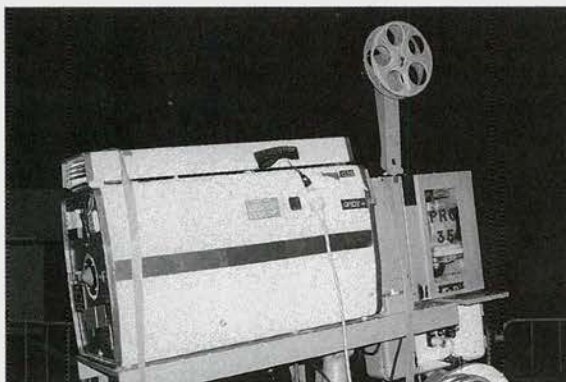
Red Hot Chili Peppers continued

When the tour finishes in August Spike will probably return to gaffing for television, which he claims is more lucrative. He does rock shows for fun.

Grier Govorko was born in New Zealand, growing up in Auckland before moving to Sydney. In 1988 he moved to London and three years later to Los Angeles. For a long time he worked mainly as a sound engineer but also a photographer and part-time art director in video.

Grier has toured with many bands - The Pogues, Motorhead, Whitesnake, Aerosmith, Poison - as a sound engineer. Although the Red Hot Chili Peppers is the first tour he has done the projection for, he has been working on other videos in LA in particular k.d.lang's last video.

"My brief is very open as I've worked with these guys a long time," said Grier. "It's more on a personal level than strictly business. The concept of the show is very simple, it has a basis in film noir with a lot of shadow play and black and white. Simple moving shadows. The whole look of it is that they appear



The old 6K 35mm projector

to be playing in a living room. It's very low-tech, nothing fancy, nothing exploding."

The projector which Grier uses is a 6K 35mm film projector made by a company in Omaha. Although it's pretty old, Grier likes its simplicity and reliability. It can project a 70ft wide by 30ft deep image which is big for a film projector.

"I can get the intensity of light I want and the image size," said Graer. "So far it's never broken down and it travels everywhere with us."

The most notable piece of projection was where black and white footage of people swimming, shot from under the water, sent gigantic forms shimmering across the cyc. Grier believes that more of this kind of work will be used in touring.

"I think people are moving away from that kind of rock extravaganza," he said. "I think everyone's a bit tired of that."

● Cat Forcer

Tour Personnel

US Crew

Tour Manager Tony Selinger **Production Manager** Stephen Nimmer **FOH Engineer** Dave Rat **Monitor Engineer** Tommy Rat **Lighting Designer** Spike Brant **Production, Windows, Sets** Grier Govorko **Sound Tech** Mark Smith **Production Assistant** Michelle Perkol

Australian Crew

Tour Manager Jon Pope **Production Manager** Wayne Jarvis **Sound** Bruce Thomas, Paul Gould, David Richardson **Lighting** Nicky Koumos, Matt Burden, Jon Delahunty.

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PF1255 CP70 1000W lamp (or CP24 1000W, CP67 650W, CP23 650W), zoom from 20-40°, steel shutter blades, high efficiency quartz aluminium reflector, throw 2.5 x 12.5m. \$661 ex tax.

PC SPOTS

PROLITE

Various distributors, phone Prolite (076) 327312

PR5-PC 500/650W T25/27 lamp, 10/60 degree beam, weight 3.7Kg. Australian made. \$196.00 ex tax.

PR12-PC 1000/1200W T19/29 lamp, 10/60 degree beam, weight 6.8Kg. Australian made. \$380.00 ex tax.

PR22-PC 2000W CP43/72 lamp, 10/60 degree beam, weight 10.5Kg. Australian made. \$475.00 ex tax.

CCT

Rosco Australia (02) 9906 6262

Minuette 650W T26 lamp, variable angle 10°-59°, compact unit weighs 2.5Kg, barndoors as accessories. The Minuette is the original pebble convex light. \$200.00 ex tax.

Starlette 1K/1.2K PC gives a beam which is soft edged with little loss of light outside main beam area. Useful for short throw front of house position. \$510.00 ex tax.

Starlette 2K/2.5K PC with similar characteristics to Starlette 1K. \$920.00 ex tax.

COEMAR

Coemar De Sisti Australia Pty Ltd (03) 9467 8666.

Corto 8° to 50° beam spread. Wattage: 300/500W GY9.5. 3m-10m working distance. Complete with colour frame. Options include: barndoors, motorised colour wheel, safety wire guard.

From \$207 ex tax.

Solar 300/500/650 9.5° to 38° beam spread. Wattage: 300/500/650W GY9.5. 4m-10m working distance. Complete with colour frame. Options include: barndoors, motorised colour wheel, safety wire guard. Also available in 650/1K version.

From \$220 ex tax.

Passo 650/1k/1.2K 5.5° to 58° beam spread. Wattage: 650W/1K/1.2K GX9.5. 5m - 18m working distance. Complete with

colour frame. Options include: barndoors, motorised colour wheel, safety wire guard. From \$320 ex tax.

Passo 2K 5° to 60° beam spread. Wattage: 2K GY16. 5m-25m working distance. Complete with colour frame. Options include: barndoors, motorised colour wheel, safety wire guard. From \$377 ex tax.

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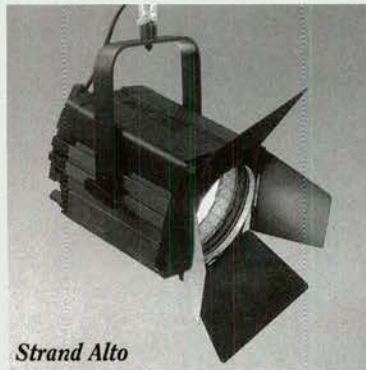
Spot 300/500 PC Eco 8° to 50° beam spread.

Wattage: 300/500W GY9.5. 3m-10m working distance. Complete with colour frame. Options include: fixed and rotating.

From \$215 ex tax.

Spot 650/1K/1.2K PC Eco 7° to 60° beam spread. Wattage: 650W/1K/1.2K GX9.5. 4m-16m working distance. Complete with colour frame. Options include: fixed and rotating. From \$246 ex tax.

Spot 650/1K/1.2K PC 7° to 60° beam spread. Wattage: 650W/1K/1.2K GX9.5. 4m-16m working distance. Complete with colour frame. Options include: fixed and rotating, safety wire guard. From \$327 ex tax.



Strand Alto

SELECON

Refer to distributors in their advert

Acclaim short throw 110m 650W PC, controlled beam 4-64° = 142,000 CD supplied c/w T/27 650W 240v lamp, microswitch safety cutout and DIN std 125mm colourframe. \$276 ex tax.

Compact 1200 PC theatre standard 6" lensed PC adjustable for 1000-1200W lamps, soft controlled range of 7-50° = 306,000 CD, supplied c/w T/29 240v lamp, microswitch safety cutout.

\$460 ex tax.

PC1200 7" lensed PC adjustable for 1000-1200W lamps, lightly diffused crisp beam, wide range of 4-62° = 342,000 CD supplied c/w T/29 240v lamp, microswitch safety cutout.

\$572 ex tax.

Arena PC theatre standard 8" lensed PC for 2000-2500W lamps, soft controlled range 4-60° = 546,350 CD supplied c/w CP43 2000W or CP91 2500W 240v lamp, microswitch safety cutout.

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CHOOSING COLOUR

2nd part to a guide for students of theatre lighting

POSITIONING OF COLOUR

The brain bases most of what it knows on images when we see, so we can use the conventions and knowledge of light which we learn as we grow up to help us create the geography, time and emotion of our stage play.

For instance, atmospheric conditions mean that landscape further away from the viewer shifts towards blue in colour. (Because blue light focuses slightly forward in our eyes, blue coloured objects seem further away).

Thus by judicious use of blue in the upstage areas of our stage we can increase the perspective of the scene.

A cool backlight, directed onto an actor or group, in front of a cyclorama coloured with reds and ambers will tend to place the actors into the landscape, with the effect of dimensionality and intimacy increased.

Colours can be seen to have "weight" - blues and greens will sit heavily on top of reds and ambers on a cyclorama or vertical plane of scenery. Similarly, more saturated colours imply more "weight" when seen above the pastels.

THE LIGHTING COLOUR PALETTE

The lighting palette is not restricted to what you find in a swatch book or gel guide. By mixing gels either subtractively or additively you can achieve limitless colour combinations to suit your requirements.

Additive Mixing - two or more lights, with different gels are mixed by altering their dimmer settings. Three spotlights with Red, Blue and Green filters will mix to give White light.

Subtractive Mixing - Two or more sheets of gel are placed in one gel frame and the colours are subtracted from white to give a mixed colour. Light Amber and a Lavender would give a warmed steel colour.

Multiple Mixing - Two or more sheets of gel are placed into the same colour frame but cut so that each takes up only a part of the lens. This gives single lantern additive mixing and is particularly useful when breakup gobos or patterns are used as it gives two colour edges to the projected image.

PINKS

The pinks are a useful group of stage colours, offering flattering warm tones to the skin and evening softness to daylight motivational lights. Pastels are good for acting area lighting, and particularly for cross light and front

light into the main acting areas. The saturated pinks are useful for adding to blue cyclorama lighting as dramatic sunsets and for musicals and pantomime as block washes onto the stage without the need to naturalistically light actors' faces.

AMBERS

The ambers provide a useful group of colours for acting area lighting and for motivational lighting from both the sun and from interior light sources. The saturated ambers are still useful as reflected or bounced fill light, but you should be careful not to contrast them too strongly with cool colours such as steels or blues. The pastels are kind to human skin tones and the high transmission of light makes them suitable for use on less bright lanterns.

REDS

The red group is often used in productions, but rarely with success. All the red group are saturated and create quite extreme effects when projected onto the stage. They can be useful in fire effects or in musical work, but the strength of the colour must be relieved with other more subtle lighting, perhaps in the acting light, if the audience is to gain a balanced picture of the production. Deep reds do not work well on human skin tones or on many costume materials.

GREENS

The greens can be used sparingly to give area washes into which you overlay light pastel ambers and open white. They are extremely un-



Tap Dogs, lighting designer David Murray

flattering to skin tones, but if used carefully (perhaps with ambers in the same frame) they can give a useful fill light in outdoor or sea scenes. They are not successful as cyclorama wash colour, but can lift shadow areas in moonlight scenes. Do not rely upon the greens for acting area lighting.

LAVENDERS

The lavenders are useful because they sit on the fence between warm and cool colours. They can appear complimentary to either warm ambers and pinks or steel blues and light greens. The pastel lavenders are only a short tint away from white and are very useful to the designer in achieving clean highlight and accent onto actors over the whole stage. Sidelight in lavender can be an exciting modelling addition to open white front light.

(continued on page 74)



Simpatico, lighting design by Stephen Wickham

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CHOOSING COLOUR

BLUES

The blue colour group offers a range of colour effects from cool winter daylight motivational lighting to deep "moonlight". The lazy saturated blues are great in backlights and on cycloramas whilst the pastels give a high-tech edge to the light. Back and sidelight at a low level can sculpt the human form and face to good effect and a fill light in open white or lavender from the front will pull the image back to a plausible realism. Blues absorb a lot of the light going into the filter so make sure that a high wattage lantern is used such as a Parcan or 1Kw Fresnel.

OTHERS

As well as diffusion, which is available in white and coloured versions now, enabling the designer to soften and widen the output of the lantern to which it is applied (you can add any colour as well), there are other colours that do not fit into the categories above.

Medium Yellow, a saturated but bright yellow light which is unflattering on faces but can edge light scenery well.

Canary, a deep amber devoid of red or blues which can be used to scrape across foliage to fill the shadows of a more neutral colour.

Clear, in the past a joke gel to send the trainee on errands to look for, but now more seriously useful as an open-white for colour scrollers or for painting for effect.

GETTING CONTROL OF COLOUR

The process of selecting colours should not be separate from the ongoing process of designing the whole lighting scheme for the production.

Every lighting decision should be taken with its implications on the colour of the show. If you think that the show should be highly realistic, for instance, then this may preclude the use of highly saturated colours. If the equipment you are going to use has low wattage lamps you may

wish to steer clear of the ambers which might appear muddy with such lamps.

Read the play - at least once, noting in the margins or in your notebook a colour which you associate with each scene, mood, location or event in the script. This is particularly valid when lighting performances with music.

Research - most importantly, use your eyes when going about your daily life - test your ideas in the world around you. Cut out pictures and source material to illustrate your colour and lighting ideas. Find out what equipment you will be using.

Choose your colours - using your swatch book, choose the family you want to use, and then narrow the choice. Test your colour ideas by projecting light through the gel from the swatchbook onto a surface or your skin. Hold the gel swatch between a desk lamp and the subject, or use sunlight, but do not just hold it over your eye - this will give you a false idea of how the colour will affect your subjects on stage.

Discuss with the team - after you have refined your ideas, and chosen which colours you want to include in your palette, discuss these with your director and set and costume designers. Take along the swatchbook, and encourage them to see how the colour falls onto their skin or any materials the designer may have brought. If there is a set model, try to project onto this - a 35mm slide projector can be very useful in this case.

Build into the design - select which stage lights the colour will be used in, and analyse how the beams of coloured light will interact with each other and the subject (the actors and scenery). If you are drawing a plan, write the colour number from the swatchbook inside the symbol for the stage light. You should keep a schedule of lights as you add them to the plan.

One column will have the colour needed in that lantern. This will help you develop your colour call to tell you how much of each colour you will need to get and what sizes it should be cut into.

In the theatre - cut the colour from the sheets or rolls into the sizes necessary for the filter frames from the lanterns. Keep your swatchbook handy to check the actual colour against the original choice. You can measure the frames and then cut to size, or make up a board with the frame sizes marked to help you cut the gel with a craft knife. Do not cut it on the stage floor, or on a rough concrete surface as the filter will become scratched. Mark the colour number and lantern type on the cut sheet of gel with a chinagraph pencil, to help identify which filter goes into which lamp, and group cut gels together according to their destination (such as 'cyclorama', 'Number 1 Bar'). Keep the edge of the colour sheet with the printed number on uncut until last so that you can tell exactly which colour it is when stored. Keep gel stored in an organised manner, according to number, so that you can get more quickly when you need it. And keep a swatchbook close at hand should you need to check or compare colours.

Give yourself time in the theatre to experiment with the colour, to see what happens as you mix the beams of light from various lanterns with the dimmers. Look at the effect and test it to see if it is what you had envisaged. If not, do not worry about changing your mind after you have seen it. Go back to the swatchbook and enjoy choosing an alternative - remember just how important colour can be. Make sure that you have clear ideas of what you want so that contingency plans, should the effect not work first time, can be put in place.

★ Taken from the *Rosco Choosing Colour brochure* written by David Taylor

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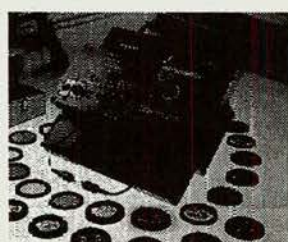
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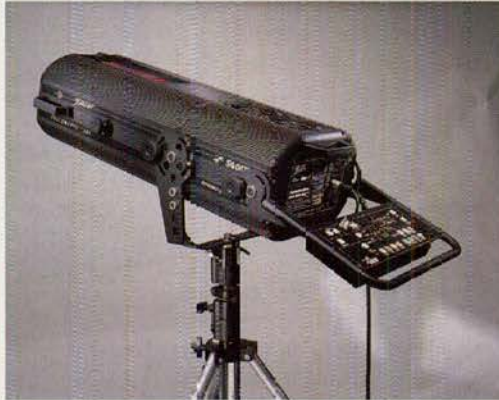
The Tracer from Sagitter

Sagitter, the Italian manufacturers of lighting equipment, have released the Tracer, a high luminosity, electronically controlled followspot with a four lens system.

Control of the various lenses is simplified by a knob allowing extra lenses to be put into operation even during use. The difference in focal length from 300mm to 207mm is compensated by electronic focussing directly controlled from the console. The control console takes its power supply directly from the projector.

Available in two versions, with MSR 1200W G22 or HMI 1200W/GS lamp, the Tracer can project 24 colours and 24 two-colour bands. Sagitter claim the motor-operated iris is absolutely noiseless. Other features include mechanical dimming 0-100%, strobe effect, and colour disc rotation effect.

The Tracer function, from which the followspot receives its name, simplifies operation. The Tracer can be controlled from its own digital console which can provide synchronised control of an indefinite number of other projectors, for simultaneous colour changes, shutter opening and so on. The Tracer



is able to accept DMX512 control signals from a lighting desk and thus form part of a larger scale lighting program.

The Tracer's Mixed Control system makes it possible to control some parameters from the lighting desk and others from the console of each individual projector. For example, colour, colour correction and dimmer functions can be controlled from the lighting desk while other functions such as the iris and focusing can be better controlled by the operator.

For further info call: Sagitter +39 35-351777.

Bits

Universal Lighting & Audio (07 5532 9922) report the following:

- The **Hire Hutt** on the NSW coast have added 4 x Abstract Futurescan 2 CEs and a Futurescan controller to their permanent hire department.
- **Lumentech**, recently formed in Brisbane, purchased 2 x Le Maitre G300 Haze machines.

More sales for **Selecon (09 3601718)**:

- **Sound Advice** of Canberra have supplied the technical staff of Parliament House's Great Hall with 1200W 9-21° and 650W 18-34° Condensor profiles.
- **Active Lighting** report the long term hire of a swag of Selecon gear to Channel 9 in Melbourne. This one year hire includes Acclaim 650W Fresnels, SF1200 7 inch Fresnels and ZS1200 1200W Ellipsoidal Profiles.
- **Nova Productions** of Canberra now have two new Selecon Performer MSR1200 long throw followspots available for hire.

From **LSC (03 9561 5255)**:

- **Laser Vision** have purchased 8 LSC Multisplit and 4 DMX Splits for 'the world's largest laser installation' in Korea.




AGENTS FOR:



Panscan 4

- HMI 1200 Lamp
- 2 x 10 Position Colour Wheels with Bi-Colours
- 10 x Fixed Gobos on Interchangeable Wheels
- 5 x Interchangeable Rotating Gobos
- 4 x Rotating Prisms
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- Super Fast Iris and Remote Focus
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- High or Low Resolution DMX512



Iris

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- HMI 575 with Blackout Shutter or Halogen Lamp
- Sound Activation or Slave Mode

DJ Series

- Small, Inexpensive Effects Lights
- Sound Activation or Slave Mode
- High Power Halogen Lamps

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LX MASTER CLASS

The Broadway Lighting Master Class will run its annual four day seminar in New York from October 10th - 13th at John Jay College. Jules Fisher is the creative consultant and leading industry professionals involved include: Abe Feder, John Gleason, Gil Wechsler, Roger Morgan, Peggy Eisenhauer, Danny Franks, Wendall Harrington, Marc Weiss, Beverly Emmons, Bran Ferren, Ted Mather and Steve Cochrane.

The cost is \$595 but if you register before June 30th you'll receive a \$50 discount. In addition to the seminar, there will also be representatives from a number of manufacturers demonstrating their newest products. For further information call: Kelly Sonnenfeld +1 212-787-0389.

Theatrelight Upgrade

Theatrelight Scenemaster has now been upgraded with a colour display and also the ability to record fade time on the up and down of scenes. The larger console, Cuemaster, has also got colour VGA output.

For further info call: Lightmoves Technologies (02) 560 0000.

READER SERVICE NUMBER 501



QCommander

The QCommander automated lighting control system from LightProcessor is a multi-function console for the widest range of entertainment lighting applications, designed to control moving lights, effects projectors, colour scrollers, dimmers and other DMX devices.

All functions are menu driven from the LCD display and the surrounding 'softkeys'. Each of the 256 DMX channels may be set up as a standard dimmer on an LTP or HTP basis, or as part of an automated lighting fixture or



chase sequence. Programming of moving lights is done by push-button selection of each fixture attribute. Three different moving light types may be installed at any one time, the personalities being uploaded from a PCMCIA memory card.

The card slot allows the downloading of the entire memory contents for safe storage, show duplication or remote programming. The QCommander operating system software is stored internally on a flash ROM and may be updated through the card slot.

The QCommander is fitted with MIDI show control and an RS232 port.

For further info call: LightProcessor 0011 44 181 575 8828.

BLACK BOX DMX TOOLS

Lightmoves Technologies of NSW have put together a range of DMX512 tools, interfaces and hardware solutions and called them 'Black Box DMX Solutions'.

They include a **DMX Tester**, which is described as a must have fashion apparel for the well dressed technician, and a **DMX Terminator** with indicator. There is a **DMX to Audio Encoder/Decoder** which can record your cues in real time on your favourite lighting desk with the encoder in line with the DMX system and an audio recording device. Then re-cue and take your desk off to another site. The decoder converts the audio signal to DMX and transmits it down the line to your entire DMX system. **DMX to Analogue Converters** from 24 to 64 channels are available.

The **DMX Dongle** receives and transmits DMX from a PC. It is supplied with a software library that allows you to set up a lighting rig and visually display dimmer output levels. Programming in C allows customisation and further development of this facility.

The **Grand Master** is a PC based virtual lighting control solution operating under Windows 95 in conjunction with the DMX Dongle, offering DMX output, DMX input snapshot, 120 control channels, dimmer patch, manual preset, MIDI remote, manual presets and timed cross-fades.

The **DMX Inject** single line intelligent DMX input/output plates with opto-isolated buffering. Allows one DMX cable line to be used as an input or output with intelligent function selectively and face plate indication.

DMX Port is a dual output port for DMX installations. Each of the two outlets is individually opto-isolated. It can be used on two separate DMX rings or with an internal jumper as two independent outlets on one ring. **Micro-Scope** is a small, hand held DMX testing and analysis tool that also works as a Riggers remote and Cable Tester.

For further info call: Lightmoves Technologies (02) 560 0000.

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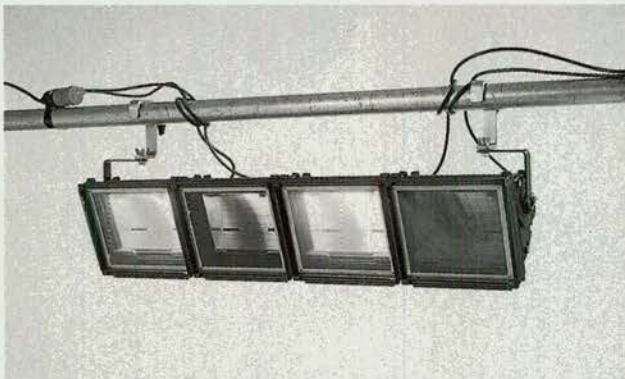
LIGHTING & STAGING

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Cyc and Flood luminaires from Selecon

Selecon have created new Cyc and Flood luminaires to join their Acclaim 500/650W range. The luminaires were designed using reflector systems optimised on Selecon's optical modelling software. Selecon claim that the Acclaim Cyc will evenly light a 5m high cyclorama or back cloth to 1000 lux from a distance of 1.75m positioned at 2.0m centres. The flood has a 90° beam angle and is fitted with four barn doors.



Selecon Acclaim Cyc 4

The luminaires utilise the latest injection moulded glass fitted plastic technology and aluminium extrusions.

Multiple battens of either Cyc or Flood units are made up by simply assembling together the desired number of the appropriate luminaires onto tie rods. A hinged safety glass activates microswitches on the phase and neutral of the mains supply, effectively isolate the luminaires for relamping. The range complies with appropriate European safety standards and is therefore CE marked.

The Acclaim Cyc and Flood range is available now from the Selecon world wide distributor network or contact Selecon, fax 64 9 3601719 or E Mail selecon@selecon.co.nz.



Selecon Acclaim Flood

READER SERVICE NUMBER 503

ABSTRACT GLADIATOR CED

The Abstract Gladiator CED is another product from the new wave of CE range of Abstract lighting effects.

Boasting 6000 hours of lamp life, the Ab-

stract Gladiator CED projects high powered beams in twelve different colours (eleven plus white) through eleven gobo patterns. Abstract claim that the high quality optics ensure pure clarity when the beams are deflected off the Gladiator's 40rpm barrel, which rotates and elevates through 50 degrees to create an ariel effect. Lamp type is a GE 150W 4000K Arc Discharge.

The Abstract Gladiator is controlled via DMX512 or from its own internal memory of pre-programmes. As with all other lights in the CE range it has the capability to produce light shows without an external controller.

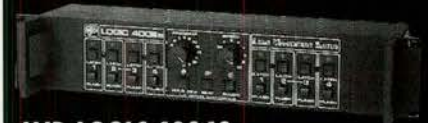
For further info call: Universal Lighting & Audio (07) 5529 0688.

READER SERVICE NUMBER 504



NJLD LOGIC 8000s Dimmable Computer Chaser

- 4 channels • 10 amps per channel • 40 amp total load • 24 programs • Individual channel dimming • Foreground • Background • Level preset • Sound activated



NJLD LOGIC 4004S Light Management System

- 4 channel chaser & 4 channel switch panel • 5 amps per channel • 24 programs • Latch/flash buttons • Sound activated • Ideal for small installations and mobile DJ's



NJLD LOGIC TS10R Programmable Touch Panel

- 10 channels • 5 amps per channel • 10 IEC outputs • Latch/flash buttons • 64 step program • or. can run in sequence mode



NJLD LOGIC 512 Touch Panel

- 12 channels • 5 amps per channel • 40 amp total load • Latch/Flash • Master/Slave feature.

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- Single channel 2400 watt dimmer with a built in variable speed oscillator • Ideal for stage lighting and shop window displays.



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Photo: John Stanton

Alanis Morissette Rocks into Town

Riding on a wave of popularity at the moment, Canadian songstress Alanis Morissette stormed into town for three sold out shows - two at the Enmore Theatre and another at the Hordern Pavilion.

The tour started last November in the States, with one truck, playing 2-3000 seater theatres. The lighting, designed by Andy Proudfoot, was just a front truss and rear truss.

"The front truss was just generic lighting," said Andy. "I find front lighting a necessary evil. I like to be able to see the lights so the rear truss trimmed low and I had to make it look really interesting on a limited budget. I had the light company in the States construct aluminium triangular shapes, 8ft long and 3ft tall with a slope. Two were the same size and one was slightly more of an equilateral shape than a triangle. I suspended two from the back truss and the other was rigged from the top in the middle. That allowed me, with bars of ACLs hung at angles, a really asymmetrical look which I like. It's difficult to make something new out of a regular two truss system. It worked well."

On that first part of the tour, Andy also took out four Intellabeams which were placed around the rig to give a depth of field on the back truss. Later in the tour Andy decided that at 700 watts, the Intellabeams did not have the power for slightly bigger venues so

he swapped to six Cyberlights. He also added some cans in a fan shape at chest height on the stage at the back.

"The Cyberlights worked really great for me," said Andy. "I had quite a sharp learning curve with them especially as we had no real pre-production time but all the people at High End have been very helpful. Obviously they were interested in Alanis, being such a high profile act, using their product. The versatility of the Cyberlight is great, it makes more sense to me to take one Cyberlight on the road rather than a VL6 and a VL5 because you get the best of both worlds. Vari*lite did offer us some gear at the start of the tour but I decided to go with High End and I don't regret it. Neither does Alanis who thinks they look great."

For Australia, Andy took that design and reinterpreted it, although its pretty true to the original. Andy wasn't perplexed by the Hordern's low ceiling as he had experienced much worse in the States.

"We played a show in Dallas which was held in an old supermarket that had a suspended ceiling," he recalled. "They had obviously taken a big pair of wire cutters and cut a box shape out above the stage. That was much lower than the Hordern."

Andy was also using Colourset colour scrollers although he was used to the Wybron ColourRam units.

"You can put a lot of atmosphere on the stage just by taking everything out and leaving them up," he said. "The rest of the stuff is just cans, ACL's and lekos. I'm a big fan of the ETC Source 4's in the States. I'm using a Jands Event here for control although I had a Jands ESP11 in the States which I found easier to use than the Event. The Cyberlights are run by an LCD controller and its presets are triggered from my laptop. It's very simple so you can replicate it easily and it's not expensive to do."

• Cat Forcer

Congratulations!

The a/l Australian design team of **Nigel Levings** (lighting), **Roger Kirk** (costumes) and **Brian Thomson** (set design) have won the prestigious American Outer Critics Circle Award for 'Outstanding Design' for the production of *The King & I* currently playing on Broadway. Unfortunately none of them are able to make it to New York to pick up the award so their mutual friend Mark Bramble, a writer, producer and director of plays such as *Barnum*, will do so on their behalf.

The same design team have also been nominated for a Drama Disc Award as well as a Tcny Award.

The hard face of the future

THE ALL NEW FUTURES SCAN II CE/CED

The Abstract Futurescan II CE and CED are the first products in the new wave of high technology, user friendly CE range of Abstract lighting effects.

Housed in an extremely attractive and compact new casing the Futurescan II contains many advanced developments over its predecessor.

Most important of these advances is the use of micro stepping motors for pan and tilt movement and colour change. This gives unrivalled accuracy and smoothness of operation for a unit of its class and cost.

Both the Abstract Futurescan II CE and CED offer eight micro stepped dichroic colours (seven plus white) and eight gobo patterns. The CE uses a highly effective 150W/15V A1-232 lamp, whilst the CED uses a GE 150W 3000K Arc Discharge lamp to give an amazing 8000 hours of lamp life. Both are controllable via full DMX-512 channels.

Futurescan II CE

High Output 150 Watt Lamp
DMX Controlled Full 512 Channels
Fully Micro stepped
Separate Colours/Gobo

Futurescan II CED

4000K 8000 Hours Lamp
DMX Controlled Full 512 Channels
Low Running cost
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Abstract is solely distributed in Australasia by:



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	blue			slash	
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	orange			tunnel	
	magenta			bubbles	
	cyan			stars	

SPECIAL OFFER:
Purchase 4 x Futurescan II CE DMX
for \$4500.00 inc. tax
and receive a 32 ch controller and lamps
absolutely free!





Martin's MAC 1200

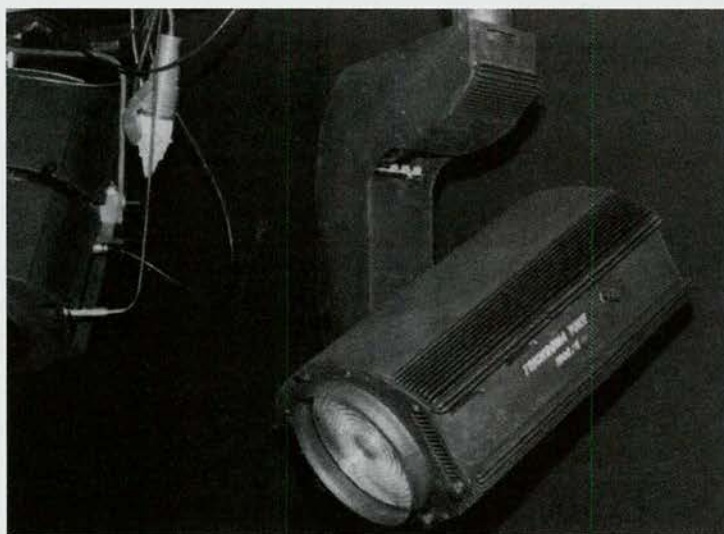
At the recent Rimini show, Martin previewed a colour mixing luminaire with movement from a yoke rather than a mirror. Called the MAC 1200, the spotlight uses Martin's colour mixing system of CMY proportional mixing but also included a separate colour wheel with four interchangeable colour positions plus white.

The standard beam angle of the profile version shown at SIB is 28°, there is frost filter and gobos. Added to that is remote focus and mechanical 0-100% micro stepping dimming.

The lamp is a 1200 MSR which

uses Martin's hot-spot elimination process, as seen with the PAL 1200, to deliver an even field. Martin claim that the MAC 1200 is the most powerful moving head lamp in the industry today.

Rumour is that Martin will be releasing a wash luminaire version in the future.



Bits

Theatreworks (09 227 7015) in WA report the following sales:

● Penrhos College purchased a quantity of Prolite 1.2Kw customised (focus handles on top) profiles for hard to get at FOH positions.

● The Octagon Theatre took delivery of 40 of the new Prolite 2kW fresnels. From **Selecon (09 360 1718)** in New Zealand:

● Greg Hughes of East Coast Lighting supplied a range of Selecon profiles, including Arena 2000w ellipsoids and the new 12-28° and 9-21° condensor 1200', to the new Brisbane School of Music.

● DB Concert Sounds completed the lighting install into the new Woolstore Theatre on Geelong's western beach Woolstore campus, Deakin University. Selecon gear included 24 Arena 2000w wide and medium profiles, 12 Arena 10" high performance fresnels, 12 Enhanced 1200 ellipsoids and 2 MSR1200 Performer followspots.

● The Museum & Art Gallery of the Northern Territory was the first gallery to fit the new Acclaim wall wash display units from Selecon.

projection perfection

We've been finding out alot more about Condensor profiles. Check out this photo. With fewer limitations than ellipsoidals. Selecon Condensor Profiles offer:

- sharp focus across the entire beam range.
- precise beam shaping with hard or soft edge.
- projected images in focus across the stage and scenery (great depth of field).
- fine tune the image focus (soft centre, hard edge etc) to suit your requirements.
- extended pattern and filter life thanks to the lower gate temperature and even light distribution.

Full 1200W output from industry standard lamp.

Robustly engineered luminaires.

The Selecon 1200 Condensor range 9 - 21° • 12 - 28° • 15 - 31° • 28 - 52°.

Try them out, contact your Selecon distributor.



For further information and sample units to test, contact your distributor

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NZ Ltd 26 Putiki Street, Grey Lynn, Auckland. 09 3601718 fax 09 3601719

SELECON



BUYERS GUIDE

a couple of cock-ups and a stern message

The following should have been in last month's Buyers Guide but unfortunately were omitted.

STROBES & STROBE CONTROLLERS

HIGH END SYSTEMS

GUVT (07) 3358 5022

AF 1000 Dataflash high power flash and continuous illumination Xenon fixture, uses up to 3 DMX channels in 7 different modes for control over rate, duration and intensity. \$718.75

AF 1000 Mini Controller controls up to 12 AF 1000 fixtures, has standby, flash, up/down, program, rate, intensity and audio keys, uses DMX512 protocol. \$1001.65.

AF 1000 LCD Controller controls up to 256 AF 1000 fixtures, has LCD, 9 memories, 891 pages (scenes), 1024 programmable presets, simple menu operation. \$5746.00.

AF 1000 Accessories including axial or horizontal reflectors, standard or high powered lamps and coloured domes. P.O.A.

EFFECTS PROJECTORS

ANYTRONICS

GUVT (07) 3358 5022

Superstar Strobe MkII 11 Joule strobe w/- internal oscillator 1-10 fps or external trigger input 3- 20V+ or - . Also available slave only and par 64 pod. \$323.50.

Megastar Strobe MkII 1500W linear tube, fan cooled w/- toughened glass filter, DMX option available. \$944.30.

Death Star Strobe high output version of Megastar strobe. \$1296.30

Anytronics 8 Channel Strobe Chaser auto sensing chaser for 1 to 8 strobes. Sequence or all flash, audio input and speed control. \$331.40.

CONSTELLA

Show Structures (09) 470 4707

Starfire projects 20 individual images of mixed colours and gobos; unique strobe effect; stand alone sound to light activation or up to four units can be linked to synchronise. A1/231 12v 100W lamp. \$651.

Chameleon colour changing moonflower effect. projects 20 laser like beams in full and split colour. A1/231 12v 100W lamp. \$463.

Twin Orbiter two sets of coloured moonflower beams projected off two mirrors which send the beams in all directions providing large coverage. 2 x M28 12v 100W lamps. \$868.

Dome a calm effect ideally suited as a background effect for lounge or chill out areas. Projects hundreds of pencil thin coloured beams in one direction or can be set for larger coverage. \$651.

All prices exclude sales tax.

With no reference to the above distributors, it would make life a lot easier if manufacturers and distributors would take note of future Buyers Guides. It's no good whinging when you've not been included if you've made no effort to keep track of the great Buyers Guide plan. It's not difficult and is the same every month, every year.

To help I've included the yearly plan so if your product matches one of these Buyers Guides, let us know so we can put you on our database. That way you'll receive the appropriate fax, at the appropriate time, to fill out. Easy! Otherwise, get the info in by the 15th.

AUGUST
Lighting Control and Dimmers
SEPTEMBER
Fresnel Spots, Floodlights
OCTOBER
Followspots
NOVEMBER
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MARCH
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MAY
Effects Lighting
JUNE
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30 Jeays St, Bowen Hills, Qld. 4006
Phone: 07 3252 5988 Fax: 07 3252 2411

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New Strand Lighting products for Bytecraft

Strand Lighting had a host of new products on the Bytecraft stand at the recent ENTECH show.

The **Portable Lighting Kits** are a selection of Quartzcolor portable location lights and accessories ranging from 300W to 2000W. They are ideal for ENG, EFP and set piece lighting and come in convenient transportable cases.

The **SuperQuasar 60 Parlight** is a high intensity location Parlight designed in Hollywood, using a 6000 single-ended HMI daylight lamp which Strand claim can give a punch to match an 18K fresnel. A microswitch prevents the lamp operating if the front section is opened. Externally operated quick-release socket allows easy lamp change and secondary lamp support reduces lamp base stress. Supplied with integral igniter and illuminated pushbutton on/off controls, set of four custom-designed 350mm diameter spreader lenses and holders and 7.5m or 15m extension cable to ballast.

The **Bambino 650** has a 130mm diameter lens and is specifically designed for location lighting, rental applications and for tight situations on a crowded set. It may be used with a 650W, 500W and 300W lamp. It has a stirrup fitted with a 16mm female socket and in-line switch. The Bambino 650 is supplied in black with 650W CP89 lamp, 4-leaf rotating barndoor, colour frame and 4m power cable.

The **Bambino/ladi Kit** comprises of two Bambino 650 heads with CP89 650W lamps, two barndoors, two scrim sets (one each of full double, full



Bambino 650

single, half double, half single), and two colour frames. Also there is one ladi Fill head with P2/20 1000W lamp, plus full double scrim and full single scrim as well as three Spartan stands in a kit case.

Electronic Ballasts ranging from 200W to 18000W are now available. Constant power regulated output ensures optimum lamp performance. All models except 200EB are



Portable Lighting Kits

selectable to quiet mode giving modified square wave output to reduce lamp/igniter noise and maintain flicker free operation at 24/25 fps. All models are dimmable to 50%.

For further info call: Bytecraft (03) 9587 2555.

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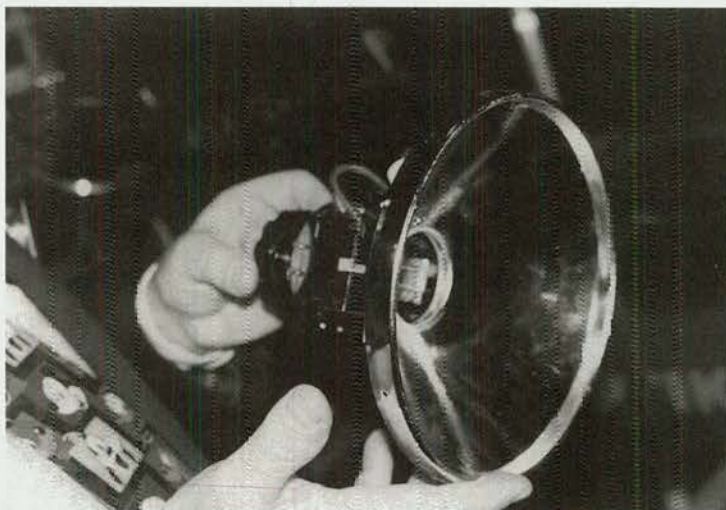
The Par Plus

At Entech, Lightmoves Technologies showed the second prototype model of the Par Plus, the first was shown at LDI. It fits a Par 64 and has an adjustable beam angle with seven positions on it ranging from 6.2° to 23°. Basically it can turn your Par 64 to an ACL - up to a medium flood.

The Par Plus is designed to retrofit into the can so the ceramic goes straight on it and it uses the HX600 or HP600 lamp at 240 volt.

"The great advantage is for people from production companies with rental stock where they have three lamps for every fitting - with this you don't need to do it," said Jonathan Ciddor of Lightmoves. "Changing the beam angle in the rig is done simply with a

couple of clicks. It's taking the Par can back to what it's been in America, a cheap light with a single fitting which plugs in and does the job."



For further info call: Lightmoves Technologies (02) 560 0000.

READER SERVICE NUMBER 506

Bits

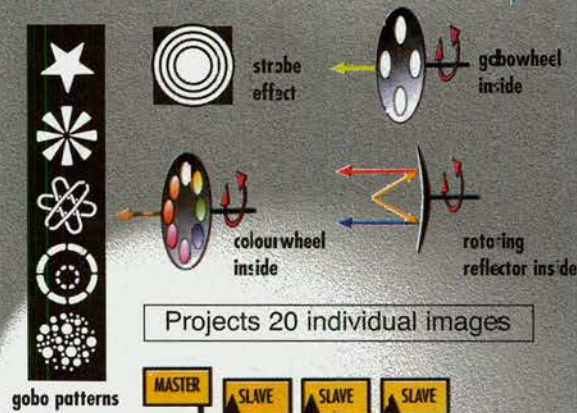
Coemar De Sisti (03 9467 8666) sales:

- **Key Lighting** purchased De Sisti products including Remington 4 Pars, Rembrandt HMI 575 fresnels, Leonardo 2K fresnels.
- **GTV 9 Melbourne** have purchased some De Sisti Leonardo 5K fresnels for their studio.
- **Laser in Qld** have purchased some De Sisti portable lights for the Cairns Convention Centre.
- **TCP (NSW)** have purchased another ShowCAD control system, this time for the Sydney Hilton Discotheque.
- **Creative Lighting and Sound Qld** have taken delivery of a Coemar Nat TM1200 for an outdoor projection system in Queensland. They have also received a custom built (stainless steel) DF-50 machine for a boiling billy effect in a themed installation they are involved in.
- **Preston TAFE** in Melbourne have purchased a MacLUX Pro design software.
- **Clearlight Shows** in Melbourne have purchased Stardraw 2D design software to assist in their production designs.
- A range of Leisure Lighting and TAS effects have been purchased by: **Black Express Light & Sound (NSW)**; **BSS (SA)**; and **Entertainment Warehouse (Vic)**.

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Check the Web for LX Info

The lighting links page is an attempt to maintain a World Wide Web page of useful links to entertainment lighting information as part of the WA Academy of Performing Arts contribution to the industry.

The approximately 200 links now on this page include:

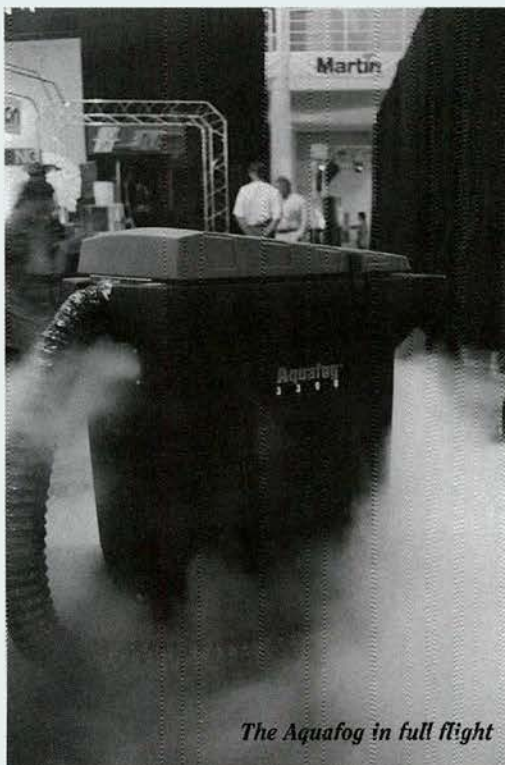
- CAD symbol libraries
- Lighting Company information
- Standard bodies
- Industry Associations
- Theatre, film and television industry pages
- Strange bits which some may find fascinating

You'll find the page at URL <http://www.cowan.edu.au/academy/lighting/lx-list.htm>

The page is maintained by Andy Ciddor for The Kilowatt Company which produces lighting and production software and of course Web Pages.

For further info call: Andy Ciddor (09) 227 8190.

Aquafog 3300



The Aquafog in full flight

The first 240 volt version of the award winning Aquafog 3300 was shown at Entech.

The Aquafog 3300 is a 240 volt dry ice fogger with two 1650 watt heater elements with separate single phase inputs, separate fan input and separate pump input. The pump pumps the water over the top of the dry ice, it takes a total of 45 kilo load and runs about 10 minutes. It'll reheat in about 20 minutes.

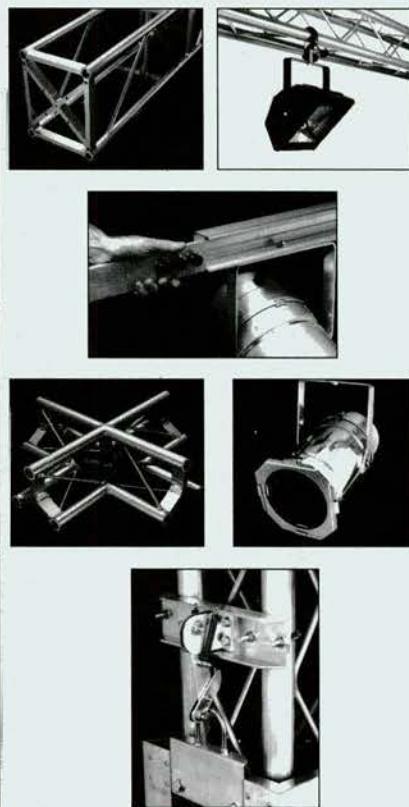
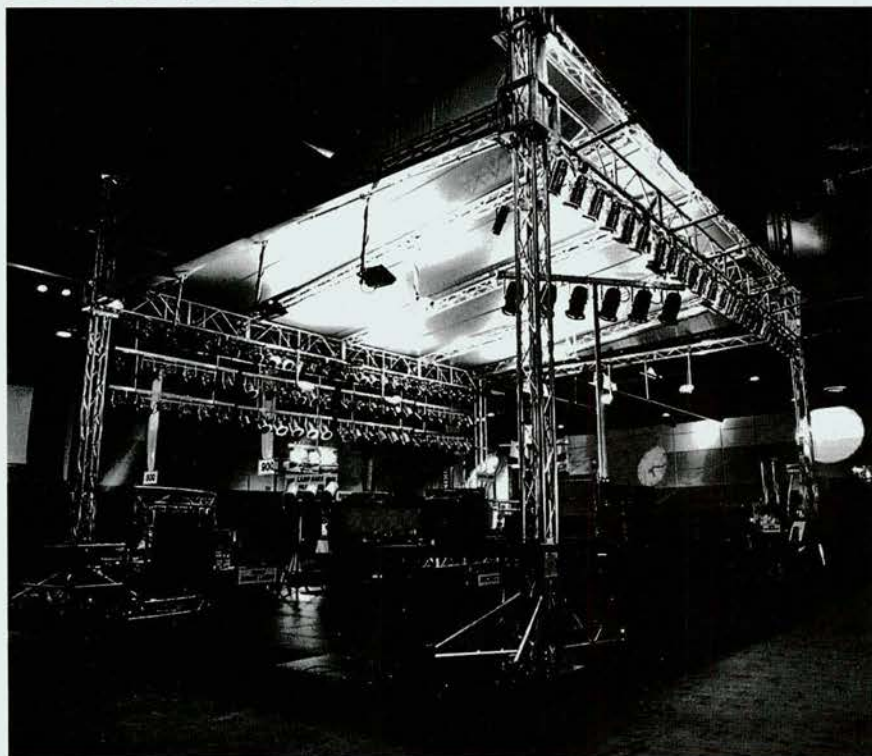
Unfortunately Jonathan Ciddor of Lightmoves is expecting a whole heap of wheelie bin jokes to come his way.

For further info call: Lightmoves Technologies (02) 560 0000.

READER SERVICE NUMBER 507

Q:What's the difference between an intelligent light and its operator?
A:The intelligent light is often brighter.

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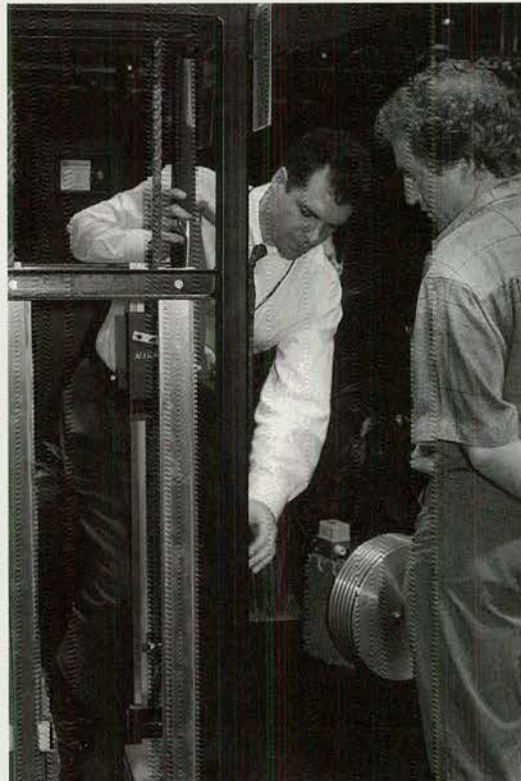
Jands to represent Hoffend & Sons

In a move to further strengthen its position in the theatre market Jands has announced it will represent Hoffend & Sons in Australia.

Established in 1913 and based in New York, Hoffend & Sons designs and manufactures a comprehensive range of stage machinery from counterweight rigging systems and stagelifts to custom machinery such as the precision hydraulic system used at Universal Studios to control the fall and re-erection of a 8500 kilogram saloon facade in the 'Wild Wild Wild West Stunt Show'.

One of the products that Hoffend & Sons produce is the new Magic-Loc rope lock system, described by the company as a 'show stopper'. The system is safe and overcomes the dangers of conventional rope locks which, when disengaged, can result in run-away linesets that can cause injury and equipment damage.

For further info call: Jands (02) 516 3622.



Peter Hofstead demos the Magic-Loc rope lock

READER SERVICE NUMBER 508

FREEDOM for ROSCO

Shown for the first time at Entech were the Freedom range of luminaires by CCT Lighting, distributed by Rosco Australia.

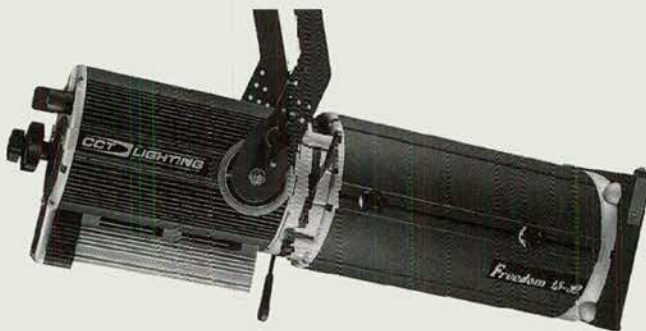
The Freedom range are compact and lightweight and can be hard focussed (for gobo imaging) or soft edged, with peak or flat beam adjustment. The lenstube can be removed in seconds allowing another tube to be attached, or one of the three types of DMX dimmer units can be slid into position under the body of the lamphouse.

Four lights can be run off a 10 amp power supply, 'Daisy Chain' your DMX signal back to the control desk and you have a working system. Each dimmer has 'LPC' localised proportional control to adjust the output, balancing light levels if several units are on the one DMX channel.

The range includes 20°, 30°, 40° and 50° Fixed Beam Profiles as well as a 15° to 32° Zoom Profile and a 28° to 58° Very Wide Zoom Profile.

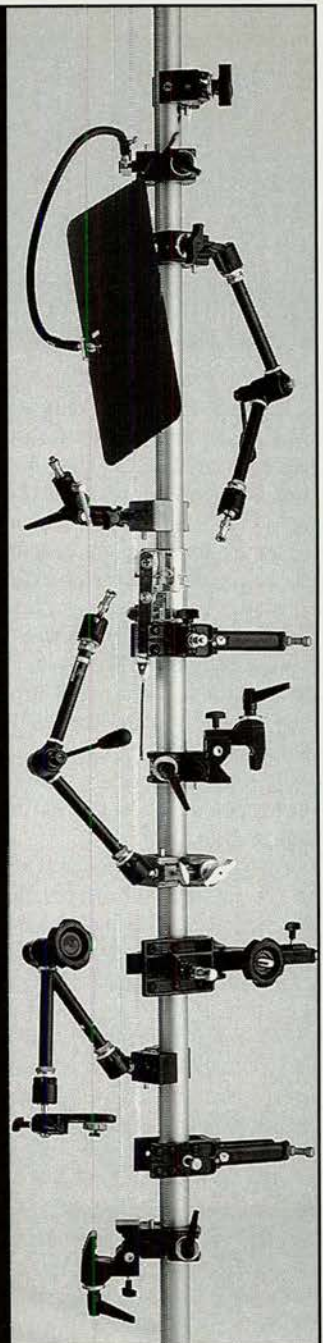
For further info call: Rosco Australia (02) 9906 6262.

READER SERVICE NUMBER 509



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MOMIX

America's Internationally Acclaimed Dance Company present two works *Baseball* & *Passion*

Passion is a brilliant, hallucinogenic work.

The music, by Peter Gabriel, sets the mood. Exotic, haunting, mysterious, mystical melange of instruments. The first piece alone uses octabans, surdu, skins, finger cymbals, tabla, dufs, synthesisers, shakers, drone mix, guitar, double violin, and armenian doudouk, woven together in a fugitive beauty.

A scrim covers the stage, with images projected onto it. The first image is a huge tree trunk, with bare branches above. Slowly through the trunk, an eight armed naked goddess dances in a red light. The dancers are behind the image, but part of it. They emerge and disappear magically. You watch the tree, on the picture plane, but you also see into it, into another plane.

The entire performance is shifting images on the scrim, with shifting images dancing/moving/hanging behind. The most striking is a standing baby's legs, open to form a giant archway, through which we see a male swimming through the legs of a woman giving birth.

Passion is conceived and lit by Moses Pendelton, and it is an amazing visual feat, using image, light, and dancers in seductive, elusive patterns. *Passion* has toured all over the world since '91. Last month, it came to Sydney, with a new show, *Baseball*.

John Finnen, technical director

"I can remember in elementary school. When we did the thanksgiving play, I didn't want to be onstage, I wanted to be the stage manager. We did a series of plays in literature class, in grade three. They were melodramas, so I decided to light them with strobe lights, and get the whole black and white film feel."

What's not to love about a technical director who started like this?

John Finnen has been with Momix for two

Baseball



years. Last year alone they toured to Italy, Moscow, Zurich, France, Chile, London, Canada, US, and Greece, adding up to 53 weeks. Finnen comes from Nashville, and worked with the Alvin Ailey Dance theatre before Momix. Fresh faced, and smart, he has a degree in music and computer science. He worked as a computer network supervisor, and plays jazz trumpet. He is also discreet, which must be an asset when working with a small troupe, which is like a family.

Bringing a show like *Passion*, and another work *Baseball*, to Australia was complicated.

The lighting

For *Passion*, the stage is lit entirely from behind the arch. "In lighting the dance, the idea is not to light the stage. You're trying to isolate just the bodies, so that what you see is the slide

image, and the dancers are floating in these images. So you create all these surreal environments. "We light mostly from the side, using Shins/Kickers, low units on the side. The light is cut

very specifically off the downstage scrim so we don't cast any shadows or any reflections of light onto the scrim. We try to locate the scrim about two metres downstage from the dancers, so we can keep the light away from it. You cut the light off the floor, so that you're creating corridors of light which appear to be dark, but as soon as you put a body in there, it catches the light. "90% is from the side. We do a little from the back and above to fill in, but those are with darker colours that won't show up on the floor. Once the floor starts to read, Moses goes, 'No back it off,' because you're grounding this image now. All of a sudden it's on a flat plane. Where you don't see the floor, you have the image of the dancers floating in the tree, or the sunflower. When you see the floor, it's four dancers standing in a line onstage.

"It's very challenging from a lighting standpoint, because it limits you in the number of angles you can shoot from. Anything overhead is going to cast light on the floor. It also requires a lot of special lights, because each scene has to have a light that's cut just for the area where the dance takes place.

"Like the opening scene, there's three lights directly over each dancer, and the light is cut just to the width of their dress, so all we're lighting is the body and the dress. Nothing else is being lit at all. They look like they're floating in the black void of the image. As soon as they move, you have to have another light to catch them when they stand up and move. So it makes for a very large lighting rig."

"The lights have to be very low so the cuts

Passion





Baseball



don't cut the dancer off mid calf or something, so it's always a compromise. You want all these lights low from the side, but then you start blocking the wings up, and the dancers can't enter and exit. In a small theatre, it gets really cramped, and the dancers have to work really hard just to get onstage.

"There's only one front light, at the end of *Passion*. Everything else, that is 200 lights, are over the stage, so it makes for a tight rig.

The projectors

The 35mm slide projectors are generally, between 750-1000w. They are always mounted somewhere centrally FOH, as close as possible to the stage. They tend to be noisy. In Sydney, the Opera House staff built big boxes that hang off the circle to house them, and keep the noise down. "That's always a challenge in a venue, to find the best place to put them, without knocking out the best seats."

The projectors are controlled by a system developed by AVL, called the Dove X, a basic slide multi media dissolve system. The programming instructions are encoded onto the audio tape, all synchronised through the DAC.

"Whenever we use projectors that the house provides, I have to allow a couple of extra hours. There are inevitably glitches to work out, especially in a situation like Australia, where all of our control equipment is on 110v, and all of the projector is 220v. There's always problems in going between the two voltages. No matter how well the stuff is grounded, you always seem to get some kind of a voltage difference across the two. We bring our own transformers.

"I don't know if it was a grounding problem here, but I blew out two different components, trying to bridge between using the house DAT machine as a backup to our DAT."

Ideally, Finnen likes to bring the projector himself, having made sure that the lamps are balanced, and that the shutters open and close

smoothly. "There's nothing more irritating than when you've got a beautiful 30 second dissolve, and it pops open in the first second, and destroys that smooth fade."

Hire Companies

Two projectors with touring cases would cost about \$US35,000, so Momix rent for tours. "It's always a problem," says Finnen. "Here we got the projectors from a hire company that were not associated with the Opera House. They forgot to send a component so we couldn't connect it up correctly. The projectors weren't in best of condition. In general, I was not impressed with the Australian hire companies.

"We blew more lights in the first day than I've blown in a fifteen week run. It was unbelievable. We blew at least 25 lamps. We spent the entire first day when we were trying to focus, replacing lamps.

"I found that a lot of equipment that was delivered to us wasn't maintained. It was out of alignment, hadn't been bench focused in a long time, lenses were dirty. That's what happens when the equipment gets used a lot, and they don't take time in between to recondition.

"I've gotten spoiled by some of the companies in New York that take really good care of us."

Touring

Finnen toured all over America, mainly in small venues with the Ailey troupe. "You learn to improvise really quickly. 'Ok, so we don't have those lights and the board won't do this, and ok, the stage is only half the size we need.' We very rarely played in a union house with a professional crew. It was always a struggle, and you learn to think on your feet, which is

the most important thing I learned from the whole experience. You can make the best plans, and you can have your plot, and paperwork all in order, and five minutes after you walk in the door, that's all tossed out the window. You have to be able to react, look at the given situation, and make the most of it, specially when you tour overseas.

"You not only have the language barrier, you have to deal with different kinds of equipment, working styles, lighting styles, ways theatres are run. Italy is always a real challenge. The crews are very laid back. You can never get any information from them, besides 'don't worry, it'll be fine.' You get there, and you walk in, and there's a theatre with no bars, no pipes, just a large empty space, and four very large guys with big mounds of ropes start dropping ropes down. You start hanging your legs and borders, and about eight hours later you've built the theatre, and you're ready to start teching the show. It's always an experience."

Improvising

Finnen likes to understand what the designer or choreographer wants, because he sometimes has to improvise with the equipment available. "You have to have a very clear concept of what is the image that you're trying to portray. How can we make it work with what we've got. It's a lot of compromises."

At the Sydney Opera House, the lights had to be rigged for four different shows, two by Momix, and two by the Sydney Dance Company. "I can't always have a light just where I want it. So can we move the choreography around? Everything is a compromise. Like we can't refocus this light because I have to use it in three different places. All these things vary greatly from theatre to theatre, so it's hard to keep the piece looking the same. That's where knowing the concepts and the intent is really important. That's what really interests me.

"That's a real challenge with Momix and with Moses, because his attitude and his concepts change. It keeps it interesting from my end because it's not always re-

creating the same drudge over and over. He'll come in and put a new spin on a section, and you think wow, it's a whole new look. It's fun. It's a little aggravating, like the electrician says, 'Why are we going up and changing the colour for the third time?' Trust me, it's making the show better!"



John Finnen

● Madeleine Murray

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THE PA PAGE

The Importance of Keeping It All Together

Part five in a series, by Michael Orland.

MORE NUTS AND BOLTS AND AMPLIFIERS

Now where were we? Oh yeah, preventative maintenance for your amplifiers. Low-tech tips on getting the most use from your amps with the least failures and subsequent repair bills. Now I wouldn't pretend for a minute to know how amplifiers actually work as such. I'm no technician; just another accidental small businessman. And I know preventative maintenance is smart business.

Amplifiers, as well as having those sneaky capacitor things I mentioned last month, also have these things called output devices. These transistors generally, although not always, come in what's called TLO3 packages which look a little like Fig 1. As I have men-



tioned previously, the energy (wattage) consumed by the amplifier is converted via these things into energy to drive your speakers, plus heat. The amount of useable power it creates compared to the heat it generates is referred to as the amp's efficiency. It is vital that all heat produced by the output stage is disposed of in order to maintain safe operating parameters. Last month I talked of lifting the lid on your amp, discharging it, and cleaning it. Having done this, the next thing I usually check is the bolts that hold down the output trannies. These are usually bolted to an aluminium heatsink, which, as the name implies, drains away heat, often with the aid of a fan. Often, these bolts also fasten to a fibreglass circuit board, forming an integral module.

Usually the heatsink is either bolted to the chassis or even an integral part of it. The transistor's casing, which is live, needs to be

isolated from it. This is usually done with mica washers. Between the transistor and the washer, and again between the washer and the heatsink, should be a smear of special heat transfer compound. Some manufacturers omit this goo, claiming it to be unnecessary in their design. Most technicians harumph at such claims. In the rock and roll world, to paraphrase Roy and HG, too much protection is barely enough. I would add it if it was missing. Only a thin smear is needed, not a splodge. If applying with your finger, be aware, the stuff is usually quite poisonous, so scrub up thoroughly after the operation.

In some amplifier designs, the entire heatsink will be electronically isolated from the chassis, with the transistors bolted directly to it. No washers, just a smear of compound. This results in a live heatsink, such as those in EHT or Jands' SR amps. The advantage of live heatsinks is that because the transfer of heat is more direct, the designer can get away with smaller, lighter heatsinks. One disadvantage is that, should anything metallic ever come loose or find its way into the amp, and should happen to short between the heatsink and the chassis, well, to put it in non-technical terms....BANG. If you ever notice a rattle when handling this type of amp (well, any amp really, but more so this type) or, if while cleaning, you notice a nut missing, then be afraid, be very afraid. Hunt down the culprit, and do not reassemble until you find it or satisfy yourself that it's fallen out.

The bolts that hold down the output transistors need to be reasonably tight. Even if they are adequately tightened during manufacture and locktite is applied to the nuts to stop them working loose, the fibreglass boards can actually compress after a couple of years. This explains why these bolts may need several turns to re-tighten despite it being obvious that the locktite seal on the nuts has never been broken. If the

bolt won't tighten with a screwdriver because the nut isn't grabbing, then you will need to secure the nut with a nutdriver while you do it. Nutdrivers are like little socket spanners and indispensable for this sort of job. Available from speciality hardware or serious electronic shops. Don't use pliers. Awkward and messy. If the manufacturer has used garbagey screws which you suspect may be even a little stripped, replace them.

Output transistors in most modern amplifiers are usually either mosfet or bipolar. In both types, most of the action takes place within a little chip mounted in the centre of the base. In a mosfet transistor, the base is made of copper, which as any saucepan salesman can tell you, will distribute the heat evenly over the base achieving maximum transference to the heatsink. In a bipolar transistor, the base is made of steel, which is a relatively poor heat conductor. Meaning the centrepiece below the chip can be much hotter than the outer rim of the casing. This is one of the reasons why mosfets were hailed as being the more rugged devices. It is also the reason why smoothly machined heatsinks, the correct heat transfer compound, and the correct even tensioning of the bolts is so important. Any rock'n'roll bipolar transistor without adequate heat transference directly below the centre chip is in trouble.

After tightening bolts on transistors on non-live heatsinks, always use your meter to check for any signs of shorts between the transistors' casings and the heatsink. In a nice amplifier, the surface that the transistors bolt to should feel as smooth as glass. In a not so nice amp it may feel a little rough. In one such cheaper amp I found that overtightening the bolts would short the transistor right through the washer. You guessed it....BANG.

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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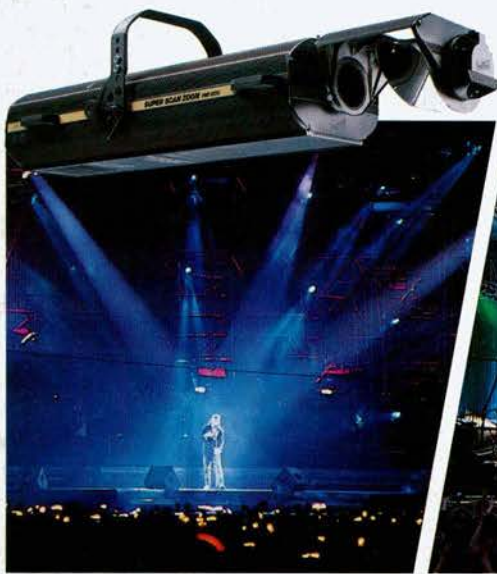


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Standard lens	Electronic Zoom from 8° to 16°	24 and 15 degree	11°
Optional lenses	—	13 and 9 degree	16°-13°-11°-9°
Electronic focus	*	*	—
Wheel with 7 colours + white	—	*	*
Wheel with 7 special colours + white	*	*	—
Special light blue filter	—	*	—
Rainbow effect, two-colour beams	*	*	*
Colour temperature correction filters	2	2	2
RGB colour mixing systems	*	—	—
Max. No. of colours	Infinite	113	24
Rotating gobos in dichroic glass	Optional	2	Optional
Rotating M-size metal gobos	4	2	4
Fixed M-size metal gobos	4	4	—
Variable speed indexed two-directional rotation of gobos	*	*	*
10 additional gobos in metal	*	*	*
Fixed prisms	—	1 (5 facets)	1 (4 facets)
Rotating prisms	2 (4 facets, 3D)	4 (4 facets, 3D, wake, image doubling)	—
Frost filters	2	2	1
Iris	increased speed	increased speed	*
Dimmer 0-100% - Stop - High speed strobe	*	*	*
Rotation of mirror adapter on projector body	360°	360°	360°
DMX 512, RS 232 (PMX), analogue 0-10V controls	*	*	*
Number of control channels	12/16 selectable	12	6/8 selectable

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