

ENTECH - an industry gathers

Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

AUSTRALIA \$4.50 #33

MAY 1996

ENTECH AWARDS 1996
our best equipment
our best people

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ISSUES

Safety Conference a full house
Exporters form trade group
FOCUS report on house AV policies

VENUES

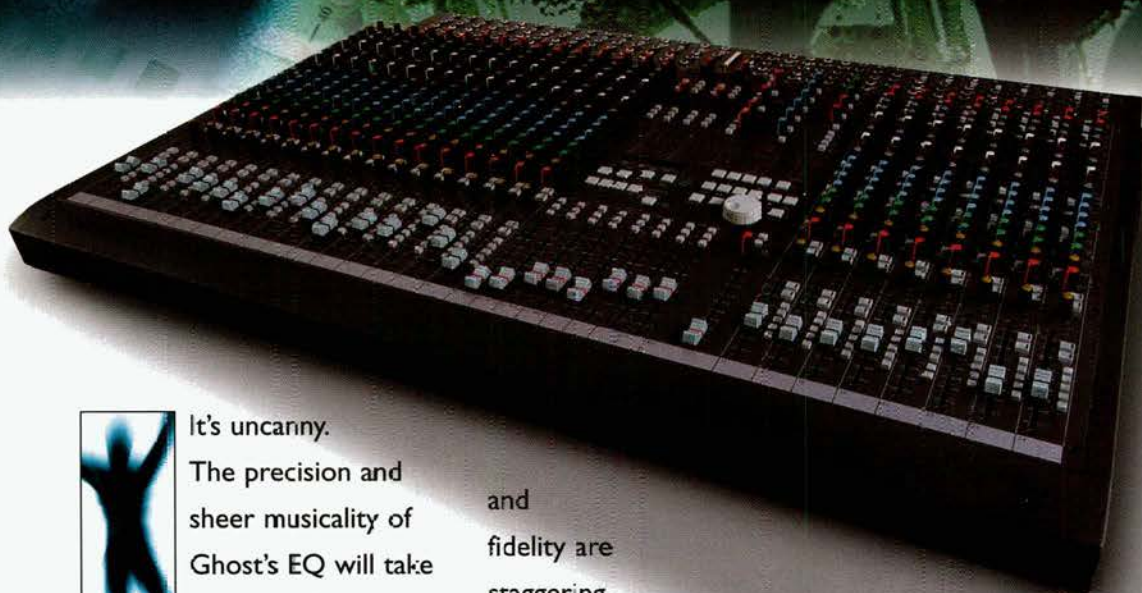
VMA and ENTECH join forces
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Hi, cop this...

We had a great time meeting readers at ENTECH 1996 in Sydney, and now look forward to doing the same thing next April in Melbourne. You readers are **not shy**, we had plenty of forthright criticism of which 95% was useful and genuine. The other 5% was either warped humour or the thin edge of dissatisfaction. Please accept this: we honestly work to the principle that we are a conduit, a communications tool for the industry.

Because of this, we have included a survey form in this issue on page 56. We got a lot of these filled out at ENTECH, and would like some more. So tell us what you like, dislike, and how we can improve your magazine to better serve you.

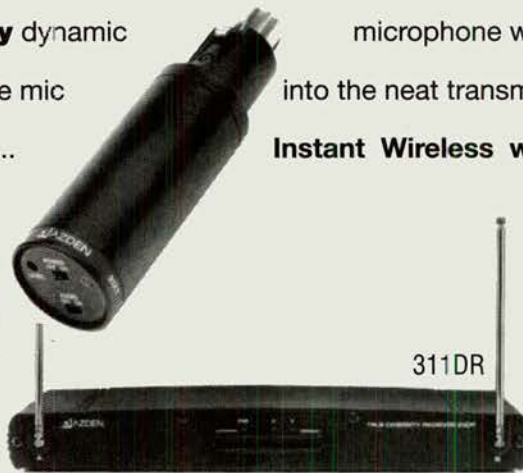
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Connections

MAY 1996. Number 33

Diverse Attendance

The strength of the ENTECH trade show is the diversity of the entertainment technology market. This is graphically demonstrated by the breakdown in the attendance statistics below. We asked two questions on the registration form:

"Your Work status is":		
	(%)	(#)
Designer	9.84%	432
Producer	8.24%	362
Agent	2.03%	89
Dealer	3.42%	150
Operator	11.74%	516
Architect	0.89%	39
Contractor	3.90%	172
Manufacturer	3.85%	169
Product rep	1.27%	56
Distributor	6.74%	296
Management	11.82%	519
Club Owner	1.22%	53
Musician	8.52%	374
Student/other	12.50%	549
DJ	7.89%	346
Retailer	6.14%	270
Total	100.00%	4394

"Your Industry sector is":		
	(%)	(#)
Pro Audio	10.85%	477
Project Studio	2.34%	103
Studio	4.63%	203
Post Production	2.16%	95
Contracting	3.20%	141
Theatre	7.40%	325
Communications	3.89%	171
Rental Firm	3.22%	141
Lighting	12.95%	569
Staging	3.89%	171
Broadcast	3.81%	167
Vision/AV	5.74%	252
Theatre/Venue	3.81%	167
Nightclub	5.32%	234
Music Dist	1.23%	54
Music Retail	1.38%	60
Other	7.65%	336
Engineer	10.56%	464
Consultant	5.99%	263
Total	100.00%	4394

4,394 trade at ENTECH

Trade Show Bigger and Better than Ever - 4,394 trade, 1,360 public and 110 stands

By Madeleine Murray

Even the most cautious, cynical person, which I'm not, would have to say that Entech was a raving, screaming success.

I was there from 10 to 6, for all three days, as a visitor, and I was still having fun on Thursday evening. Being a very important person, I didn't have to pay for anything, and could access all areas, so I did.

I dropped in on lighting semi-

nars, sound seminars, watched the Clay Paky light show, educated myself at the Osram stand, saw the autopilot follow spot at Chameleon, caught the DJ competition, compared sound systems, met Chip Monck who lit Woodstock, the Stones, and Bette Midler, gazed baffled at the Crookwood paintbox pre amp, and the Midas XL200 console, survived the Entech Awards even though I didn't win one, rode on the Glantre spiralift, and dropped in on the

(continued over)

ENTECH- AN INDUSTRY

By Julius Grafton

In just days the diverse elements of the entertainment technology industry came together. "I want to work in the entech industry" a young person told me at the show.

The attendance demographics finally give proof to what we at Connections have known for some time. You can't pigeon hole technology. And Australia is too small for specialists. All good versatile technicians multitask.

More than just a tradeshow, ENTECH entertained, educated and serviced its host industry. People came from everywhere, 4,394 trade and then an unexpected 1,360 public - who were attracted to the DJ Championships and the Home Recording Expo.

At times the numbers overwhelmed the organisers.

AWARDS SIZZLE

Sydney's Metro was a sellout, (pictures, left) with over 400 industry types on hand to see Awards delivered for the best equipment, people, and institutions. See P.16

SCHOLARSHIP

Jason Waide is pictured with Ken O'Brien from Stage & Screen Travel (below right), who provided a return ticket to London as part of the Barratt Lighting Scholarship. Jason is the first recipient of this prestigious scholarship. Full details in LIGHTING, page 69.



Full house at Sydney's Metro for the 2nd ENTECH AWARDS, April 24th



VMA and ENTECH to combine for '97

Hailed as a co-operative synergy, the 1997 Venue Management Association Convention and Trade Show will be held simultaneously with the 1997 ENTECH Trade Show and Conference.

ENTECH is now held annually, alternating out of Sydney and showing for the first time at the new Melbourne Exhibition Centre next April. Moves have been afoot since 1994 to align the 1997 VMA Convention with ENTECH, to give trade attendees to both gatherings extra benefits.

Both trade shows will run at the same time, with reciprocal entry rights for delegates to both events. Conference and convention activities are also being aligned for 1997.

"This is a one-off, co-operative synergy designed to add value for all visitors, both to VMA and ENTECH. We are open to any constructive suggestion to better service our visitors, who are responsible for the success of any trade event", said ENTECH director Caroline Grafton. "We hope to have other alignments in the future. At ENTECH '96 we worked with several trade associations and expect to do so again next year".

Melbourne ENTECH already a big success

Floor space sales for the April 1997 ENTECH trade show passed 40% of available space - on the day sales opened, one year ahead of the event. "The first firm to book space was Horwood Australia, followed by many of the major exhibitors at ENTECH '96", said Caroline Grafton.

"This puts ENTECH ahead of any other similar trade show here in terms of sales. We expect a sell-out for the third consecutive time, and in the case of Melbourne the sellout will likely happen earlier than expected. We actually have slightly less space available in Melbourne than we did in Sydney".

Glantre bar regularly. Thanks, Derek Gilbert!

I asked people what they thought of ENTECH 1996:

■ "I'm very glad I came down from the US. It was definitely a long trip, but worth the travel. I was surprised at the wide range of products here in the Australian market, and I was also very surprised at the number of production companies that were there, as exhibitors and visitors. I wasn't aware there were so many production companies here in Australia. I met quite a few people from the different performing arts centres and theatres. I was expecting a bit more from the broadcast industry than I ran into, at least lightingwise. I met more people from broadcast sound than from broadcast lighting." -**Dennis Vanian, Electronic Theatre Controls, Wisconsin.**

■ "We always find these things extremely helpful. If you're restricted to one venue, you only get to see the technology that you have installed, and the people that you deal with everyday. So when you get out of the hole, so to speak, it's a real helicopter view.

"Things go by. If you're working with annual budgets, you start thinking about the equipment you're going to buy the year before you get it. Reading about it is being aware of it, but seeing it working and talking to distributors is a completely different thing. I always find it a real eye opener. Two yearly wasn't often enough. Every twelve months is more appropriate." **Stephen Bock, Manager, Theatre Services, Deakin University.**

■ "It's been interesting to see how products are sold in Australia. For example, there are several distributors here who sell viciously competing products in other parts of the world. That you can buy a Clay Paky or a Martin that's imported by the same company, - that's rather unusual." **Karl Ruling, Technical Editor, Lighting Dimensions, New York**

■ "I thought it was great. There was a massive variety there. I came away with a whole heap of ideas for theme nights. We do theme nights here, and hopefully we'll

be getting some equipment." **Russell Tillott, Audio Visual & Entertainment, Fairmont Resort, Leura .**

■ "There were a number of stands that didn't have enough people that knew what the product was, who obviously had just been hired to do the stand. But most of the stands that were of interest to me were well stocked and well informed. Some exhibitors could have put more effort in. There was a good range or products.

"They need to put up a real stage, with all the gear. A shootout at 5 metres doesn't really do it. There needs to be more stuff that people can actually play with. We all know how to make things look good in a demo.

"I also thought, as a participant in the Seminars, that we let ourselves down badly in there. We looked like shit. The lighting seminar you couldn't see." **John Rayment, Resident Lighting Designer, Sydney Dance Company**

■ "It's a very good show. Obviously we've had a lot of interest in the Spiralift as a high profile, specialty product. It's been around on the world market for eight years, mainly in the States and Canada. This is the first time it's been seen in Australia. There's a number of potential projects around. We've had a couple of very useful discussions on major projects, which is our main area of focus, and seen a lot of friends." **Derek Gilbert, Managing Director, Glantre Engineering, England**

■ "Great show, lots of traffic, lots of products. We brought a new product down here, the magic lock, which is a rope lock that senses out of balance situations. Once you put the condition back into place. It's a mechanism that when you put it back onto balance, the system begins to operate normally again." **Peter Hoffna, Hoffna and sons, USA**

■ "We've had a lot of interest, plenty of people going through asking about our products, full spectrum from retailers to hire people, audio engineers, performing arts council." **Dean Shelton, Dynamic Music.**

■ "This show is much better than

last time. The presentation is better, and the way that everyone has done the stands. The light levels are better." **Brian Mazlin, Oracle Lasers, Dee Why**

■ "The show's been terrific. We're a bit incognito down here, but we've had a lot of interest in the auto pilot follow spot, so it's been real nice for us. We've had a real good time." **Craig Schertz, Wybron, Colorado, ex sound mixer, Genesis, ZZ Top.**

■ "A lot of the designers and specifiers in theatres who have come to the show have seen our truss system, and like it. People have been very resistant in Australia to aluminum trussing. Jands had precipitated a myth for several years that only steel trussing could survive the Australian roads." **Richard Hartmann, Tomcat, ex production manager, U2, Pink Floyd, Rolling Stones.**

■ "It gets a good mix of lighting and sound. And as a sound company, it brings together a lot of lighting people who do a bit of sound that we otherwise wouldn't access, so that's good for us." **Maxwell Twartz, AR Audio Engineering, Balmain**

■ "By far the most impressive show they've had there. It's come a long way since its humble beginnings. It was a big good looking show, had a good feel about it. From the company's point of view, we were very happy about it. I found it quite interesting. The music gear is only a very small fringe portion of the show. That's why we're always a little dubious about how far into the show we should go, but it was very good for us. We didn't sell so much musical instrument product as hard disc recording and recording peripherals. And the retailers we had assisting us on the stand were more than happy about it. They expect to get a lot of direct business from it." **Brendan Callinan, Roland, Sydney.**

■ "The technology is amazing, absolutely amazing. I'm a sound engineering student. It's really well presented and the layouts nice and there's lots of nice ladies walking around with refreshments." **William Jackson, Eclipse Studios.**

Performance Safety Conference

Industry committee is formed from ENTECH Conference

By Madeleine Murray

More than 120 people turned up from all over Australia for the conference on safety in the performance space. Theatre techs and managers from Townsville, Lismore, Wollongong, Perth, Adelaide, Bunberry, Melbourne, Sydney, and even New Zealand mingled with people from Occupational Health and Safety, Worksafe, Workcover, unions, manufacturers, riggers, lighting designers, and more.

In spite of the numbers, and diversity, the group managed to come to some sort of a consensus at the end of the meeting. The main points were that

- * a National Code of Practice for the Industry be made;

- * this NCP be a broad document covering all aspects, ie theatre, TV, film, AV, music;

- * a small steering committee of key people be formed within the week of Entech, who would then put together a broader committee

- * Connections would underwrite the initial cost;

- * Connections would keep people informed via the magazine;

- * The internet could be used to communicate about the project;

- * The Entertainment Industry Employers' Association (EIEA) would pay for committee members to travel to meetings;

- * Dr. John Toohey, Director of Industry Development, Worksafe Australia, offered to advise, until June 30.

This was probably a fairly good achievement, considering the complexity of any decision involving more than one person. Some points were made around the room during the discussion. An elected OHS rep from Perth, said that the problem was not as daunting as we thought. 90 % of the work is done, it just has to be adapted for our industry.

Someone asked the panel who would pay for all this additional training. "Um, good question," was the answer.

Simon Luckhurst from Univer-

sity of Wollongong wanted the room to select a steering committee on the spot, since there were so many key people present. Caution prevailed, and this will be done during Entech (see report by Simon Jenkins.) Despite minor differences, there is certainly a common purpose, and much goodwill.

The speakers

The lunch was delicious, and the Opera House venue stunning. Amanda Garland from Connections gives good organisation. Despite the desperate lack of coffee on arrival, and the clattering of some eager Opera House employee washing the china for half an hour at 4 o'clock during a talk, the day was interesting, stimulating, and even entertaining.

Lynette Guy, an OHS consultant, suggested that we make a safety training video specific to the industry.

Dr. Eric Lepage explained the vital and complex outer hair cells in the ear that amplify and filter sounds. These hairs can be broken off, or torn by noises above 85 dB. Trading off time for volume, one should stay in a rock concert, at 115dB, for 15 seconds. With earplugs, 50 minutes. Hearing loss causes people to withdraw, to back off, and Lepage believes that people outlast their hearing loss by about 10-15 years.

The early warning signs of hearing loss are difficulty hearing people in a noisy situation, the 'cocktail party effect.' An increase in noise in your own ear, tinnitus. And the general sense that the volume control on the world is turned down.

Mike Jeffreys, managing director of X-fade Consulting, and former Technical Manager of the Sydney Opera House said that a code of practice (NCP) for the entertainment industry had been started 18 months ago by E.I.E.A. The Sydney Opera House had funded the first two drafts, and a

third draft should be ready for comment in six months. This seems like a vital point that no one really took up. Jeffreys cited diffusion and complexity of the industry as problems. One of the incentives for an NCP are self regulation, and more certainty for workers and venue managers/owners.

Peter Marshall, from the Sydney Opera House, said that "everytime we came up with a new step in the NCP, the criteria always was 'to the industry standard,' and no one had a clue what that was."

John Bates, manager of IR for the Entertainment Industry Employers Association pointed out that a standard code will benefit all, meaning less injuries, and less compensation costs. His members support the project. Competency standards were developed in '94, sent to South Australia TAFE to develop a curriculum around them. The relevant steering committee will meet in Adelaide on May 14, but the package won't be ready until early next year. The courses have to be accredited, which can't happen until the union gives the green light.

Karl Ruling, tech editor of Lighting Dimensions & Theatre Crafts, New York, admitted that there is no NCP in the States. He held up a booklet which was a list of "organisation of organisations for writing standards, for which there are no standards." The closest thing to a cohesive body is the National Fire Protection Agency. Ruling made the distinction between a standard, ie: a good way to do things, and a regulation.

Dr. John Toohey, of Worksafe Australia, introduced himself as a Lebanese-Irish, who always wanted to be a country and eastern singer. Worksafe Australia is to be slashed by the razor gang so after June 30 this year, Toohey may be singing. Worksafe has managed to produce national

(continued on page 10)

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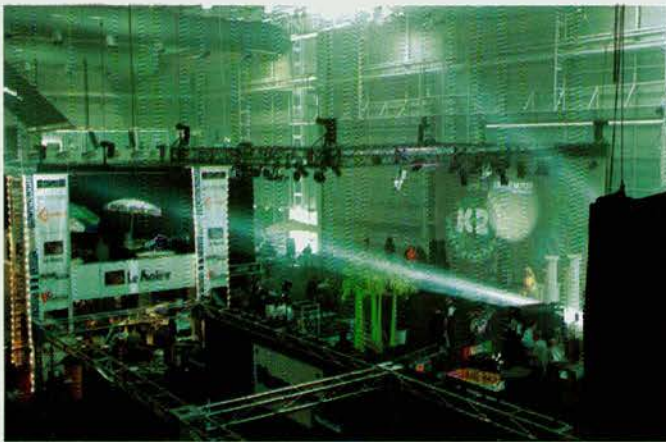
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ENTECH 1997

THE MELBOURNE EDITION

HELD ALONGSIDE THE V.M.A.
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Our Theme: **SYNERGY ~ and ~ CO-OPERATION**

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But hurry, because space at ENTECH 1997 is already selling fast. *And sadly you may miss out.*

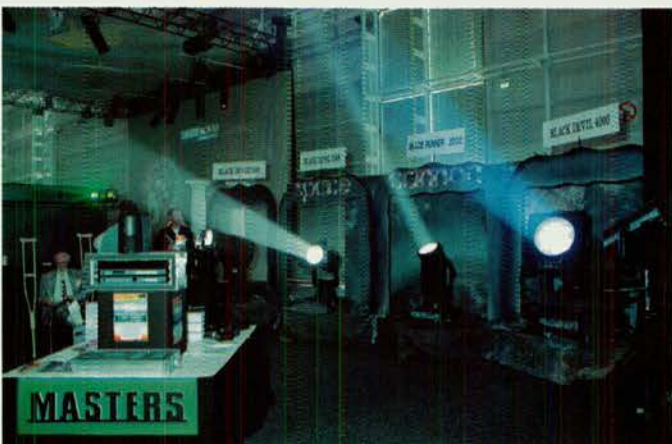
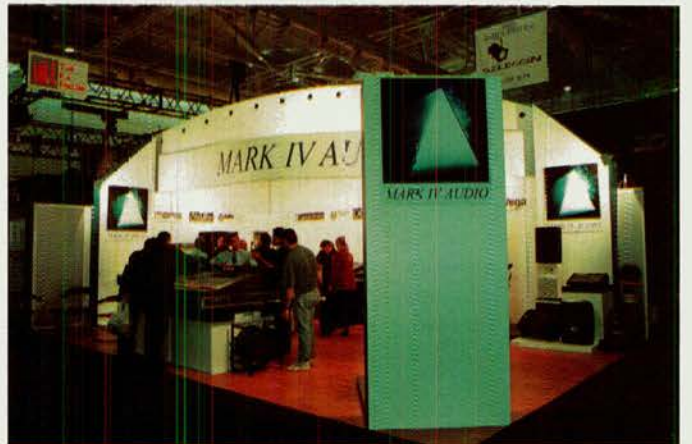
Call (02) 876-3530. Dates: April 23, 24 and 25, 1997.



ENTECH 1996



Photography by Babetta Greip



Safety Conference report

(continued from page 7)

standards this year for industries as sprawling as farming, textile, and cleaning. Toohey gave guidelines for forming a NCP for our industry. Broad representation, practical focus, strategy, national industry wide focus, partnerships, achievable strategies, and checking processes.

Toohey offered his expertise and advice until June 30. The panel was led by Simon Jenkins, the essence of grace, tact, and diplomacy.

I think the Chairman spoke for us all when he assured us that "a process is in place for the finalisation of the eventuation."

Frankly, it all has a touch of the Yes Ministers to me!

NATIONAL ENTERTAINMENT INDUSTRY SAFETY COMMITTEE FORMED AT ENTECH 96 By Simon Jenkins

Following the success of the "Safety in the Performance Space" 1996 conference, a coordinating committee has been formed to drive a National Safety Committee.

It is proposed that this coordinating committee when fully constituted will have representatives from each state and the A.C.T..

It will also incorporate all craft streams and all areas involved in the performing arts and it will have a technical / business / management orientation.

It will also involve O/H & S professionals and appropriate training institutions.

This is an ambitious project which will be inclusive and open. In the first instance it will need to be served by an appropriate communication structure.

The Coordinating Committee shall initially consist of **Tony Davies** (Chameleon), **Roger Cameron** (Pollard Productions), **Don Gunn** (Media Entertainment and Arts Alliance), **Paul van der Ent** (Canberra Freelance), **Bruce Brown** (Corporate Theatre and Focus member), **Simon Jenkins** (Sydney Opera House), **Buchanan Reed** (Wollongong University), **Robert Johnson** (Worksafe, Australia), **John Bates** (Entertainment Industry Employers Association), and chaired by **Byron Conninos** (O/H & S Professional).

This is not a complete list and the Coordinating Committee will need to establish proper funding and a network that can accommodate the inevitable travel, and accommodation required. This is a largely self funding project until a proper structure can be established, with some initial assistance from *Connections Magazine*.

Please keep track of eventualities and there will be regular briefing through the Internet but particularly *Connections magazine*.

In the meantime, contact the Coordinating Committee for further info or contact **Simon Jenkins** through (02) 310 4989 or **Don Gunn** (02) 333-0961.

Exporters to form trade group

Entertainment Technology exports from Australia and New Zealand have grown very healthy since the last ENTECH, and so a meeting of exporters from both countries was convened at ENTECH to explore possible common trade interests.

The meeting parties quickly found common ground, with the observation that it is OK to bang heads and compete in a combined market of 21 million people, but the export markets to our north number some 600 million people.

Issues were identified, the most crucial of which is the need to combine data and market information to reduce duplication of effort, and to ease out the learning curve when an exporter goes into a new market where others already have been.

An observation was made that each export market is typically assigned to one distributor within the country, and that there are usually a number of dealers - therefore competition within one country will occur irrespective of whether the exporter is part of an export group or not.

Our expertise as technicians, designers and manufacturers is widely recognised in export markets, so the need to promote the region as a technology exporter is paramount. Discussion was held regarding combining to buy trade show space at international trade shows, rather than individual

firms taking space scattered throughout a large show.

One most important aspect discussed was the need for a communication channel to be opened amongst exporters, and this is at the top of the agenda. Access to government assistance on both sides of the Tasman is something every exporter already knows about, and it was thought that eventually the group could attract some support from outside.

It was agreed that the first step towards formally implementing the trade group is to open up a line of communication. Julius Grafton from *Connections Magazine* agreed to establish this within the *Connections* office.

The group is open to any relevant exporter, manufacturer, or service provider with export aspirations. A questionnaire has been prepared which will survey all interested parties and form the basis for the structure of the group.

Initially it was decided that the group should be tightly focussed towards export, and most likely towards the Asian region, although some present expressed interest in South America in general and Brazil in particular.

Any interested party may contact the group for a questionnaire, fax Julius Grafton on +61 (0) 2 876-5715, or email to: mail@conpub.com.au. We will continue to keep the industry posted through these pages.

BIRTHS!

Congratulations to the following families and welcome to their new members:

Dave & Teresa Tozer - Chrystal Clear Studios and Warehouse Rehearsal Studios - proudly announce the birth of their young daughter, Courtney Patricia, on Friday March 22nd, 1996 at The Mater Hospital, North Sydney. Mother and baby doing extremely well and Dave is learning to cope. **Archie and Kerry Kamakaris** have

had a "beautiful baby born on the 6th March, 1996. Her name is Bianca. She is absolutely beautiful; lots of people have mentioned that she does look a lot like Dad." **Matthew and Debbie Dixon** of BSS Light & Sound Innovation, S.A. are proud to announce the arrival of their baby boy, Sean Robert, 8lb 3oz born on February 25th, 1996 at the Women & Children's Hospital, Adelaide. Debbie and baby Sean are both very well.

Neil and Tanya Smith of Cannon Sound are now the proud parents of a new baby daughter Allyson

Rose, 10lb 13oz, born April 15th at 6.25a.m. Both Tanya and Allyson are extremely well.

Steve "Stig" and Lisa Moor became the proud parents of their first baby, a little girl named Lily who arrived on April 17th, just in time so Stig could make it to ENTECH. A proud dad and also a vicious noise monitor!

**Advise our CEO and birth database manager Elaine Auld of your addition. She also can assist with tips and suggestions, so perhaps FAX her instead. (02) 876-5715.*

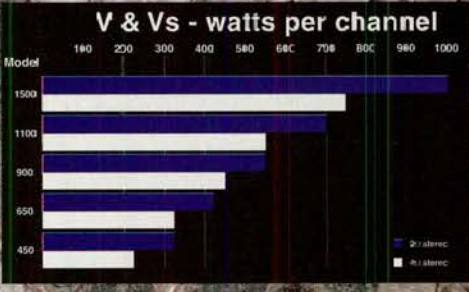
MOVES

IMMEDIAT P/L have moved to: 20 Hordern Street, Newtown NSW 2042. New phone number (02) 557-7766 New fax number (02) 557-7788

Studio Solutions, the well-known sales and service outfit have moved into bigger premises in St Leonards. See them at Level 5, 80 Chandos Street. The phone number remains the same, (02) 9906-4363.

25th
Anniversary

for those about to rock



Crest Audio presents the **V & Vs Series** Amplifiers designed to deliver all your music - always. Earth-shaking bass and effortless mids & highs come from generous power reserves. Fail-safe protection & road-tested reliability keep you in business, night after night, year after year. All created by the maker of the world's leading concert sound amplifiers. **About to rock? Power up at your local Crest Audio dealer.**



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BUYERS GUIDES

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

- **Digital Media World.** Sydney May 1 - 3. Call +61 (0) 2 211-4844.
- **Venue Management Association Conference.** Wellington May 5 - 7th May. Call +64 4 801-4272
- **AES 100th.** Denmark May 11-14, '96. Call +45-9785-1122
Europe's leading pro audio show.
- **NSCA St Louis (USA),** May 13 - 15, '96.
Best contracting and pro install audio gear show there is!
- **PALM China** Beijing, 25 - 28 May 1996. Call +65-227-0688
- **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.

CASH!

Business Column
By Julius Grafton

The price you pay for imported equipment - and most of what we use in the 'entech' industry is imported - probably won't fall if the Australian dollar continues to rise against the US dollar. Our dollar has almost hit 80c at presstime. This compares with 74c six months ago, and this rise cuts about 5% off the cost of an import if the currency is purchased today.

Most importers we know say they have structured current pricelists on a 74c dollar - but they caution that in many cases they are locked into forward contracts. They also say that in the past they have absorbed currency falls and that they usually don't act until they have incurred real time losses or gains.

On the flip side, exporters are taking a small bath if new sales are written at current dollar levels - and exporters are loath to increase prices.

In a perfect world, an exporter is also an importer so fluctuations in currency can balance out if imports and exports are matched, and written in the same currency. We know some firms who have this down to an art form.

8% rise coming

More ominous is the mooted removal of the tariff concession scheme which the new Government says will happen on the 1st of July. It looks likely that this will put 8% on the price of most imported goods we use, and you can bet it will be effective from July 1st too.

DOLLAR HISTORY

HOW the A\$ has fared over time.

One Australian dollar would/will buy:

	\$US	Yen	£	DM	\$Sin
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*	0.78	84	0.52	1.21	1.11

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: \$1.15 ▲

*At 30/04/96. All rates indicative only. Check with your bank.



World Weather trend, MAY

*NOT a forecast!

Where?	Temp °C	Rain mm			
Auckland	17/11	127	Manila	34/24	128
Bangkok	34/25	166	New York	21/12	91
Beijing	27/13	35	Paris	20/10	57
Chicago	21/11	95	Perth	21/12	125
Dubai	34/22	0	Rome	23/13	46
Frankfurt	20/9	55	San Francisco	19/10	13
HoChiMinhCity	33/25	220	Seoul	22/11	86
Hong Kong	29./24	298	Shanghai	25/15	96
Jakarta	31/24	114	Singapore	31/25	174
Kuala Lumpur	33/23	216	Sydney	19/11	127
London	17/8	46	Taipei	28/21	205
Los Angeles	20/13	3	Tokyo	22/12	131
			Toronto	18/9	71



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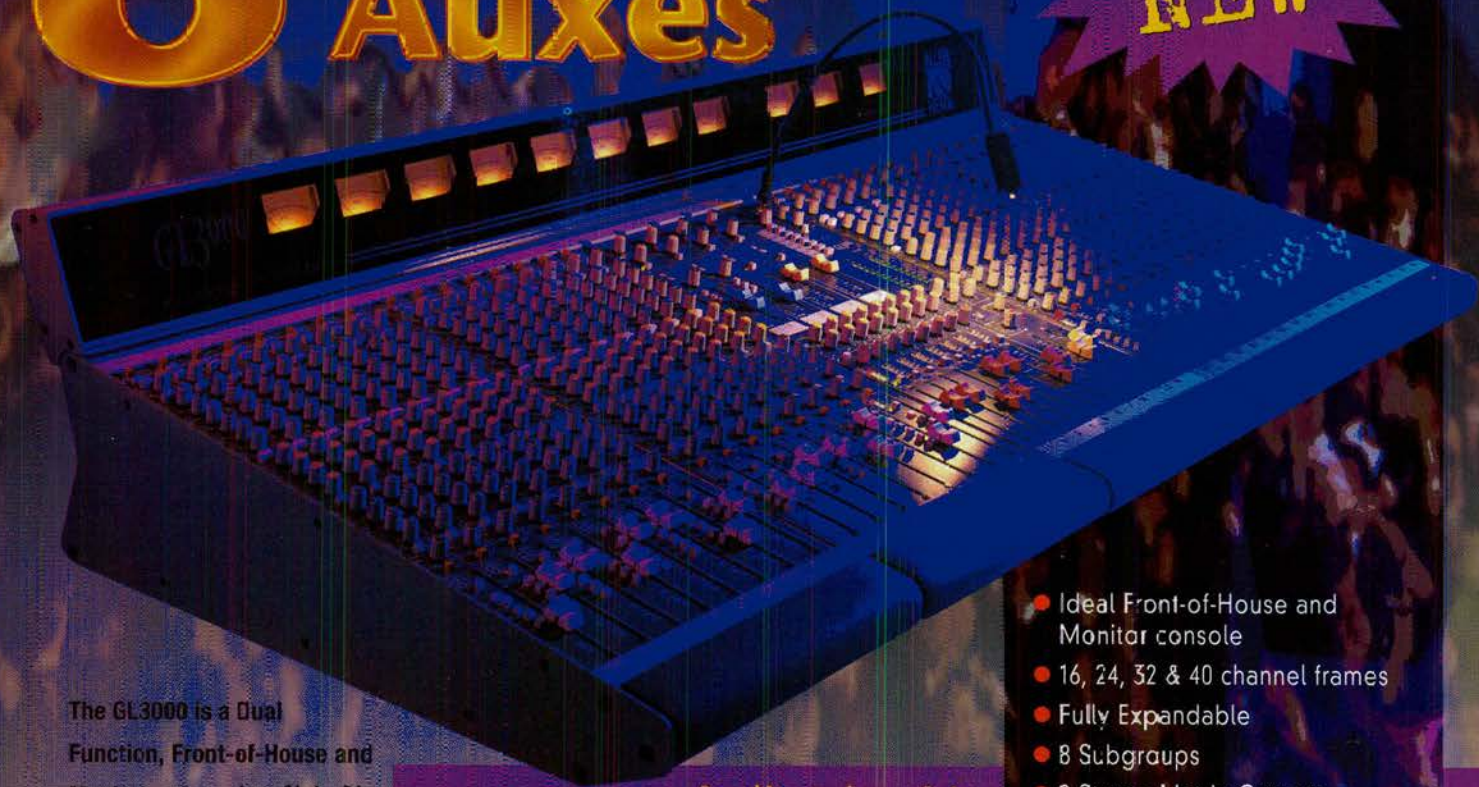
Trade Show dates July 10 - July 12th

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8 Groups Auxes

NEW



The GL3000 is a Dual Function, Front-of-House and Monitor mixer for Club PA, Band PA and Hire Companies alike. It boasts an exceptional feature set - typical of all Allen & Heath consoles.

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 bands for a showcase performance. It's that easy with the GL3000 because everything you need is in front of you.

The flexibility goes even further. The console can be expanded in two ways;

...for the price of 4
without cutting our features in half!

either bolt on another mono or stereo expander module (installation takes minutes), or install the unique SYS-LINK™ buss interconnect system which links independent consoles together as if they were one.

Add this flexibility to the superb quality of the audio performance, the visual clarity of the control surface, the solid metal beam construction and you will know that only Allen & Heath could have achieved such versatility.

- Ideal Front-of-House and Monitor console
- 16, 24, 32 & 40 channel frames
- Fully Expandable
- 8 Subgroups
- 2 Stereo Matrix Outputs
- 4 Stereo Dual Mic inputs*
- 4 band mid sweep EQ plus switchable lo-cut filter
- 8 Aux sends
- 2 Stereo Returns
- 2-track record and replay
- Extensive metering and monitoring capability
- Optional VU Meterbridge*

*Except on the 16-channel GL3000

GL3000

Looking at how engineers produce their shows requires an unusual understanding of the business. Everybody wants to work in a slightly different way.

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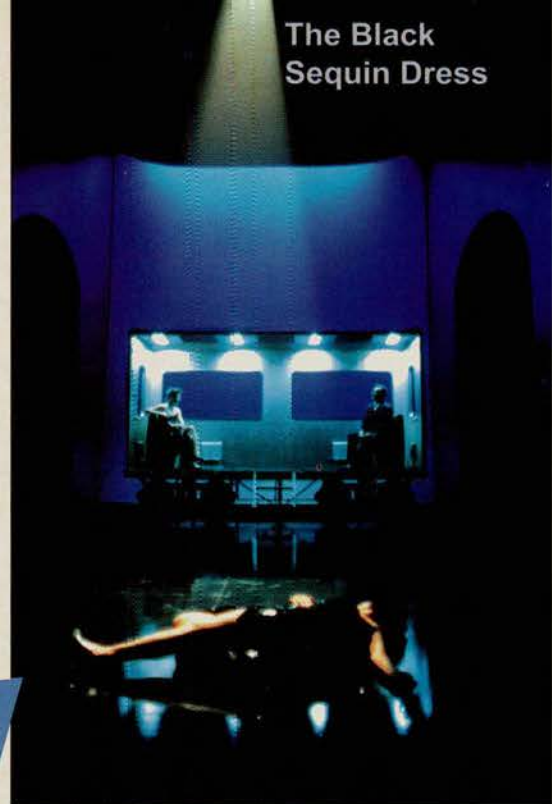
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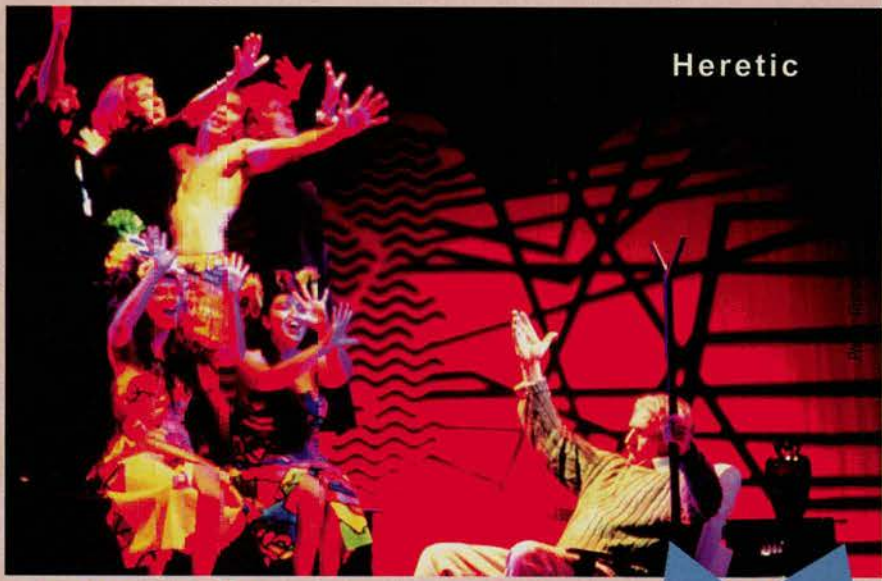
INVESTOR IN PEOPLE
1995

The Black Sequin Dress



The world premiere of Jenny Kemp's *The Black Sequin Dress* took place at the Playbox Theatre, Melbourne. Designed by Jacqui Everitt and with the lights by Ben Cobham, the play was co-presented by the Adelaide Festival.

Heretic



David Williamson's *Heretic*, staged by the Sydney Theatre Company, premiered recently in Sydney amongst much controversy. The designer was John Senczuk, lights by David Murray, and the sound by Paul Heal.

SHOW SCENE

My Father's Father

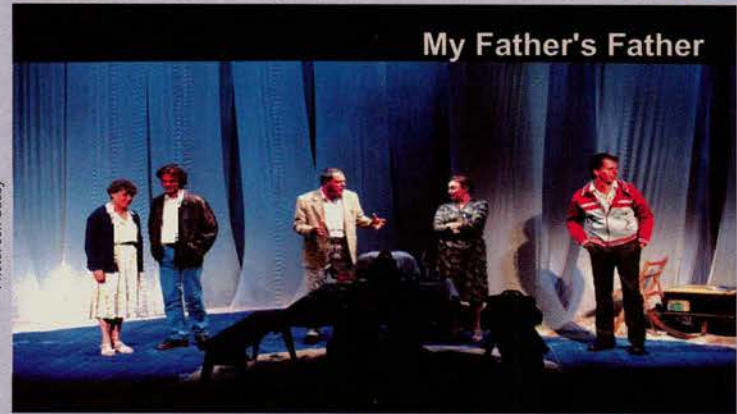


Photo: Jeff Busby

Written by Janis Balodis *My Father's Father* recently played at the Fairfax Theatre, VAC, with the lighting designed by Jamieson Lewis and the sets by Dale Ferguson.

Cruel Sea

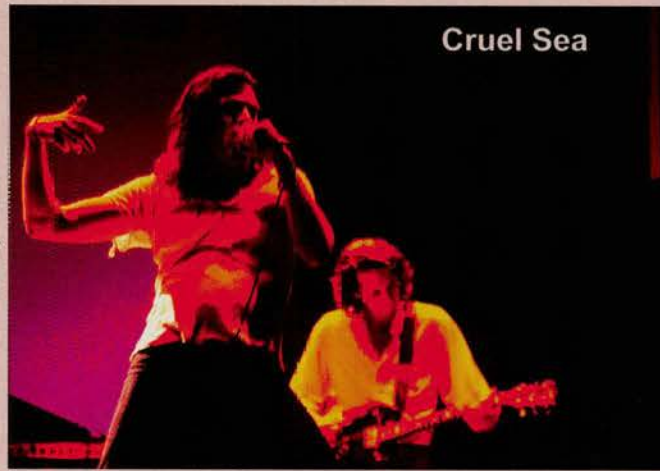


Photo: Marty Williams

The *Cruel Sea* played two nights at the Athenaeum Theatre in Melbourne. Great to see a band like this before midnight in a comfortable environment. The lighting, by Damien Oxley, took advantage of the theatre and looked really good. It was the best live performance of the band in three tours to Melbourne. ● Marty Williams

Huxton Creepers



Photo: Marty Williams

The *Huxton Creepers*, with support act and special guest Tim Rogers of *You Am I*, helped out on a cracking 'Shake Some Action'. Great re-union after 7 years, bands always seem to sound better after a break and a bit of maturity. They played Sydney, Perth and Melbourne ● Marty Williams



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Technology

SPECIAL AWARDS EDITION

How YOU voted

This is the story of how we arrived at the winners. These are the ENTECH awards for product, people and institutions.

The PRODUCT awards were the subject of an exhaustive process. The products are **not chosen** by Connections Magazine. Nor do we choose the product winners. Readers of Connections choose and vote.

Connections have not now, or ever, endorsed any product. (Other than T shirts printed by Judy at Bongo Print!) Readers call almost every day seeking advice on products and we must politely decline. Our role is that of conduit, medium, media - we are impartial to market conditions. We do not do advertorial, we do not link advertising to stories, and we do not wheel and deal.

The Awards bear no relationship to the size of a distributors advertising budget. Nor do the awards have any link to ENTECH trade show floor space sales. Some firms who won awards were not exhibitors at this ENTECH.

This has been a completely open awards process. In August last year we published a full page appeal for nominations. We followed through with letters, faxes and editorial until December. Despite this, we have had some flack about the process. Fortunately, where flack is directed at us by forthright individuals, we are able to discuss the process and seek

suggestions as to ways of improving the Awards. We invite constructive criticism.

In January we collated nominations into categories, and in March the voting form was carried in the middle of the magazine. The form could not be duplicated, copied, or faxed.

Voting forms were collected at the cutoff date of April 1st. They were shipped to our returning officer, Bruce Rowland of accountancy practice Partlett Chave & Rowland.

The response from the industry at nominations time has been acceptable, but could have been better.

The actual voting response was great, with more than 1,000 eligible forms returned.

PEOPLE AWARDS

We also called for Nominations for the People and Institution Awards. These were then organised by us, and in this case we did have input. Connections assembled a panel who finessed the people awards.

The 1997 awards will be delivered at a dinner in Melbourne, with the tradeshow to be held at the new Melbourne Exhibition Centre, on April 23, 24 and 25th.

For the 1997 Awards we will further refine the process. We will announce the details again in August, so please stay tuned. And remember to get involved. These are YOUR awards.

WHAT a night!



SYDNEY'S Metro is a great dinner / awards venue. Randall Waller and his band kick started the Awards with a blistering (and re-written) version of 'It's a long way to the top', whereupon Vince Sorrenti took control of the masses. Seriousness was finally restored, and the awards were dispensed. With food, drink, awards and much serious networking all done, the 400+ people present were treated to the soulful Doug Williams and the Black Mass. Thrown onto the street after midnight, several hundred then partied on at RIVA nightclub.

Bruce Jackson Honoured

"I truly didn't expect this" he said, before taking the ENTECH Award for International Achievement home to LA. It joins an EMMY and a TEC award for the Australian audio achiever, who was a special guest at ENTECH.



Awards Flight Winners

To encourage readers to actually VOTE for the ENTECH AWARDS, we offered QANTAS return air tickets to ENTECH for three lucky winners. They were duly drawn out of the barrel and were:

John Schlink, from AAV Duplication Services in Melbourne;

Jerry Reinisch, from Outlaw Recording in Trinity Park (Cairns);

and: **Paul Bennetts**, from the Henley & Grange Youth Theatre in Grange, SA. He is pictured with Amanda Garland (left) and Caroline Grafton at ENTECH. Paul also celebrated his 20th birthday at ENTECH!



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 Use Three-Dual Mono Effects Processor
 At 44.1kHz Sampling Rate
 18-bit Processing



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EFFECT	PARAMETER 1	PARAMETER 2
Reverb	Time	EQ
Delay	Time	Feedback
Modulation	Speed	EQ
Pitch-Bend	Detune	EQ
Mod-Pan + Delay	Delay Time	Balance
Mod-Pan + Reverb	Delay	Balance
Mod-Pan / Delay	Delay Time	Balance
Mod-Pan / Reverb	Delay	Balance

2 adjustable parameters for each effect or combination.

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Perth: (09) 443 5050 Auckland: (09) 415 7777

1996 ENTECH AWARDS: THE WINNERS

Audio Contractor Product

ARX Mixmaster

Manufactured in Australia, by ARX Systems Pty Ltd.

Sampler

Akai S3200

Distributed in Australia by Australis Music Group.

Music Technology Product

Roland VG-8 Guitar System

Distributed in Australia by Roland Corporation (Australia) Pty Ltd.

DJ CD Player

Pioneer CD-J500 CD turntable

Distributed in Australia by Pioneer Electronics Pty Ltd.

Live Mixing Console - Large Format

Midas XL200

Distributed in Australia by Mark IV Audio Australia.

Live Mixing Console - Small Format

Mackie CR1604

Distributed in Australia by Australian Audio Supplies.

FX Processor

Lexicon PCM 80

Distributed in Australia by Studio Connections Pty Ltd.

Signal Processor

Behringer Composer MDX 2100

Distributed in Australia by AVD - Audio Visual Design Pty Ltd

Audio Tool

ARX Multi-Q Parametric

Manufactured in Australia by ARX Systems Pty Ltd.

>continued<

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.



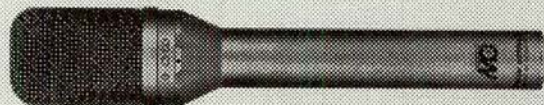
SMS2000

Slim-line transformerless microphone with changeable capsules. The winners choice for a professional recording microphone with remarkably low intrinsic noise and incredible sound. Modular construction makes this a studio owners biggest asset.



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

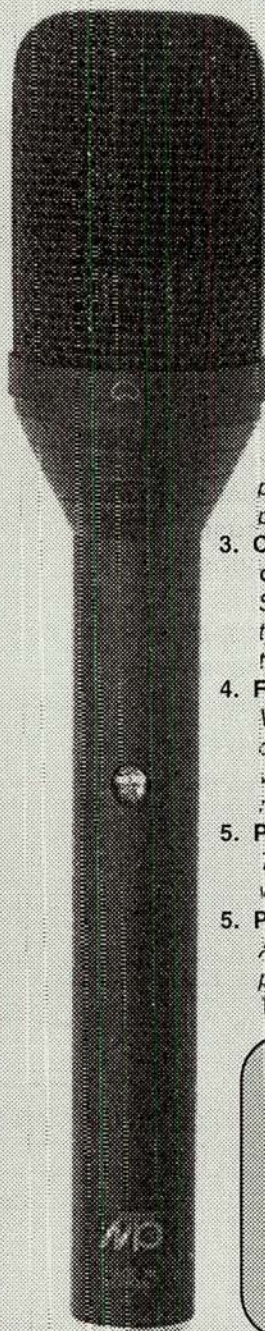
Some engineers regard this microphone as the new industry standard. A production favorite from one of the longest standing mic manufacturers.



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".

Now you can afford to own a microphone equipped with the legendary M7 capsule.



MICROTECH GEFELL MODEL MT71.1S

Features:

1. Large membrane capsule.

Normally only found in expensive production studios, the famed M7 capsule provides a warm, well rounded, true-to-life sound. Audio Engineers love it.

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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1996 ENTECH AWARDS: **THE WINNERS**

(continued)

Speaker System - Concert
Turbo Flashlight/Floodlight
Distributed in Australia by ATT Audio Controls.

Speaker System - Midsized
EV Deltamax DML1152-A
Distributed in Australia by Mark IV Audio Australia

Speaker System - Compact
JBL Eon Power 15
Distributed in Australia by Jands Electronics Pty Ltd.

Power Amplifier
QSC MX 3000a
Distributed in Australia by AR Audio Engineering Pty Ltd.

Live Cable Microphone
Shure Beta 58
Distributed in Australia by Jands Electronics.

Wireless Microphone System VHF
Shure L/LX Series
Distributed in Australia by Jands Electronics Pty Ltd.

Wireless Microphone System UHF
Sony WR 800 Meg System
Distributed in Australia by Sony Australia Limited

Near/Midfield Studio Monitor
Alesis Monitor One
Distributed in Australia by Electric Factory Pty Ltd

Recording Product
Digidesign : Pro Tools III
Distributed in Australia by Digidesign Australia.

Recording Console
Yamaha 02R
Distributed in Australia by Yamaha Music Australia.

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JV™ 1280



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1996 ENTECH AWARDS: THE WINNERS

Studio Microphone

AKG C3000

Distributed in Australia by AWA Distribution.

DAT

Panasonic SV3700

Distributed in Australia by Studio Supplies.

Recording Peripheral/Accessory

Crookwood Paintpot Preamp

Distributed in Australia by AR Audio Engineering Pty Ltd.

Video Projector

Sony VPH-1292

Distributed in Australia by Sony Australia Limited.

The PEOPLE & INSTITUTIONS AWARDS

Lighting Designer of the Year Award, TV: **Rohan Thornton**. * Sound Production Company of the Year Award: **System Sound**.

Lighting Designer of the Year Award, Stage: **John Rayment**. * Exporter of the Year Award: **Bytecraft**.

Road Warrior of the Year Award. **John Kulakowski** (aka 'Felix'). * Production Export Award: **Jands Production Services**.

Live Sound Engineer of the Year Award: **Steve Scanlon**. Recording Engineer of the Year **Kevin "Caveman" Shirley**.

Film Sound Recording Award: **Ben Osmo**. Recording Industry Initiative Award: **Studio 52 - Melbourne**.

Australian International Achiever Award: **Bruce Jackson**. Youth Technical Development Award: **Phil Cullen**. *

Lighting Production Company of the Year Award: **Chameleon Touring**. * Contracting Award: **The PA People**.
 >> for the full story, see over >>

* These winners are detailed in the Lighting section, from P.80.

**LIGHTING PRODUCT AWARDS,
GO TO PAGE 80** ⇨

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by Chris Steller

Smart Mixing...

Today's project studio has reached a level of sophistication well beyond any expectations we had just a few years ago, with the proliferation of MDM's (modular digital multi tracks), hard disk recorders, and multi-port MIDI interfaces. That amounts to heaps of gear to control.

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ENTECH AWARDS 1996.

See also Lighting awards, page 80

Live Sound Engineer

The ENTECH Live Sound Engineer award for 1996 goes to **Steve Scanlon**. He works with Tina Arena and Rick Price, and wins this award for the excellence of his live sound mix on the Tina Arena national tour late last year. Steve exhibits the best traits of an Australian technician - he is dedicated, fastidious, and he is mindful of the quality of his product. In live sound mixing he creates a transparent sound with great vocal definition. You can hear every instrument, every voice, every element. Balance, tonality and awareness of system performance are all trademarks of a Steve Scanlon mix.



Production Export Award

We honour a firm who have exported to Asia, but this time the export is expertise. They are actually a production firm, who have introduced Australian technicians and know-how to the Asian entertainment industry. They established a branch in Singapore back in 1993, which has steadily grown. Australian managers are in place, and they work synergy with Australian and international promoters. The firm is **Jands Production Services**, partner Paul Mulholland (pictured) collected the award.



Sound Production Company

.... of the year Award goes to **System Sound**. This firm have expanded their business into new areas in the past year. They provided audio for the Tina Arena tour, a step away from their traditional theatre fare. They do sound for major musicals too, with Phantom and Miss Saigon amongst their portfolio. They have also worked in Asia in the past year, and have recently established a sales company. System typify commitment to quality in every aspect of their operation. Director John Scandrett is pictured collecting the Award.



Recording Engineer of the Year

goes to someone who actually began his career in South Africa working with predominantly black acts. Although now a resident of Sydney he works internationally from the USA to the UK. Australian projects include acts from Ammonia to Margaret Urlich but he is honoured for his major achievement- the Silverchair album, *Frogstomp*. This debut album was produced, engineered and mixed in unusual circumstances. It is not often you take a young raw act and mold them into an instant Number One Seller. The creativity used in the end product is unmistakable. We are of course awarding Kevin "Caveman" Shirley.



CONTRACTING AWARD

Our contracting award goes to the **PA People** in Sydney. This award is for engineering excellence at the new Brisbane Convention and Exhibition Centre. During a story Connections did at the Centre, the staff praised the work of the PA People. Having seen the job first hand, it is a good indication of the commitment to quality our best technical people exhibit. Roger Rapsley (right) collected the award for The PA People.



People & Institutions.



Film Sound Recording

Our **Film Sound Recording** award goes to **Ben Osmo**. He is a location sound recordist who recently completed location work on the set of the new Phantom movie. In this he coped with more rain than he had ever seen before, and different wireless microphone frequencies than what we are used to here. Ben also recorded the location audio for Babe, in conjunction with Wayne Pashley and Julius Chan. Babe entailed new problems and new learning curves in recording small animals. Geoff Grist of Audio Sound Centre sums up what is best about Ben, he says: "Ben is a great ambassador for Australia. He is a good communicator, he talks to the editor and the director and gives them what they need".

Recording Industry Initiative

This award recognises **Recording Industry Initiative** and goes to **Studio 52** - Melbourne, for their Nu-Music Compilation Series. The Nu-Music Series is a celebration of unsigned artists. Nu-Music is the vehicle which allows unsigned artists the opportunity to record and release material which would otherwise remain un-heard in the commercial sector. This is achieved by prolific marketing campaigns and the blood, sweat and tears of studio owners Paul Higgins and Trevor Carter. The 10th Birthday Series 12 CD is due for release shortly and this award is our gift to Studio 52. Paul Higgins and Trevor Carter are pictured with recent studio visitor Monica Seles.



International Achievement Award

In the early 1970's a young man left Australia bound for London. He didn't get there, instead he ended up working for Elvis. He saw the pioneering days of new live sound technology, and was involved at the coalface of new developments. Having experienced the ups and downs of working with one legend he went on to work for another, through Bruce Springsteen's glory days. As a live sound engineer he also assisted in the development of products and techniques which are in use today. Last year he won an EMMY and a TEC award for his live sound for Barbra Streisand. He also established a high tech audio manufacturing firm in Los Angeles which he has just sold. **Bruce Jackson** typifies the very best of our resourceful and versatile technicians, and he is awarded our **International Achievement Award**.

EXPORTER of the year

Many manufacturing firms working in our industry now pursue export markets. In the mid 1980s about two firms aspired to export Australian made equipment overseas. Today in 1996 we count more than 20% of the firms present at ENTECH 1996 as exporters. This award goes to **Bytecraft**. The firm has used business strategy and back room savvy in building its business internationally. They don't take too many chances, and actually pass over work which may test their ability. Recently they won work within a contract worth over \$20 million in Malaysia. John O'ford from PLASA presents this ENTECH award to Shirley Jensen from Bytecraft.



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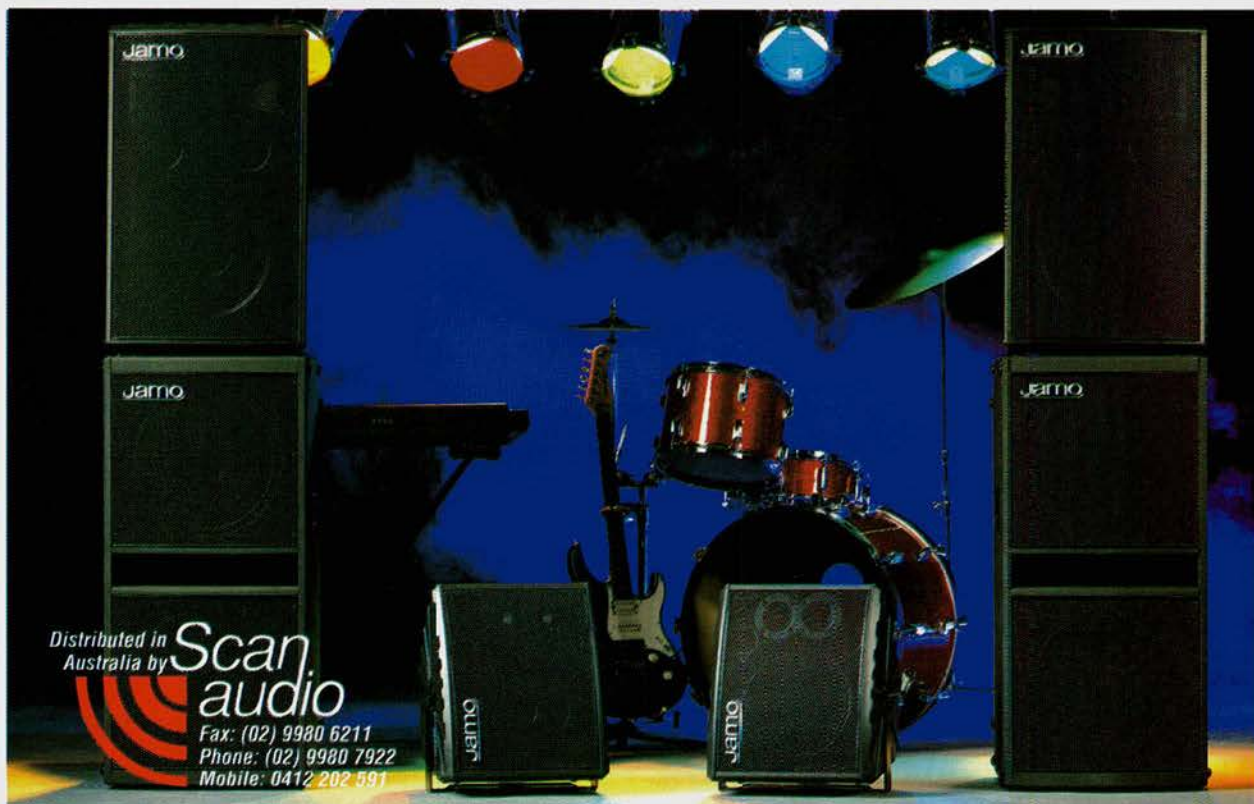
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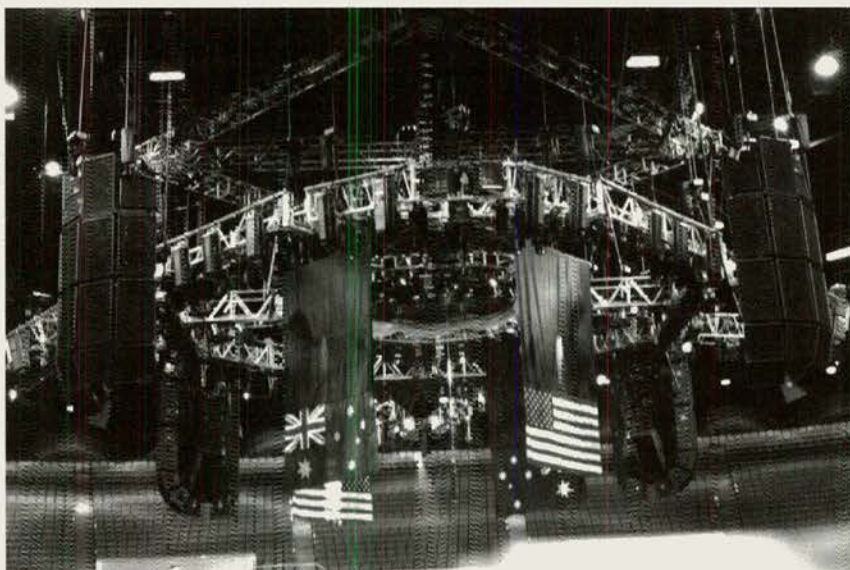
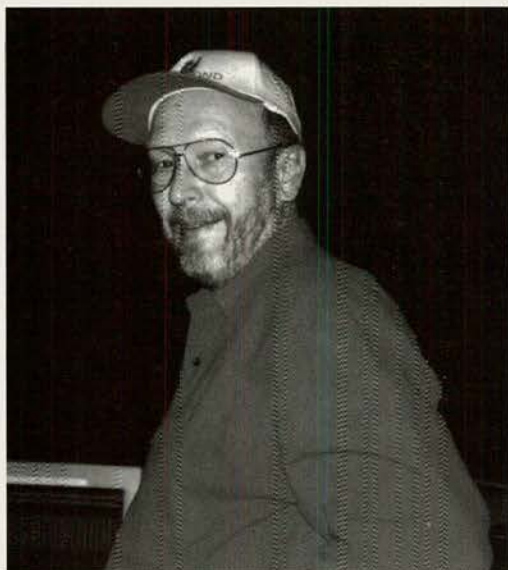
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Write in Reader Service Number: 182



The amazing disappearing console

If you went looking, you'd wonder how come Stan Miller was mixing Neil Diamond's recent tour on just a 24 channel mixer!

Fact is the real action took place out of sight, with a world first use of inexpensive and existing technology to save space and mix a show better!

Julius Grafton describes how it was done. And YOU can do it this way too!

Stan Miller is waiting patiently at stage door as I lead 50 people up. They are all ENTECH visitors who've paid \$72 for a ticket to the show and today, this very afternoon, a technical tour.

Now in his 50's, Stan Miller is every bit as much an audio legend as the guy who accompanied me this day on the walk over from the Sydney Exhibition Centre to see the Neil Diamond production. "Bruce Jackson, as I live and die....."

Stan goes into performance mode and starts joggling our crowd with information, non the least of which is that every nut and bolt in the show has come from the USA, and every nut and bolt will go onto air freighters for the next leg of the tour.

Neil Diamond has high production values, and the tour revenues to support them. The issue must be just how much money should

be spent to keep the audience coming back, and in 1996 for the first time the tour audio budget has been eclipsed by the lighting budget. This itself is a trend which has turned the live production around and given a serious boost to the lighting industry. Witness ENTECH where the growth in the live lighting market is obvious.

Stan has been mixing Neil for many, many years now, and can usually be relied on for some groundbreaking techniques. This tour is no exception, with the majority of the show mixed on little Yamaha ProMix 01 digital mixers. 11 of them, to be exact.

This is made possible by SAMM software, which incidentally was released here at ENTECH by AWA distribution. SAMP means your PC can drive a bunch of ProMix 01 mixers, which is what it does for Stan.

The ProMix - ers are all plugged

into one 24 channel Yamaha PM3500 console, which is where the main vocal channels are. 16 stereo inputs handle the ProMix and effects returns. All instruments and other inputs are run from the Pro Mix array, and Stan can reconfigure all these via a cue list on SAMP.

To put you in the picture, imagine a typical workload for a concert sound engineer.

Song starts, channels unmuted. Effects and reverb programs established, effects and reverb sends opened, effects and reverb return channels unmuted. Channel levels adjusted for each instrument where required, and some EQ changes made if necessary. Chorus vocal mics unmuted when needed and remuted when not. Effects programs switched.

Duplicate all that several times, while keeping a listening watch

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Write in Reader Service No.123

Neil Diamond Sound

on every channel and monitoring input gain to ensure the gain structure is clean.

Well, with SAMP and the Pro Mix array, Stan can fire up everything he needs by stepping through his cue list. The 11 ProMix -ers will all respond to any cue command, every channel on a ProMix has flying faders, resettable EQ, access to inbuilt SPX type effects and onboard dynamics. All these functions are programmed to cues and so changes are made by the system, when the operator is ready.

The Pro Mix consoles are all rack mounted, so they are out of the way. They need not be exposed to the world, because they sit and do their thing to command. The racks have four ProMix units stacked vertically on draw rails so they may be accessed quickly.

SAMP will also generate SMPTE so you may control your show from the PC if you choose. On The Diamond show, this is done only for the opening overture, which is run from a Roland DM-80 hard disk recorder. This is locked to a Sony PCM-8000 (aka Tascam DA-88) 8 track digital tape recorder, which is running the same overture track. This way if the Roland misbehaves (and Stan says it will not) then the Sony is ready to pump in the same audio.

During the overture, the 8 audio tracks are automated on the ProMix 01 which handles the outputs of both the Roland and the Sony. It's a powerful glimpse at how audio automation can work in the high demand, high pressure world of concert sound.

The time code automation used for the overture means timed fades are possible, whereas the cue change mode of SAMP simply 'snaps' the ProMix faders to the desired, and programmed, level for that cue. Next scene, 'Song Sung Blue', cue 34 hit spacebar <GO> and 11 ProMix -ers with 16 inputs each all change configuration! Lessee now, 11 x 16 is 176 channel faders, 22 master faders, hundreds of mutes, auxiliary sends, EQ changes

Having seriously reduced the tedium of a show mix, Stan can concentrate on the mix itself - having a smaller master console, the

PM3500, to work on. The computer with SAMP is located just right of the desk. If for some reason the PC should fail, the ProMix consoles can be reconfigured using MIDI commands from the PM3500. The first eight of these are accessed by push buttons on the console, and they can snap the ProMix consoles to various different presets.

SPEAKERS

These are unremarkable, and come from Maryland Sound, who are the audio contractors for the tour. They are essentially modified JBL Concert Series boxes which come in two basic types. The high pack has 4 x 12" speaker and a 2450 compression driver on a horn. The low end box has 2 x 18" woofers.

Then there is a long throw box, and a downfill box for those front rows.

System processing happens with JBL 52000 digital system processors, which do time alignment, crossover and limiting functions, along with high frequency equalisation. Some adjustment is needed to compensate for the constant directivity horns used.

As the show is done in the round (did I say this earlier in the story?) the system caters to this with four stacks, run left / right / left / right.

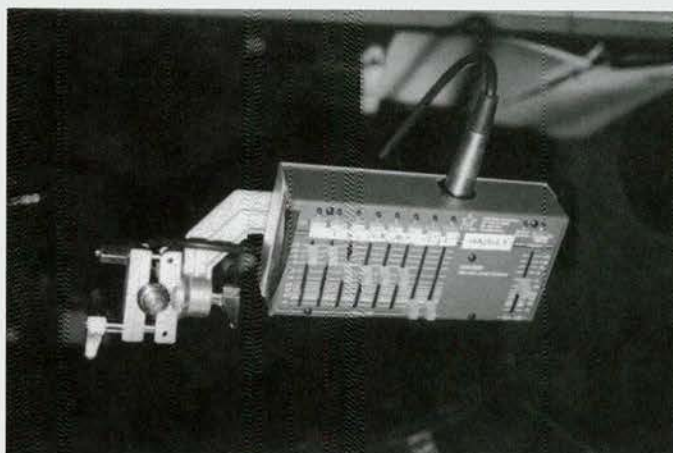
AMPS

With mixing world all leading edge, the amp racks are full of Crown VZ amps. These of course have the IQ modules fitted, because the IQ link is running so that system engineer John Draine can monitor what each amp is doing.

Where required, an amp can be turned down. This is useful when John walks the house and finds a 'hot spot' where too much of something is getting to a particular bunch of seats.

The amps are 5000VZ, 3600VZ and 2400VZ models, racked seven or eight amps high. If the rack has seven amps, then it also has the IQ control modules installed. Two racks drive each of the four floor speaker arrays, so there are 15 amplifiers for each hung array.

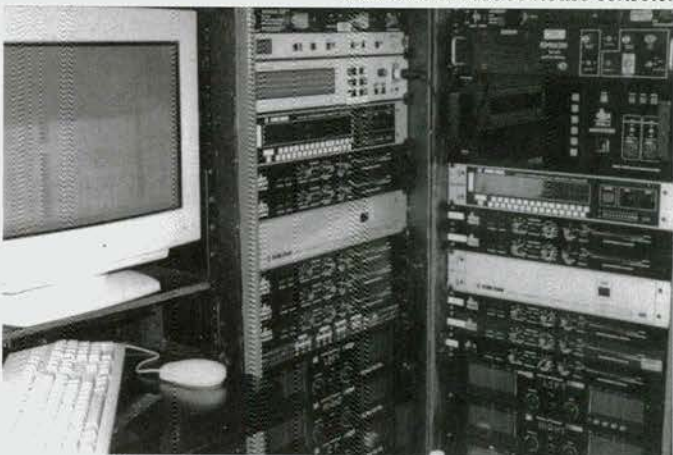
Usually shows flown in the round have space under the stage for the amp racks. In this case the



ASHLEY VCA remote mixer head



SAMP software runs the ProMix -ers, this PC sits on right side of main 24ch PM3500 house console.



Crown IQ amp control PC at the FOH system drive station

understage area is all used up, so the amps sit out back. A long way away, and out where the usual backstage area is at the venue. So far in fact, that the longest speaker loom is a whopping 310' in length. That's over 100m in the new measure, and even though the cable is 20 amps (heavy), it adds some impedance to the load. This is always a test of an amplifier, as to how stable it is driving a long cable.

THE STAGE

This is a masterpiece of engineer-

ing, being 38' diameter and built as a reverse wedding cake. There is a lowered level around the middle for the band, and a raised centre section. Essentially the whole thing rotates, it will go almost two whole turns, just over 700°. The cables run through the centre bottom of the stage and just twist. Cables do not mind this too much!

The stage was built in the USA by an Aussie, whose name escapes me. This guy is considered a staging / rigging guru, he builds major stages and touring sets and

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Neil Diamond Sound

has been suggested as a great ENTECH guest next year!

This stage has done over 250 shows yet it is still tight, fresh and functioning. It is built to one side of the performance area then wheeled into position once the lighting grid and PA is flown out of the way.

A round railway type track is laid out on the floor, the stage is simply driven in over the top, then lowered off integral auxiliary wheels onto the track. Then a bunch of electric motors and rubber wheels provide the motion, driven by an operator down underneath.

It's like a submarine down there, and its where the instrument techs and sundry other personnel hang out. It's hot, cramped, and one can only guess damn noisy too.

There is a red 'reference' light where the stairs are fixed next to the stage monitor mixing station, itself stationary on the auditorium floor. The reference light allows Neil Diamond to get a fix on where he actually is faced at any time.

MONITORS

This tour marks the first time the whole band have been converted to in ear monitors, or in the case of the two keyboard players, headphone monitors. Sony MDR-V600 headphones, to be exact.

Removing 24 foldback wedges from the stage has opened up some space and also knocked down the stage volume. Neil D needs normal monitors still, so he has four flown fills behind each FOH stack, and floor wedges.

All guitar amplifiers are gone, instead the musos play into preamps, then direct into the system. They can do their own foldback mix too, via a complex little system of submixers located under the stage.

I got baffled at this point, when Brian Keefe showed me this kludge of 1r/u devices at his ear-mix station in the bowels of the submarine. A sign on the rack says 'Hey Stupid' and I thought, "Yes, that's me.....!"

Essentially sub mixes from the main monitor mixing desk, manned (personned) by Bernie Becker, go to the submixers, where Brian ships set mixes to some play-

ers. Other players who have one of four new prototype Ashley VCA operated mixer remotes can mix their own stuff. It's a VCX-80R remote level control, to be exact. The actual 'guts' are down at the racks, the level control is just a little remote mixer head.

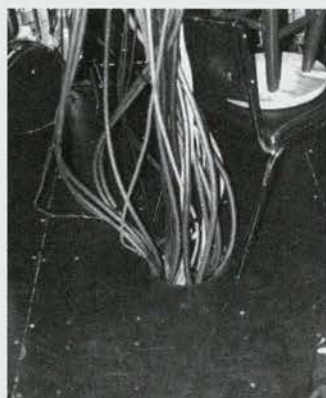
With a bunch of session players all under control after six weeks of pre production rehearsals in LA, little issues were resolved during the first few dates. One little issue is that with everyone's ears all blocked up, at the end of a soundcheck number it became difficult for Neil to talk to anyone! you know the problem, you want to tell the drummer he messed the triplet, but he can't hear you.

The crew fixed this with fixed mic's around the stage which were opened at the end of each number, and routed back into the whole monitor mix.

Then there is the drummer's vocal mic. Everyone knows drummers who sing should never have their mic open for a second longer than needed, lest great amounts of stray drum go into the mix. So the drummer's mic is switched on and off with a footswitch - operated by one of the backup singers! After all, she knows exactly when he is due to sing - because she is a singer!

There is so much clever audio on this show it is hard to know where to stop. The kick drum samples are actual recorded samples of the actual drum- but are used in preference to the raw mixed sound at each show.

Things like that - smart audio at work.



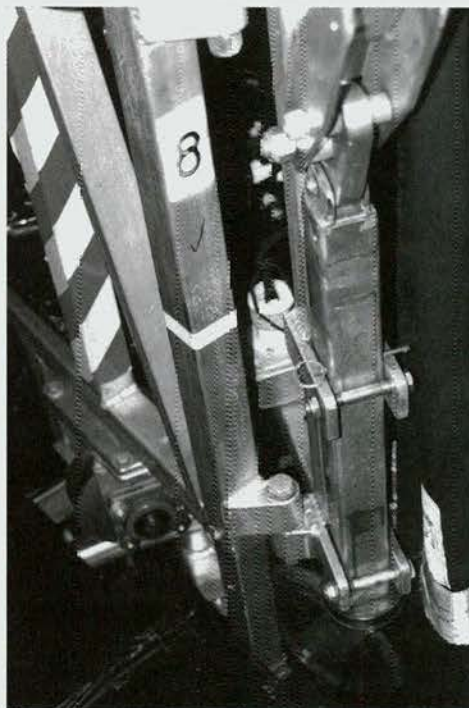
This is centre, beneath the stage. All cables run through hole then under floor frame. Cables can twist naturally as it turns twice.



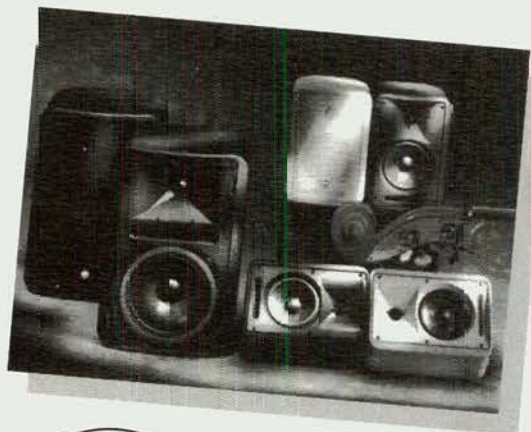
Brian Keefe, down deep inside the stage, with the 'in-ear' mix rack.



This is inside the stage, down underneath, and looking at the floor. One of the tracking wheels is shown here, it runs on a circular rail laid on a frame above the venue floor. The cables run under the frame. Neat eh?



This is another view of the stage workings, this time you can see a tracking wheel at left, and at right a retractable auxiliary wheel assembly is used to move the stage into position over the track. Then it is lowered onto the track!



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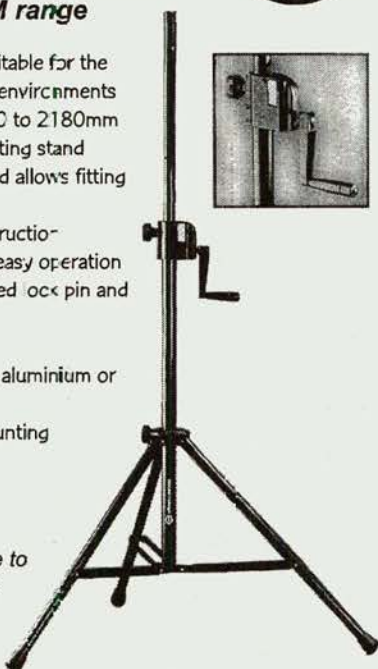
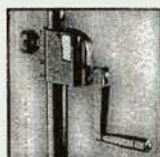
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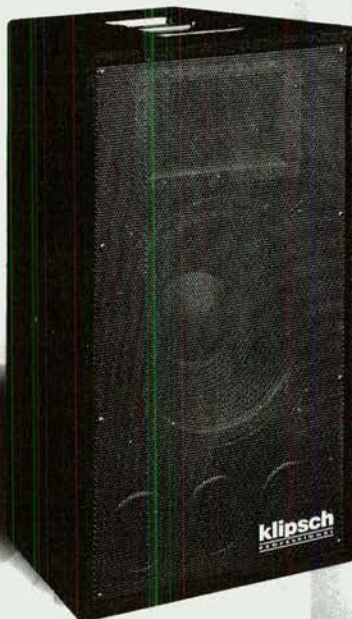
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Can You Please Oink Louder? Thank You

Film Location Recordist Ben Osmo listens carefully to Babe

By Madeleine Murray

Where do you hide a radio mike on a baby pig? Will he be happy to carry the transmitter? These are just some of the things they don't teach you at high school.

Ben Osmo had to find out for himself.

Osmo has been a sound recordist on some of the top productions: *Dead Calm*, *Strictly Ballroom*, *Babe*, and *The Phantom*. I expect sound recordists to be nerdy little guys with grey beards, smoked glasses, and headphones. Instead Osmo is a spunky Greek Jewish guy born in Alexandria (Egypt that is), complete with cowboy boots, tight jeans, and a thick, dark ponytail.

Making the mouth move

Osmo was shown the script for *Babe* when he was working on *Lorenzo's Oil* in '91. He thought

it was a great story, but there wouldn't be much sound work on it. A few years later, it was on, and the rest is history.

The sound job turned out to be bigger than a sow with twelve piglets. First a guide track was made by recording the actors in a studio. This track was given to Henson's in DAT form, and in preproduction they fed the DAT tape onto the hard drive. The puppeteers slowed down the sound track so they could see it on a computer monitor, and programmed the mouth movements to match the sound.

Now the puppeteer didn't have to worry about the mouth movements, because they were automated. He was free to control the head. Other people controlled the ears, the tail, the feet, and so on. Each animal had a head puppet-

eer, and about three other operators. At times they had six different animals going, working in the same paddock as real animals. Everyone needed to hear what everyone else was doing, a logistic conundrum that Osmo had to work out.

A menagerie of cables

Osmo had to come up with a system on location that would be able to have all the animals' sound tracks come through him. The computers that played each soundtrack for each animal, did not have enough amplification, so that the 'animals' could hear each other. And they could not put up big speakers, because they would scare the real animals.

The 'animal's' dialogue would come to Osmo, at this station. He would then mix them, and send a

sub mix back to them, so they would hear each other's dialogue.

"Each person had a foot pedal to activate the voice, the mouth movement," Osmo explains. "So basically we gave them the whole sound track of a scene, but dissected. For example, if you had the pig, sheep, and dog talking, they would have to hear each other. But it was only through me that they could hear."

The animals were given the flexibility to ad lib with grunts and laughs. So Osmo had to mic up all the puppeteers, including the many sheep people. The director had to hear the dialogue, the combined sound track, the ad libs, and he needed to be able to speak to the puppeteers. "We had a lot of locations like sheep fields, so the distances were quite vast. We couldn't use normal walkie talkies,



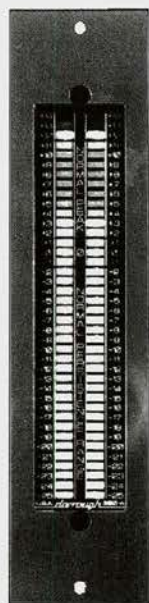
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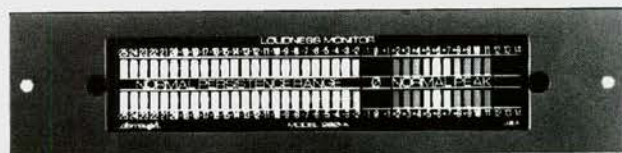
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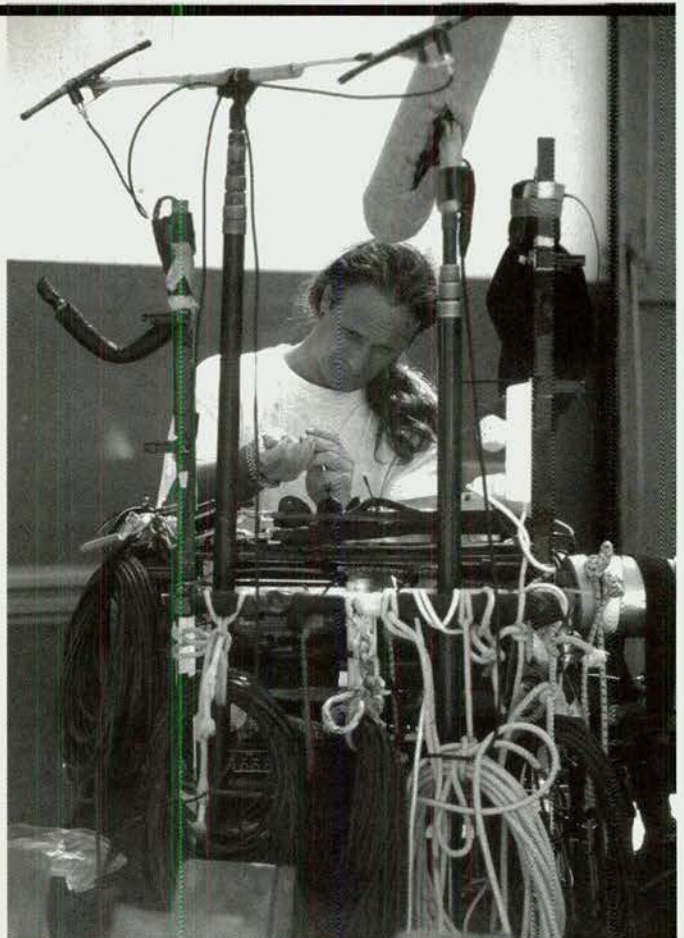


Pigs have moods too

The amount of location recording involved was probably 15 per cent, with humans. Most of the work was recording animal effects. Miller and Noonan decided that they were going to duplicate each animatronics scene with a live animal. Every time they shot a scene with animatronics, they shot it again with a live animal, and recorded sound as a guide track. One of the ongoing problems of recording the animals on set was that the trainers were always shouting instructions, like "on your mark! Stop!"

Osmo built a shed, which he designed so it was virtually an unechoic chamber. He organised with the animal trainers to go into this shed and record sound effects, like the mice, cat purring, pigs hoofs on lino, grunts, dog barks, duck quacks. He stayed over after the shoot for a week getting specific animal sounds.

You record mice by holding a



because the puppeteers had to have their hands free. I devised a link so the director could talk to the puppeteers, continuity, assistant director."

Osmo ended up having about 24 audio lines, which he had to set up in a sheep field, Hoggett's farm, and different locations.

"Each day I'd hook up this menagerie of cables. So we made looms, multicore cables up. The production ended up growing so much that the second unit needed the same set up."

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Ben Osmo

mic over their heads, they squeak and squeal obligingly. Sheep you have to chase through the paddock. To make the cat growl, they brought a dog into the room. That works with my cat too.

"These animals have got different moods. I needed to get all the moods that might be relevant, so we went through the whole gamut of reactions that a pig might have. The mixers wanted to marry the sound of Babe's voice with the sound of real grunts, ear flicks, or the way that it shook its head. They have sounds that emanate from them that make it real. They didn't want it to sound like a cartoon character."

The mixers, Wayne Pashley and Julius Chan, went to great lengths to get a realistic soundtrack, including creating their own noises, and getting the actors to make piggy sounds, or doggy sounds, to use as effects track.

"Originally I thought I would be bored by it, because it was small and I thought I would just be doing guide tracks," said Osmo. "I ended up being totally overwhelmed by the challenge of it. That's not to say there weren't boring moments. Like in one scene, we wanted the little pig to be wallowing in the mud. It took about six hours to get a pig to sit in the mud. It was the middle of winter, bloody cold.

"The pigs have been sealed in their sheds, with hay. They didn't know what grass was when they first walked on it, and they didn't know what wet cold mud was either. They wouldn't sit down. We waited for hours. Chris Noonan was the epitome of patience. The trainers had a box the pig would put its front feet on, so they'd bury that in the mud. That pig wouldn't do it, so they'd get another pig, and it wouldn't do it. Then we'd have lunch. No wonder it took five months to shoot, and a year to post produce. But it was a good result. They thought about it for years before, and waited for technology to catch up."

The Phantom

The Phantom, soon to be released in a blaze of publicity and T-shirts that accompanies American big budget films, was shot in LA, Australia, and Thailand. Osmo has been to Thailand on five films, including *Operation Dumbo Drop*, and *Bangkok Hilton*. He brought 36 pieces of luggage, about 1000 kg of sound gear, including sound stock, gaffer tape, and gear for any situation. If anything goes wrong, or missing, Osmo calls Audio Sound Services to help him out. The owner Geoff Grist, an ex sound recordist, understands the problems involved with location shoots.

They were shooting in the jungle, and spectacular locations two hours north of Phuket. They spent about a week ferrying around different islands. The grip's and gaffer's trucks, generators, camera and sound gear, props and utilities, were all taken on a huge barge the night before. The crew would go on a catamaran for an hour to the location, and shoot all day.

In the jungle shoots, they would off load from their trucks onto 4WD vehicles, then drive for about 2 kms along mud roads. Osmo brought his sound cart, which includes mixer, radio mics, boom mics, cables, and a DAT recorder. Also a Nagra for analogue, which is requested on most productions, particularly American. When they unload, they carry the gear around in a stretcher.

After the director and first assistant director decide the exact spot for the shot, Osmo finds a spot where he knows he won't have to move four or five times. "I find a spot that's out of the road, but not in anyone else's way. I've got a small TV monitor, as most productions have a video split. I feed sound to the video, and get a link back, so I can be stuck in a corner somewhere in the jungle, but still see exactly what's being shot. I have radio communication with the boom operator, and feed the director radio link of what I'm re-

ording."

Osmo's main job on location is to record the actors' dialogue as clean as possible, with minimum background noise. For dialogue, the best way of micing is with a microphone at the end of a boom pole, and a cable straight to the mixer. This is the cleanest, most reliable, and most natural sounding way of recording. Radio mics are used when the actors are far away or in wide shots.

The sound recordist has a vital, almost umbilical relationship with the boom operator. While the recordist is at his table, with playback and monitors, the boom swinger is on the set, creeping around, holding the mic above the actors' heads, always just out of shot. Osmo has been working with Gerry Nucifora for ten years, starting with *Dead Calm*. Nucifora has to be able to keep the mic in the optimum position for several minutes, and to anticipate every sentence as actors talk. He has to keep out of the actor's way, and follow their moves on the set.

Osmo stays at his sound table. "I tuck myself away, I stay back. So the crew can put their lights where they want, the dolly, tracks, crane, props. You hardly ever see me in crew photos, because I'm outside the action, but I'm always connected either with a mic cable or a radio link to the boom opera-

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tor and the director. So I'm psychologically there."

Osmo has to choose the right mic for every situation. The Thai jungle was near a road, with noisy trucks. They had unit people stopping traffic, but there were other roads they couldn't get to, so Osmo had to use very directional mics.

Radio mics

For radio mics, the challenge is to put a mic in someone's clothing, and make it sound natural. The Phantom was a tough one, because Zane's costume was skin tight. "We took one of Zane's rubber guns, cut the barrel, and glued a transmitter on where the barrel would go. His lycra suit was virtually see through. We fed the cable from the holster under the armpit, under his pec, onto the sternum. I cut some photographic tape to camouflage the mic in the shape of the fabric design, and stuck the mic onto his chest with see through surgical tape. It worked beautifully. The only problem was that it was incredibly hot, and Zane would get sweaty, so we could only do it in the last minute. I liaise with the costume designer, and try to get natural fibres if possible, because synthetics cause static electricity, and more rustle."

The best place for a radio mic is

in the centre of the chest, slightly away from the clothing. Osmo uses gizmos like surgical tape, blue tack, or sews the mic into a specially made little pocket. The mics have to be as small as possible, generally Tram, or Sony.

Osmo uses the Micron diversity transmitter receiver system for radio mics, the agent is dB audio in Melbourne. "I use them exclusively in the work that I do. They're very robust and reliable for location work. They're made in England, and tested in extreme conditions, such as freezers. I've been using them since I worked in the ABC. They've kept up with technology. They have a diversity system, the receiver is basically two receivers working in tandem. So you have two aerials, and if one of the receivers has better reception, it will cross over to that one. You don't hear the change, but it gives you much better options, particularly on location where you have a lot of interference problems. I've used them all over the world on different frequencies, and most of the time they've been quite successful."

Quiet on the set, please

Another problem with the Thai shoot was lots of rain. It rained so much that they made an indoor set. They built it in a warehouse, on a wharf, with a corrugated tin

roof. The shed had slats with air coming through, so it wasn't soundproof. Three generators were running to light the huge set. Osmo tried to baffle the generators as much as possible, but he still had rumble, plus rain on the tin roof. It was a working wharf, with a huge ice machine for the fishermen going out. And the longboats with deafening V8 motors were going up and down the river.

"We had the water police, our unit people, and 16 others getting silence when we were about to shoot. Asking the ice machine to stop, holding the boats. But it got to a stage where the trawlers refused because they were losing money. We used buses as baffles, acoustic foam, everything. I think I aged about ten years. It was hell, because you could only work within a window of opportunity of about a minute or two.

"Everytime we would mic a scene, unless it was an extreme close up, we couldn't boom it. We were forced to use radio mics, which take time to set up. Frequencies in Thailand are slightly different, so I had to order different mics for that area. It was hard, but at the end the executive producer came up, shook my hand, and said we saved them thousands of dollars because it worked well."

Sound effects are another area.

Osmo ducks off at lunch, or before the shoot to record rustling leaves, crashing waves, or jungle atmosphere. "I've got what I call the low mode, a small four channel PSC mixer wired up to another DAT machine. I have that in a little carry pack that I can just throw over my shoulder, and dash out to the jungle. That's different to the DAT machine and the larger mixer I have on the sound cart. In some situations, like when we were filming on the water, that's all that came out. We were basically working off a rubber ducky."

Geoff Grist, who owns Audio Services Centre, considers Osmo a top sound recordist. "Ben's world class. He's a great ambassador for Australia in terms of representing Australian technicians. He does Disney pictures, and gets asked overseas. He also does a Lot of George Miller's work, and gets invited back. He's a good communicator. He talks to the editor and the director, and gives them what they need."

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THEATRE

YOUR THEMES ARE SHOWING

The new Sydney Casino will have everything. meantime, the Theatre specifications have just been released.

By Madeleine Murray

The new Sydney Casino will open six months ahead of time, in November '97.

It sounds like an extravaganza on the scale of *Waterworld*. The visitor will be treated to waterfalls, aquariums, deserts, theme rooms, theme restaurants, wave pools, rocks, and mist.

It will be interesting to see how Australians react to the American affection for over the top spectacle.

There are two theatres:

The Lyric style theatre will have the following features.

- * 2000 seats in continental seating, on three tiers;
- * Proscenium 9m h x 15m w;
- * 30 m from proscenium to rear of auditorium;
- * main stage 15m deep;
- * rear stage area 16m wide x 16m deep, with 9m clearance;
- * prompt side wing 15m deep x 14m wide;
- * 2 FOH lighting bridges, box booms, follow spot room;
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- * 23m grid;
- * Variable speed, motor assisted counterweight for proscenium house curtain rated at 750kg;
- * Motorised French action system for proscenium house curtain;
- * Variable speed French action system for forestage house curtain
- * Safety curtain;

- * Orchestra pit capable of seating 90 musicians;
- * Truck lift to lift container size tray (excluding prime mover) to stage level.

The Showroom style theatre will have these features:

- * 900 seats cabaret style on one tiered level;
 - * Proscenium 6m wide x 12m high;
 - * Main stage 12m deep;
 - * Rear stage area 12m deep x 20m wide with 6m clearance;
 - * Prompt wing 12m wide x 9m deep;
 - * 2 stage lifts, each 9m wide x 3m deep;
 - * 2 forestage lifts, each 9m wide x 3m deep;
 - * Substantial sound reinforcement system;
 - * MATV and composite video reticulation to most areas;
 - * Sound control booth in centre of auditorium;
 - * Main control room above rear of auditorium;
 - * Provision for colour monitors in foyers;
 - * Variable speed, motor assisted counterweight for house curtain rated at 750kg;
 - * Motorised French action system for house curtain;
 - * Safety curtain passes through stage to level below to enable full width scenery access from understage onto forestage lifts;
 - * Provision for Parsarella, stage, and forestage lift covers, small drum revolves, ice rink, swimming pool main revolve, auditorium gantry, rain curtain, power flying.
- Vision Design Studio** are the theatre consultants. The theatre equipment packages are out to tender.

Curtain calls

Compiled by Madeleine Murray

The Comedy Theatre in Melbourne has been bought for \$2.5 million by developer David Marriner. The venue will still be run as a comedy club. Marriner owns the Princess, the Old State, and the Regent theatres.

The Palais in Newcastle is in receivership. The site has been a dance hall, skating rink, disco, dance hall, furniture and antique store, night club, and pool hall.

The Cowra Council bought the local picture theatre when it was closed by its owner. The Council and the local paper felt the loss of the theatre would be unfortunate for the town. So the Council

bought the theatre, operated it for 2 months, built it up, and then sold it to a commercial operator.

Swinburne University of Technology in Prahan, Victoria have just finished converting a small space into a studio/theatre which seats 190. This is one of the best technical training spots in Victoria. It will be fitted out as a drama theatre with a 36/72 memory board, portable dimmer racks, and fresnels. Hassell were the architects, and Dennis Irving, of Entertech the Theatre consultant. Entertech is on (055) 922 033 .

The Faith Lutheran College have *(continued over)*

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Curtain calls

Compiled by Madeleine Murray

(continued)
provided additional funding for the **Faith Centre in Tunundra, Barossa Valley**. This is a tight knit community, and Lutherans are very much part of it. The new hall will be a facility for the Barossa Music Festival, and other events. It seats 900-1100, with a proscenium stage facing a two level auditorium. Stagecraft in Perth did the counterweights and drapes, Osmond Electrical in Adelaide the lighting and control, and the audio and stage communications are by Premier Lighting. The architect is Geof Nairn, and the theatre consultant Dennis Irving.

After decades, the **open air theatre in Everglades Garden, Leura**, is being revitalised. The new manager, Trish Sollenfant, has had it for a year, and in that time they have put on ballet, opera, and theatre. Manicured Thuya trees on either side form the wings. The backdrop is a sandstone arch, with a fountain featuring a bronze naked man. Call Everglades on 047 841 938.

After thirty years, **The Canberra Playhouse** has had its last curtain call. The Playhouse had many limitations: 300 seat capacity, meagre wing space, no storage area, no loading bay, and no flying space. The Canberra Theatre Centre will be built on the site.

Australia's oldest mainland theatre has been saved, so far. Half of **Adelaide's Queen Theatre**, built in 1841, remains—the facade, internal walls, basement, and iron roof. A \$200,000 grant from Environment Minister Wotton will go towards building work, and \$86000 a year for running costs. Plans for the building include a new floor, fireproof perimeter wall, fire protection, and plumbing. More funding from other sources will be necessary for full restoration of the theatre.

Mike Walsh's Hayden company is vying with Lend Lease to build cinemas in Penrith. Lend Lease applied in August '95 to build a 10 screen complex on the roof of the

Penrith Plaza carpark. Hayden lodged a DA with local council in February, '95. Council has approved the Lend Lease DA, and Hayden is objecting.

\$600,000 has been earmarked by the Carr government for the arts in Western Sydney. \$300,000 over three years will go to a Western Sydney Performing Arts Fund. The fund will be in collaboration with **Parramatta Riverside Theatres, which includes the Joan Sutherland Performing Arts Centre, and the Q Theatre**. The complex has not been used to its full potential. The STC stopped performing there two years ago, citing managerial problems. The money will be given, after a review of the management systems.

The box office records at the **Theatre Royal, Hobart** has been broken twice. Once last month by *Tap Dogs*, and back in '92 by *Hair*. Both productions were by Nigel Triffitt, who grew up and went to school in Hobart!

After twelve months travelling through South Asia and the Himalayas, **Stephen Bock** is back on deck as manager of Deakin University's Theatre Services unit, which runs the 481 seat **Phoenix Theatre** on the Burwood campus, and the 297 seat **Stonnington Theatre** on the historic Toorak campus.

The Regent Theatre in Melbourne is having a \$35 million facelift. Tickets went on sale at the Regent for *Sunset Boulevard* last month. The musical, starring Debra Byrne will open the fabulous theatre in late October. The venue won't be ready in time for the Melbourne Film Festival, in August.

The world's biggest rock concert (according to old members of The Who) for the last twenty years will take place in **Hyde Park, London** on June 29. The Who will perform the rock opera, *Quadrophenia*. Bob Dylan, Eric Clapton, and Alanis Morissette will perform to raise \$750,000 for the Prince's Trust, a youth charity.

Explosion of Screens

Cinema coming soon to a place near you

By Madeleine Murray

Pick up a newspaper, and you'll read about new cinemas opening, or planned.

A giant Imax screen, 10 storeys high, and 38m wide will open at Cinema Plus, under construction at Darling Harbour, Sydney. The \$20 million project will be finished by September.

Meanwhile the rival company, Maxvision, is negotiating two giant screen cinema deals in Australia. One is rumoured to be at a popular NSW tourist spot.

A proposed redevelopment of Bondi Junction includes a 16 screen multiplex, to be built by Greater Union, Village Roadshow, and Warner Bros.

Hoyts announced plans to double the number of its screens around Australia, building over ten more megaplexes, and bringing the total screens to 400.

Village, Warner Bros, and

Greater Union are to build 18 megaplexes with over 20 screens each. These will be giant entertainment centres, "one stop major leisure destinations," according to VR managing director, Graham Burke.

US based Reading Australia plans a \$25 million 25 screen megaplex in Melbourne's Burwood.

Hoyts is kicking off its expansion with a megaplex in Melbourne which is supposed to have 27 screens, restaurant, rides, and amusements.

One explanation for the boom is competition between the big players. And the retailer/shopping centre is working with the cinema chains for the entertainment dollar. Intensity, an interactive entertainment park, is a joint venture between Village, Westfield, and Channel Nine.

Lights, Action, Palm Trees!

Tropical rainforest theatre reopens

By Madeleine Murray

The amazing Karnak Theatre Playhouse is about to reopen.

Built by Diane Cilento on her far north Queensland property/spiritual retreat, it was first opened in '92. Cilento put several plays on there herself, and then closed the theatre.

"I paused for a year, because we hit the middle of the airline strike, the worst time to open," Cilento says. "But no worries, now we're revamped and reopening."

Set in the back of the rainforest, beneath a mountain with two huge waterfalls, the theatre has a raked auditorium in the open air. It seats 400 people. The stage is 10m wide, with an wooden aqueduct roof. There are FOH bars for lights.

"I've been adjusting things, getting an awning and shade cloth cover put on the audience, and reconstructing my relationship with the Douglas Shire Council," says Cilento. "None of them knew the word a-c-o-u-s-t-i-c-s. They didn't even know what it was. My nearest neighbour is more than a

kilometre away. But all of that was another era. It's all gone, wonderfully dispersed into the mist.

On the 14-16 June, there will be a three day festival with Si-rocco and other bands.

"People come here, and they have a whole experience," says Cilento. "It's almost like picking someone up, and putting them down in this extraordinarily evocative place. Letting them see something incredible, and eat extraordinary food, and then be whisked back to where they came from. It's a different thing from going to the theatre, and having to park your car. I think it's the theatre of the future, we're going to want to take this journey, to sit in an inspirational place, and it really is gorgeous."

Cilento is a legend for her beauty, (she played the lusty wench in the film *Tom Jones*), her marriages (Sean Connery and Anthony Shaffer) her mother (who is a doctor and a writer,) and her dynamism.



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A It's a 3-part MIDI automation system consisting of the Ultra-34 Automation Interface (with 4-patch points per channel on the front and lots more technostuff inside), the UltraPilot™ Control Interface (looks like a fader rack but does much more), and Ultramix Pro™ software.

Q Why are there no moving faders?

A Because we designed Ultramix™ to be used with any mixer or line level device without retrofitting. UltraPilot™ reads and transmits physical fader moves. Fader level changes happen electronically and are displayed on the computer screen. Oh yeah — reliable, accurate motorized faders are extremely expensive.

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Q How do I get more info?

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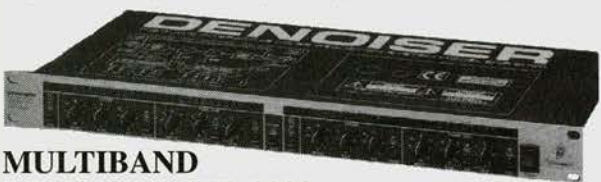
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• TRADE ENQUIRIES WELCOME •

By Madeleine Murray

Oscar Wilde said it's only shallow people who don't judge by appearances. Quite right.

The same goes for a designer, and a card. If a designer has a tacky card, it's an ominous sign. Ken Flower, of Dreamscape, has a striking card. Transparent clouds set against a milky background, with 'Ken Flower', in black coming forward.

This is a very clever card. He has managed to make a three dimensional experience out of what is normally just a plain surface. The more I stare at the card, the more impressed I become. And the longer it takes for me to write this article.

Flower does concepts and designs for multi-media events. In March, he brought a show for R.J. Reynolds, the US tobacco giant, to three Asian cities, Hong Kong, Kuala Lumpur, and Tokyo.

The brief

R.J. Reynolds have offices throughout Asia. They have a new set of TV ads to launch, and they want to give their marketing people a pep talk about teamwork—the idea of a unified approach to selling. So they propose to put on shows in Hong Kong, Tokyo and Kuala Lumpur. Each meeting will have about 300-500 employees from R.J. Reynolds in the region. So there is also a problem of language, with two or three translations needed.

The experience

The show used 24 slide projec-

tors, 4 video projectors, and a 48 channel light console. Adam Charles handled the projection work.

The set was a 30m backdrop, with a centre, and two slanted sides. Scrim ran along the galactic backdrop, 4m in front. Seven abstract shaped screens hung in front of the scrim for the central panel, and behind it on the side panels. Hard to explain, but look at the picture. Planets hung and spun in front of the backdrop, and lights swept across the room and above the audience. The effect was theatrical and subtle. A surreal metamorphosis of images, with no obvious plane, which is what Flower is particularly good at.

"I had the screens made in abstract shapes, so they don't look like screens. When we produced the AV, I had a mask made for the AV, so it projected this shape exactly onto the screens, so they looked as if they were just floating there.

"It was quite special because normally when we take shows on tour to Asia, it's just Mac graphics, a simple operation. We think we did very well producing a show of this complexity, going to three Asian cities.

"I'm trying to create real time virtual reality, an experience that you actually sit inside."

"So you didn't have 10000 exploding mice, or anything?" I asked, just to make sure I hadn't missed something.

"We don't actually do exploding mice," Flower answered, quietly.

What makes this show interest-



Shifting Cloudscapes in Asia

Australians create a show for R.J. Reynolds

Ken Flower and Peter Neufeld

ing is the layers of images that Flower achieves by using four planes of surface, the backdrop, scrim, screens, and planets, with lights and sound as well. The client liked the show so much that the president flew in executives from Europe and America to watch it.

Flower and dreamscape

"In presentations, most people have seen the screen at the end of the room, they're already kind of switched off. They've seen it all before, they go in with a barrier. So we create this total environment around them using lots of different disciplines, anything from lighting, projection, dance, theatre, moving sets.

"We create an emotional experience for the audience so that at the end of it, they're sitting in their chairs going, 'God what just happened there?' Then they're 'soft,' they're able then to receive whatever message their executives want to talk to them about."

Last year Flower was Creative Director on the Nissan Maxima launch in Sydney Town Hall. The audience sat looking up at clouds projected on the ceiling, lights sweeping across soft vertical drops of muslin. Then, the ceiling began to slowly descend, and on it was a car. Quite a spectacular sight.

Another project was the Wave-

length relaunch of Qantas, where he turned the Sydney Entertainment centre into a Qantas plane. Screens along the sides were disguised as windows, the front was the cockpit, and the floor rumbled. Moving footage of runway, and clouds, with sound effects gave a simulated takeoff.

Flower is a graduate engineer. He has worked as a lighting designer, and creative director for places like Wavelength, and Australian Business Theatre.

Flower stopped smoking three days before he was asked to do the R.J.Reynolds show.

Peter Neufeld, the lighting designer

These three shows, in the three different countries, posed some problems. The hardest was the language barrier. Neufeld, and the technical director, Peter Milne, spent weeks sending faxes, and trying to work out what equipment was available in each place. They sent about 50 faxes a day, just about lighting and rigging.

In Hong Kong, they spoke enough English for Neufeld to communicate, but he had never heard of the motors they used, and had no idea of what they did.

"Tokyo was the hardest one, because we had to have all these conference calls and interpreters," Neufeld said. "I asked them to send me an inventory of their equip-

ment. A lot of the figures got lost in the translation, so I didn't understand half of what it meant."

Rigging

Some of the venues had ceiling support, and some didn't. They all had to have at least a 6m. height, which was critical for the mixture of front and rear projection.

"The rig was relatively straight forward. I used about 6 moving lights in each venue, and the rest was standard washes. We had two separate trusses, front and back. The back one had the scenic cloths, and the front one had the screens, and the black gauzes. In between that we slung pipes to hang the planets off, and then the lighting off that to light the planets and the cloth.

"Also because of the changeover in the evening, which was a gala dinner, we had some vertical trusses which I lit internally with the company's colours. So when the audience walked in in the evening, it was quite a different look, basically achieved just through lighting."

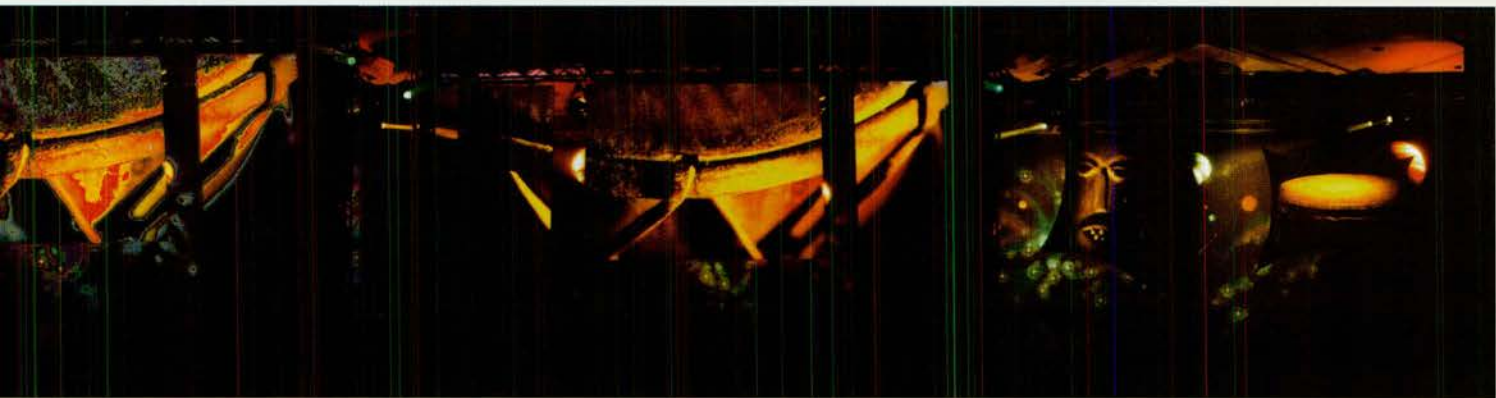
Lighting and teamwork



"In Hong Kong, I used Cyberlights, which I thought were fantastic. They were marvellous because they had glass gobos, and the mixtures were incredible. The operator I had was excellent. In fact, I have never encountered such great moving light operators. They were the fastest I've ever worked with, and nothing was a problem.

"I have to say that they were better than anyone I've met in Australia for this sort of show, although they were a bit slow in KL."

Neufeld was dazzled by the teamwork, particularly in Tokyo.



Asia

The local crew made a bet with Peter Milne, the TD, that they could mount the show in 12 hours, and the crew won.

"They were so efficient, and so fast. No one tripped over each other. In Australia, if you had 36 people working in a ballroom, there'd be problems. They were just fantastic to watch."

The teams were very specialised, even though it was a medium sized show. There were specific companies for rigging, hanging lights, and trussing.

It was all worked out carefully in hundreds of pre-production plans and drawings. Milne, Neufeld, and Flower had to grasp the work practices as well as the technical side.

"We had to plan every single little nut and bolt before it went in, because we could leave nothing to chance," say Neufeld. "Peter Milne is brilliant. He's the best in the business, I think. Doing a show of this scale in three separate cultures took an enormous amount of pre-production. Everything had to be kept simple, but to allow some fluidity. It fitted together like a glove.

"It was very brave to do this show. We toured it all as excess baggage, we took what we could of the set on the plane with us."

Neufeld is about to relight *Looking Through a Glass Onion*. "It's nice to get back and work with English speaking crews! In Tokyo I felt like a diplomat, because I was always followed by an interpreter." •

House AV policies detailed

FOCUS Venue Task Force Report

This month we report on where we are at with our Venue Task Force, which was formed to look at the concerns members have raised in relation to the policies in place at some of Australia's major Convention Centres in relation to the supply of audio visual products and services.

Last month we sent letters to the General Managers of the major convention facilities in order to clarify their position on the supply of audio visual products and services to these facilities by audio visual hire and staging companies. All of the venues (except one) have since responded with their policies. An outline:

ADELAIDE Convention Centre, reserves the right to supply all audio visual and lighting equipment which the hirer of the venue may require. The centre has appointed an audio visual contractor as the preferred supplier of equipment which is unable to supply from its own stock. For exception to this policy the client using the centre must make written request to the General Manager seeking exception if it is a "National Roadshow" (which is travelling with all or part of its own audio visual equipment from state to state). Each case will be considered on its merits and may have an exception granted. Outside A/V technicians may operate the facilities.

BRISBANE Convention & Exhibition Centre has a policy similar to the above and will source any specific needs for a client, and once again welcomes the use of outside technicians.

CANBERRA National Conven-

tion Centre, has an appointed supplier of services appointed whom they recommend. There are absolutely no restrictions with clients choosing their own preferred supplier.

CAIRNS Convention Centre will have a similar policy to Adelaide and Brisbane but will also rely on the services of a preferred supplier as they do not have a large inventory. Exceptions can once again be sought in writing 14 days prior.

MELBOURNE World Congress Centre and Convention Centre. Have yet to respond although it is understood they have a similar policy to the rest for the Congress Centre, and a more open policy for the Exhibition Centre.

SYDNEY Convention & Exhibition Centre, once again they have a similar policy and explain that the policy is based on clear commercial rationale as the centre has made a sizeable investment in its inventory and on this basis it is a condition that clients utilise it.

Well there we go, that is the short of it.... There are several points that we will be taking up on behalf of our members with all of the centre's except Canberra.

Most of the Convention Centres have been built with public money and the inventory purchased ex-tax with public money. In each state a company is appointed to manage these facilities.

The problems faced by the membership of this association are that these centres should be able to compete with an open policy to the rest of our industry - by way of

the fact that they are the in-house operation and the equipment has been purchased tax exempt they should easily be able to win business.

What is wanted by our members is the right to follow clients that they have built up a relationship with over long periods and the client is comfortable in knowing that their preferred audio visual company is handling its needs in a centre. Many large production companies have their own preferred a/v staging companies that know the idiosyncrasies of the way they work. They are then forced to use the services of an organisation that they are not familiar with.

Like the convention centres, the members companies of FOCUS has also made a large investment in equipment and staff and would rarely provide staff alone to operate the centre's equipment.

Clients using the Centres should also have the ability to source competitive quotations from other suppliers and use their services if audio visual costs are a constraint.

The Venue Task Force is currently drafting a questionnaire that will be distributed to members (Suppliers & Producers) as well as some of the larger users of conference facilities for their comments on the venue policies. Once this is collated we will endeavour to talk with all of the centres for a fairer system. Your comments can be faxed to the task force on (02) 356 4883 or through the FOCUS secretariat on (02) 9953 6768 or fax (02) 9953 4234.

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Hire & Production Industry News

• **AUSTAGE** Sydney have purchased a swag of new technology. The list reads:

2 new Sony 1292 data projectors, 1 x MX50 mixer, a Betacam Player/Recorder, NEC 37" data monitor, 16 x 12, 12 x 9 truss super screens, 1 x scan line doubler, 2 x 29" PVM monitors, SVHS player, Sony 1001 video projectors and a Meyer Sound System with QSC amps. Call Joe on (02) 517-1599.

• **GRAFTON SOUND** report a scare story whereby customer calls looking for a large PA on day before Easter - and is vague. Unable to help, 'Mr X' then called several other hire firms and each time the show changed, from film shoot to festival. Graftons had called every hire firm beforehand because it all sounded suss, and they hope no-one was suckered into what was obviously a loser proposition. The moral is that sometimes rival companies are your closest allies and the telephone is a useful tool. Thanks GS, Call (02) 698-7777.

• **AUDIO & RECORDING** purchased the newly released RAMSA WR-SX1 mixing console. It is a 48 + 4 stereo input board, with 20 auxiliary and group outputs, and 10 matrix. The console will debut on the Red Hot Chilli tour. Chilli sound person David Rat is already an

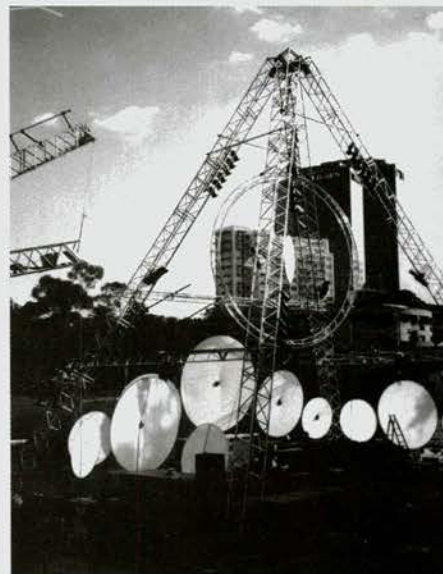
SX1 owner back in the USA.

• **ALBURY SOUND & LIGHTING** have moved to new premises - located right on the goat track itself. Ross Shultz and Mario Sanzo are at 535 Hume highway, with a larger service dept. Call (060) 211-502.

• **STAGING RENTALS** did the mother of all drape jobs at ENTECH, creating the two seminar Theatres and the Shootout area. They have supplied softgoods and hardgoods for Green Day, Bjork, Dwight Yokum, Celine Dion and Simply Red tours. Call (02) 519-6300.

• **CLS** are busy as usual, the Moomba Festival featured an interesting event, the River Parade. The Woman's Circus Barge and the Drum Barge both used huge propane gas torches as well as fire fighting equipment to produce giant jets of water. The Drum Barge had synthetic drums inside and circular scrim which were lit by Intellabeams. The main attraction is when a giant water screen, 30 metres wide, has a 35mm projector used on it. As to what happens when the wind blows water everywhere we at Connections do not know!

• Audio Visual news from **Blacksheep Productions** (Ultimo, Sydney) includes recently supplied A/V support for Boyzone; 4,000 Westfield



screamers; album launches for Tina Arena, Salt n' Pepa; and fashion launches for Jerry Hall, Claudia Schiffer collections. And who is the new person behind the office divider? That's Sue Payne, Event Manager and Client Services.

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The Tent Job From Hell

AFL CENTENARY BALL

By Marty Williams in Melbourne

The topic must have been discussed at various levels; *how can* the one-hundredth year of Australian Rules Football best be celebrated in its originating state? The obvious thing to do is put on a large function and invite a lot 'names' from a life's rich pageant. All well and good, but the venue and staging need to appropriately grand for this occasion. As football is treated as a religion in Victoria, (*hey, it's the GREATEST game of all -Ed*) the best place to have this event is at the Spiritual home, the MCG and erect a vast marquee to accommodate the guests and performers.

The AFL employed Dennis Bourke's production company to collect the necessary hardware to do justice to their vision of the celebration. Once the decision was made to hold it on the main playing field of the MCG a marquee then had to found which would accommodate the anticipated 3500 guests. The marquee to be used measures 110 x 72 metres and has an internal area of 7,457 sq. metres.

This is the largest to ever be erected in Australia. In previous set-ups of this 'tent' it has been supported by eight King poles each measuring 17.5 Mts. high. For this application there were to be 10 poles each capped with a crown fashioned on a Mexican hat to prevent water leakage through the support holes, previously a problem with tents such as this.

Designed by Ron Bell, the owner of Instant Stadiums, the King poles had a network of trussing hung between them which was capable of supporting the 45 tonnes of equipment to be flown inside the marquee. This assembly was capped by spine of trussing which formed the peak of the tent. Between this and the tent material was a line of inflatable bags to prevent tearing from the two surfaces rubbing together. Over the stage area inside the tent an out-door type stage roof supplied by World Stages was flown to allow the lighting to be hung in a conventional manner.

The equipment to be flown inside the assembled marquee was supplied by two main

sources, Jands and CLS. Jands were responsible for audio throughout the venue and lighting production on the stage. There were two 48 channel Yamaha PM4000 consoles used to cope with the performers including Kate Ceberano, John Farnham, Grace Knight and the Movin' and Groovin' orchestra, The MLC choir and Mike Brady and the Music Men.

One console and dedicated effects rack which included one Lexicon 480, 4 SPX990s, 2 SPX900s, a PCM70 and 14 DBX 160s was used solely for Farnham, its signal then fed to the second desk which was shared among the other artists. Fourteen DBX compressors may seem a surprising number, however in the context of their applications, it was not unusual. They were being used to keep a check on vocal channels and bass, three alone for Farnham's voice - main radio mike and two spare wired inputs. Two channels of the second console's matrix output were fed to two Klark Technic DN728 delays whose six outputs fed a Midas XL88.

(continued over)

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Tent Job From Hell!

The XL88's signals then fed the speaker's cross-over/controller units. This configuration was used as the S4s all had a delayed signal feed with respect to the highest level on the stage, which was the vocal in the side fill. The six hours Pat Richardson spent time aligning and EQ-ing proved very worthwhile as the 100dB level the system ran at was smoothly maintained throughout the room.

To achieve this a tone burst was run through each speaker and assessed using a high resolution spectrum analyser. Pat: 'We were only looking at the first reflections, if we'd had a Simms system we could have spent 20 hours and take into account the reflective qualities of the table settings.' The JBL S4s were flown in a combination of groups of two or four. The charming, approachable and informative Grant Walsh was again Farnham's audio operator.

The stage lighting is based on what Chris Newman normally specifies for Farnham with modifications so that the choir and orchestra were adequately covered. The total amount of lighting available on the stage comprised 360 KW of fixed and 48 moving lights, while the audience/dance floor area had 280 KW fixed and 68 moving.

These were controlled by 192 2.5 KW dimmers run from an AVO controlling the fixed lights for the stage, an Artisan for the Vari-lites, PC Spot, 3 Intellibeam remote control units for the lamps mounted on the trussing which encircled the main area of the room and 2 Jands Event 48 desks running the fixed audience lighting. For the performers there were also 4 truss mounted follow spots above the dance floor. Alex Saad and Richard Grenfell were the LDs who looked after everything but Farnham, who was Chris Newman's regular assignment.

To speed change-overs between acts some equipment was shared, as an example the drum kit for the orchestra and for Ceberano was the same. As Farnham performed in between these two acts this had to be removed and concealed behind a large curtain which served two purposes. The first, to conceal equipment from FOH, the second to protect the rear of the stage as the wings had the entrances leading

to two of the 1600 SQM of kitchen areas behind them.

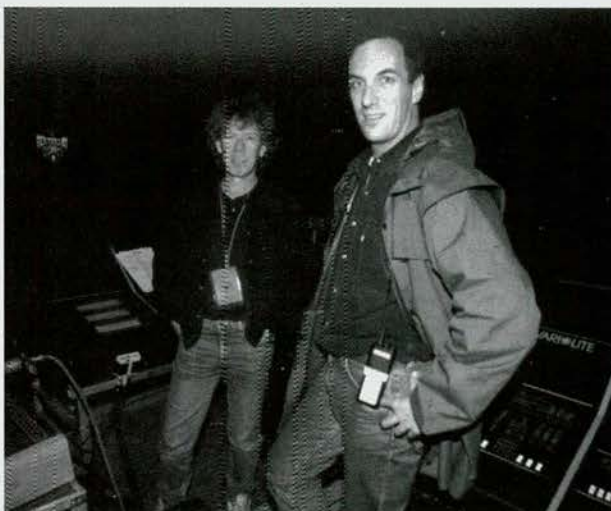
To add extra glamour to the whole event, a commemorative shield of fireworks was hung in the middle of the Southern Stand, requiring a large section of the seating to be covered by plywood for protection from sparks. The bowling green adjacent to the Northern Stand was used for the launch site of another large fireworks display, this also requiring protective coverage.

As the drainage system for the main ground of the MCG is only four years old it would have been conceivable that there were detailed plans made of where the new piping was placed, but no, there wasn't, only a rough only line of where they may be. This was a problem as there were 400 tent poles each with two pegs one metre long placed in the ground using a Bob Cat with a 300PSI hydraulic ram mounted where there would normally be a bucket. This was then placed on a trailer and towed to prevent damage to the ground.

The Northern side of the oval had never been correctly surveyed, so Dennis Bourke's plans for tent placement were found to be a few metres out when the tent was pegged out, it ended up with one end over the fence line. No it didn't rain, it poured!!!!

Fifty millimetres of water in one morning delayed erection of the tent, but the drainage system worked perfectly and the ground was dry again next morning.

With a guest list including the Prime Minister, the Premier, the Opposition Leader and a variety of past and present footballers, all mixed in with the social elite this \$500 per head



Richard Grenfell and Dennis Bourke, ready for the big one!



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■ The recent Melbourne Grand Prix presented a headache for 3AW's Chief Engineer Peter Iliff. He spent several months planning and two weeks setting up the station's **outside broadcast**. According to Mr Iliff it went exceedingly well with 25 mics at 6 vantage points plus a roving FM mic, all co-ordinated through a trackside studio and control room then directed to 3AW via Telstra ISDN lines.

■ The National Acoustics Laboratories located in Chatswood (NSW) offers some useful precision audio services: **Measurements**; transmission loss; absorption co-efficients; frequency response; sound power; testing of loudspeakers and sound sources of all types; acoustic properties of materials; **Calibration**: sound level meters; artificial mastoids (not upper jaw, bonehead), dose meters, microphones (down to 10Hz up to 20, 000kHz), **Other Services**: sound effects recording; acoustic modelling investigation; acoustics evaluation; reverberation rooms; anechoic chambers; hire of measurement equipment. ph 02 412 6966

■ Dolby Inc. (aural hygiene artists) have built a **http page** which has consumer, home theatre and professional sections, including product data sheets and notes. <http://www.dolby.com>

■ ABC Radio now offer an audio recovery service pitched at those wish to save their special recordings, say, a siblings

first gurgle caught on tape or a bakelite/vinyl recording too scratched to listen to. The service offers CEDAR equipment, correct styli, pre-amps and a room full of processing gear and an ABC staffer/engineer. Items can be mastered to any medium (except spiritual). Cost is \$160 for the first hour then \$40 for each other quarter hour. Call 02 333 2517

■ Open Channel (Melbourne) run ongoing industry seminars throughout the year, ranging from location sound, video editing to business issues. Coming up: Video 3: Bridge to Broadcast (May 10); Avid Session (June 1) and Intro. to **Multimedia Authorship** (June 10). ph. 03 941 95111 for details.

■ MIMA Experimenta (experimental film/video exhibition/competition) **Deadline: 14 June**. Call 03 941 95111

■ In the 12 months to December 1995 total ad. revenue for the commercial radio industry was \$502.3 m.

■ **The Production Book** is an on-line catalogue of film contacts; technicians, resumes, banner ads, down-loadable movies, sound and graphics. <http://pb.com.au>, or ph. (02) 356 3355 for listing inquiries.

■ By the way, **http** stands for *hyper text transfer protocol*...

■ Stephanie Lewis, the head of music programming for Galaxy's music channel **Red** has **resigned**. Music Director from MMM Dean Dezius takes over. Some fear the loss of more progressive

programming with Lewis' departure (more Steve Miller please oh please...) The change-over was, as a spokesperson parrots, amicable.

■ Nicholas Negroponete is one of the co-founders of MIT's \$45 million **Media Lab** — an influential US technology think tank. His top three techno topic predictions of the year are: 1. Digital Cash, 2. Security and Privacy and 3. Cyberlaw

■ **WIFT** stands for **Women in Film and TV**, is a on-profit organisation promoting women in the film, television, video and multimedia industries. They also run workshops, a directory, industry referrals. Contact: (02) 332 2408

■ Making a film and need police and police car? The NSW Film & TV office says that the **NSW Police Service** has revised its 'userpays' costs: \$35 per hour, per officer and \$12.50 per hour, per vehicle (four hour minium). Contact the Traffic Sergeant (02) 265 6450

■ The Australian Screen Directors Association have set up a revenue collection company. Why? In 1995 the Association was told there was **2 million francs** waiting to be paid to Australian directors' and writers' whose work had been broadcast in Europe. The catch was: to collect the francs, a company had to be set up. The Australian Screen Directors Authorship Collection Society (ASDACS) now exists to distribute and collect residuals for those who deserve. For more information on the Screen Di-

rectors Association, drop in <http://www.ozemail.com.au/~asda>.

■ The NSW Film and Television Office has been allocated \$350,000 for four years for a **New Film-Makers Fund**. The money's there and grant details have been sorted out. Call the NSW Department of Arts for details.

■ Meyer Sound has established a WebSite which contains **data sheets**, articles, case studies. The site is checked daily for questions and comments. <http://www.meyersound.com/>

■ Commercial TV stations are being **taken to the Copyright Tribunal** by members of the music industry. This is to establish a 'proper licence fee' for background use of sound recordings on free-to-air TV. Total revenue collected is about \$32,000 which is small beans compared to commercial TV's turnover of \$2.3 billion per year. The Phonographic Performance Company of Australia is helping to lodge the action. More information ph 02 267 7877

■ Media analysts in the US note a **steady decline** of the Classic Rock format. (thank god) after peaking in 1994. Total audience in the 12+ range for the 1994 summer was 4.2% which fell to 3.6% in the summer of 1995.

■ Ed Breslin, former manager of Austereo's B105 FM Brisbane has **moved** to JJJ as their new Network Manager.

■ NEWS to Dan Cole, Fax 02 876-5715.

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Write in Reader Service number: 141

Cairns a backwater?

An article in the March edition about the NARPACA Technical Managers Conference included some comments made by Peter Owens who is the manager of the Rockhampton Performing Arts Centre.

I refer in particular to his statement that in Cairns there are no hire firms, no local equipment repairers, no industry people to drink with, that we must make do with the equipment we have and that it is hard to get good crew.

Several professionals here in Cairns have, understandably, taken exception to Peter's comments.

Cairns has long attracted musicians and music industry people for the same reasons it attracts thousands of international tourists and has a booming convention market. Throughout the '80s it was the most northerly town on the infamous Queensland (Hutchinson) Circuit on which 30 odd (some very odd) cover bands used to occupy 30 even more odd venues for 3 week seasons in rotation. This was a way of life for many musos and roadies for years. There were 5 or 6 'Circuit Venues' in Cairns. Lots of young bands would find themselves playing at the Central Hotel or the Tudor Room the first time round and with the benefits of experience or perseverance, luck, and if 'Hutcho' was being uncharacteristically benevolent they might play at The House on the Hill or the Playpen in later years. In the last decade, many people who saw Cairns first whilst on 'The Circuit' settled here and as many found Cairns all by themselves. As a consequence there are lots of very talented and accomplished people who've made Cairns home. Additionally, the new casino and the imminent opening of a new convention centre have caused a recent surge in the number of experienced crew moving north. One interesting phenomenon related to tourism is that there is generally another English back-packer with West End experience on our doorstep every month looking for casual work.

There are several well stocked music shops, PA hire companies etc. There is one AV/Staging company which is part of a huge na-

tional chain. There are a few sound studios one of which is very classy and is run by an engineer/producer with a formidable history of accomplishment. I can get just about any speaker reconed straight away and there are lots of repairers of amps and things, one of whom specialises in valve amps.

Whilst the crew at the Cairns Civic Theatre do largely make do with the gear they've got it is generally due to budgetary constraints rather than unavailability. Others are happy to 'make do' with the theatre's equipment too. The Selecon Performers, the ColourSet scrollers and the system of 12 Shure EC radio lapers are often hired to the non-existent local production companies.

John Kelly, Technical Manager, Cairns Civic Theatre.

Doing Business!

It is a rare occasion when I attend an industry exhibition and find it totally absorbing. I stayed for more hours than my busy schedule allowed and left wanting more.

My sincere congratulations on what was an excellent event. I found previously unknown products, a new agency, a potential distributor and a couple of new customers, and I didn't even have a stand!

Very well done to all involved in this organisation and the exhibitors.

John I. Eustace, Sales & Market Manager, Laservision, NSW.

ENTECH 1

This was the best event I have been to. Everything appeared to go without a hitch. I spent all three days there and enjoyed a few seminars. All the facilities, the pre event arrangements and notices and the stands were all excellently done. I think the show should have been run one or two more days however. This might have allowed some repeats of seminars to be held, as I missed a few because of clashes with other seminars. The only seminar that was disappointing was the Gain Before Feedback Seminar. This was very light and had no substance to it, only a few tips were mentioned and these were of common sense. My only

other gripe was the DJ Comp. It was very loud and made it very hard to do business with people at the stands. (This is the reason why most people are there)! It also let a lot of time wasters into the event.

Thanks again for a wonderful event. I wish all events ran like this one.

James Frost, JAFLAC Systems & Services, NSW.

To answer your comments in sequence, the Gain Before Feedback seminar was to have been mine, I am guilty of passing it on to others without perhaps an adequate brief. But others I spoke with said it was entertaining if light. The DJ Comp was out of control, no argument. It was supposed to be one six minute set per state, instead it started late, ran long, and attracted a massive number of enthusiasts who were not expected. We didn't run this ourselves, but take the blame. -Julius Grafton

ENTECH 2

To all the Connections team, I thought a few complimentary comments were in order. Entech was certainly excellent by any standards. If I had to complain it would be that there were so many interesting seminars on at the same time and I couldn't make it to all of them.

One thing did seem strange though, how can you evaluate the difference between monitors when they are all being driven by different brand Amplifiers??

Anyway, a job well done thank you.

-Greg Suttle, Suttle Sound, NSW.

More on the monitors next month.

ENTECH comments

A few comments about ENTECH 1.) Too much "Moving lights & Disco", not enough Broadcast/ Recording stuff.

2.) All the seminars were excellent, best part of the whole show. More!

3.) Lighting of seminar areas totally inappropriate. Panel members could not see audience. LDs on Tues Morning were NOT im-

pressed.

4.) Sound isolation between seminar rooms inadequate.

5.) Bar upstairs seemed too far from the action and (like most bars) full of smoke.

6.) Cafe area seemed like "Backstage". Surrounded by backs of displays. Should have had Connections stand near Cafe. More seats at Lunchtime needed.

7.) Too much loud "thumping" music in hall. Naughty Naughty. May I suggest;

- Locate all "noisy" displays in a separate sound isolated hall. OR:
- Make a rule for ALL participants that say, loud sound demos may only be used for 10 minutes per hour, on the hour. i.e. for 10 minutes per hour all the displays can "go for broke" at max. sound levels but then have to be totally "silent" for 50 minutes while business is conducted.

8.) Long line for seminar bookings on Tuesday.

9.) Very few of the participants could supply me with accurate, competitive ex.tax prices on the spot. I found this in stark contrast with the show I attended in London last year where everyone competitive prices ready. It was perhaps the most annoying aspect of the show and made it somewhat useless to a small supplier / installer such as myself.

10.) Each item/fixture in the shootout should have a place alongside where the supplier can leave data sheets for those interested in having one.

11.) (My mate) Keith wants it held in Canberra. He also wants more project studio stuff in the seminars.

I Hope those comments help.

-Paul Matthews, NSW.

**Thanks. To answer all in sequence: (1) Yes and no. we still had more pro audio than any other show. (2) Yes. (3) Yes! (4) Maybe. (5) Yes. (6) Yes. (7) only on the last day when the DJ competition went out of control. Rest of the time our measures worked! (8) Book in advance next time and beat the long line! (9) It's in the exhibitors best interest to be ready with prices. Many were run off their feet. (10) Yes. (11) We had 7 pro audio seminars and a whole day Home Recording Expo. We*

are building this Seminar stream for Melbourne in April 1997.

More Input

Congratulations on the show - it seemed to go off really well with a good roll-up of people

The registration system seems to be over-complicated.

The seminar room set-up seemed better (from an attendees point of view) with the bigger rooms - the only improvement I could suggest would be for a bit better sound insulation between the two. It got distracting at times to hear what was happening next door.

Bruce Jackson was great - what a career! Very inspiring!

I was disappointed with the 'feedback' seminar (as were some others I talked to afterwards) - did something happen with the 'original' people scheduled to present this? It seemed like it was very much under-prepared.

The seminars pitched at the beginners/basic levels had very solid

attendances - a good indicator that this end of the market should be well 'catered' for. I feel that some exhibitors fail in this area.

Anyway, thanks for the 'receptive ear'. It's good to be able to bounce ideas around.

- Tony Romeo, Electron Microscope Unit, Uni. of Sydney

Showcorp reply

I write in response to Ian Hamilton's remarks regarding Showcorp's Chrysler stand in your April 1996 edition of Connections.

Who is Ian Hamilton? Ian, you ask which exhibition stands have Showcorp worked on over the past 2 years apart from Hyundai & Chrysler? Our efforts have included producing award-winning exhibition stands for Hyundai (1st prize, Best Large Exhibit 1995 Adelaide Motor Show & 1996 Perth Motor Show), Road Transport Forum (1st prize, Best Stand 1996), and T.W.U. Trans-Super Conference (1st prize, Best Staging 1996

Perth). Other stands which we have worked on also include Chrysler Jeep (1995, 1996), Komatsu (AMEX show, 1995) and Mac Trucks Australia (1st Prize, Stand of the Show 1992).

'Who the hell is George P. Johnson?', you also asked. Well Ian, as explained in the article, the George P. Johnson Co. is one of the largest designers and fabricators of exhibition stands in the world. With offices in Detroit, Los Angeles, Chicago and Hamburg, we can only assume that you don't get overseas much Ian.

Surely the question which needs to be asked is, who the hell is Ian Hamilton, and who could his learned associates possibly be? The statement Mr. Hamilton makes that he and his 6 associates must be missing something is, however, true. The extent of this is known only to them. Mr. Hamilton and his company, Ian Hamilton Design and Production are unfortunately not listed in any of the national telephone directories? We gave him the benefit of the doubt

and also searched under loading services, again with no success.

Please don't call Showcorp Ian.

Finally, Julius, we were surprised by your closing comments to Mr. Hamilton's attack on us, given that it was Connections who asked Showcorp for the story. Where and how you chose to run the story was left up to your journalistic discretion given that it was merely a story about the construction of an exhibition stand and not a lighting story. Vinni Sedgwick was available on his mobile phone for discussion during the construction period and I would have been more than happy to meet with one of your journalists to clarify any points of the article.

PS. George P. Johnson asked us to congratulate you on the success of Entech.

-Colin Baldwin, Showcorp.

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Write in Reader Service number: 162

STUDIOS & POST

Incorporating the **BASF** National Tracking Guide

Nude Carpentry at Troy Horse Recording Studios

Dan Cole tries it out

Troy Horse studios have recently set up the major recording part of their operation in Alexandria. Also housed are other activities which they have built up over recently. This *diversification* has allowed Troy Horse to maintain a profile in the difficult and highly competitive Sydney studio market whilst maintaining a positive ethos.

The total Troy Horse package: rehearsal rooms, CD mastering, artwork and printing, CD manufacture, digital mastering and editing, label support. Once inside, a band need not leave the premises:

"Everything can be done here, from rehearsal to manufacture," says business partner Chris McBurnie, "Troy Horse moved from a garage in Naremburn to Newtown eight years ago where the 1" 24 recording room was, two doors down from the rehearsal rooms. We have been operational here [in Alexandria] for about a year."

The move to Alexandria consolidates the activities of Troy Horse and the mood is casual and friendly as Studio Manager Colin Wright explains,

"We manage to be viable and to keep the prices down because of the different activities we do, which makes recording here appealing from an economic sense," Colin continues, "But, it's not just about money—of course we are running a business—but this is something that we love doing so the studio has this to offer too"

Begin with 1000 square feet of office space and start cutting Gyprock and MDF like all-get-out. [There are some nudy carpenter shots available but not for this family rag, sorry...] The end result (as I see it) is comfortable with good sized work spaces. The complex consists of two live rooms, two sound booths, a large control room, five office/tape duplication

Studio Manager Colin Wright at Troy Horse. For our colour impaired readers we must note *trendy* colour scheme in picture: Light Purple

rooms plus recreation and technical areas. The control room has, believe or nay, *natural light!* [Personally, I think that's going *too far...*]

With the move, some technical changes have been made,

"We added a 2" 24 track to the 1" from Newtown. This was the correct move so to attract labels and other acts to the facility. We can lock together both machines for 48 tracks if need be. We are also looking for a new console—we were thinking about adding an SSL console but we would have to triple our prices. We did discuss ADATS but decided on 2" and the way the domestic market is going with home digital recording, the bottom seems to be dropping out of the ADAT market. People come in specifically for the 2" machine."

Chris Burnie adds, "We are still expanding; we will be building rehearsal rooms here (another 1000 sq. ft. on the lower floor) and we will maintain the rooms in Newtown."



There is also a separate studio called **Loopy Green** (not owed but run by Troy Horse) where all digital work is done. Among other machines it runs a Quadra, an Akai DDE 1000 (with two external MO drives), and a Yamaha Pro 1 for mastering through.

"This facility allows us to do full digital edits of albums and fully calibrated masters, ready to press very cheaply too."

When it comes to overviews—the big questions, Colin says that Troy Horse is between markets,

"We have come out of the inner-city market, whilst getting interest from others—Steve Hunter really likes the place—but we still have a strong commitment to the 'street level' market and keep prices low enough so bands starting out can experience a full professional studio experience.

"We don't just throw a young band in there either, we're into service so it all goes smoothly, we are in it because we love what we are doing, so we can put something back into the industry through bands that need support."

To this end Troy Horse run two labels *Troy Horse* and *Stunt Pram*—the latter is a service orientated entity which provides manufacture, printing and design, distribution.

Equipment highlights:

[Tape Machines] Otari MTR 90 24, Tascam MSR 24, DA 30 DAT **[Console]** Tascam M3500 (with Hof automation on Mac) **[Monitors]** Tannoy Little Reds, Yamaha NS10, Beyer Fostex, AKG headphones. **[Pre-amps]** Behringer Pre-Q **[Reverbs]** Lexicon LXP 15, SDR 1000, DRV 2000, SDE 2500, SDD 1000 **[Compressors]** Hof Dynamics Master, Urie 1178, Ashley E.Q.s **[Effects]** Behringer Enhancer, Noise Reduction **[Midi]** S900 Sampler, Mac and Atari running Cubase **[Mics]** Nuemann U67, KM83, KM84, KM 85, Sony ECM 280, Rode NT2, EV RE20, Trius D.I.s + plus more.

• **Troy Horse Recording Studio, Ipx House level 3, 44-54 Botany Rd Alexandria, (02) 557 3129**

■ **Damien Gerards** have added a 2" 24 track machine, digital multitrack and editing facilities. ■ **Vandersound Studios** are building a new control room; new gear includes a Kurzweil PC88. Big beat Studios (VIC) also upgraded with DigiDesign Session 8, CuBase and Sound Forge to complete their MIDI re-mix facility. ■ **Kiss Music Studios** in Chapel Street (Melbourne) a new hi-end facility also adding finishing touches including acoustic treatment and aesthetics. New gear includes Quedest 410 monitors, Fairlight MFX 3 on order (to run with the Sony 48 track digital). Andy Baldwin, previously at Metropolis is now in-house music engineer at KISS. Rage Against The Machine recorded part of the latest album there. ■ **EMI's Studio 301** has been sold via a 'management buyout' to ex 301 GM Jim Taig. The new company is called Studio 310 Pty Ltd. ■ **Crystal Clear Studios** (SYD) have increased its size, now with two live recording spaces in Rydalmere and

no neighbours to annoy with volume! Bands recorded through the studio recently include Strident, Jaded Vision, Shattered Mass, Christ Art, Kryptic, Tyranny, Wishbone, Toxic Blonde. ■ **Wombat Rd Studios** (VIC) added new gear including CD recording equipment and tube equipment like valve mic, pre-amps and stereo DI. ■ **Cloud Studios** have employed a full time engineer Phil Dracoulis and installed a DR 16, Mac quadra 800 (Logic Audio) and Yamaha CBX D5. Deals available for Aug/Sept. ■ **Grevillea Recording Studios** (QLD) have installed a Sony PCM 8000 digital 8-track and the DABK-801 Sync board to handle the Hi-8 digital format used in film & TV post mixing (with Remote). Also a Yamaha CDR-100E and upgraded their Prism AD-1 with 24-bit software. Other news. ■ **Rockinghorse Studio** demo offer: for \$350 you get 4 songs, 8 hours, an engineer, on 2" 24 mastered to DAT. (066) 88 4131.

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Write in Reader Service Number: 121

HOWARD JONES WORKBENCH

BRAVE NEW WORLD

The advent of Yamaha's O2R digital console puts in place the last link required for many studios to forge an all digital recording chain. Taken together with Tascam, Sony and Alesis digital recorders, DAT recorders of all types, CD players, effects devices with digital I/O etc, the possibility now exists to keep everything between the microphone and the speaker in the digital domain.

Many of our clients have traded in their analogue consoles on these new Yammys and are looking to do just that. It's a brave new world, but with it comes a new set of rules for making it all work.

If you are planning an all-digital studio, then you'll need to check out some of these rules and put them into practice. Your starting point should be the realisation that digital interconnects don't work very well - if at all - on the basis of being lashed together with sealing wax and string. Using Grandpa's 50 watt soldering iron and a heap of old Telecom wire, leftover guitar leads etc is definitely not the way to go!

Digital signals have to be han-

dled with much greater care than their analogue counterparts because they are much higher bandwidth - around 4 MHz. This makes them a lot more sensitive to poor connections, wrong impedances and reflections on the line.

The higher bandwidths involved mean that transmission line theory is much more applicable than at the very low bandwidth of analogue audio. Let me give you an analogy so that we can avoid the technical jargon. We have all experienced the fact that, unless we have a decent aerial and a good reception path, we are quite likely to get poor pictures on our TV.

Typical problems include ghosting, fuzzy images, poor colour and tearing of high contrast edges.

In much the same way, unless a digital signal is fed down a wire of the correct impedance and is terminated correctly, it will be corrupted on the way through. Unlike your TV, however, if the receiving device does not detect a good, clean signal, it may not even want to work.

Unfortunately, the potential pitfalls don't only relate to hardware.

I was called in recently by a client who needed some advice in getting all his gear working together.

He had just begun using an O2R and had patched it up with his DAT, CD and digital workstation. Because he commonly lifted clips off the workstation to add to his mixes, it was convenient to have the (digital) output from the workstation permanently patched into an input on the console.

The DAT, naturally enough, was patched to the main mix output from the console.

The problem came when he wanted to back up a project from the hard drive to the DAT - the O2R wouldn't pass the header burst which preceded each song, although the audio went through okay. I haven't had a chance to get to the bottom of this yet, but I wasn't surprised.

My advice was to make the connection directly from the back of the PC to the back of the DAT and do the backup. From his point of view this was a pain because it meant getting in back of his racks to make the necessary connection. His comment? "But it's all digital - it's supposed to work!".

By the way, this sort of problem raises a very important question about backups. Most backups are done to DAT and most DATs are two head devices - i.e. you can't monitor off tape whilst recording. Human nature being what it is, no-one bothers to rewind and listen to the dump back off tape. The obvious conclusion is that you can't be sure that every little bit of data is really there when you do a backup.

Under these circumstances it's best to take a safety first approach and give that digital signal every chance of making it down cleanly to the DAT before wiping the project off the hard disc.

Let's look at a few practical issues to be resolved when setting up a digital studio.

If your connections are based on the AES/EBU standard, then they use a characteristic impedance of 110 ohms. This means that you should use special "digital" cable which is available from several suppliers and is rated at 110 ohms. Where possible, make your connection directly from one device to another. If for some reason you choose to use other types of

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Write in Reader Service Number: 127

BASF NATIONAL STUDIO TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
New South Wales			
Airmotion Guy Dickerson (02) 550 6576 24 Track Analogue			
Quick and the Dead	Band	Ian Baldwin	Album
Scrub Hornets	Band	Craig Beck	Album
Charing Cross Studio David Sykes (02)387 8362 - 24 Trk Neve			
Big Heavy Stuff	Dave Trump	Dave/Peter Jones	Album
Bluebottle Kiss	John Rafferty	Peter Jones	EP Mixing
Fur	Dave Trump	Peter Jones	EP
Drop City	Rob Younger	Dave Trump	EP Mixing
Dioline	Dave Trump	Dave/Peter Jones	EP Track & Mix
Mental As Anything	Martin White	Martin/Peter Jones	Album Tracking
Cloud Studios Parris Macleod (043) 532429 72 Track Digital/Analogue			
Love N' Rebellion	Parris Macleod	Parris/Phil Dracoulis	Album
Strange Idols	Parris/Band	Parris/Phil Dracoulis	Mastering
Barking Dogs	Parris/Band	Parris/Phil Dracoulis	Single
Savestry	Phil/Band	Phil/Kim Lemke	EP
Mark Grant	Parris Macleod	Parris/Phil	4X Album
Eternity	Parris Macleod	Parris/Phil	Album Tracks
Crystal Clear Studios Dave Tozer (02) 684 1152 24 Tk. Dig.		Adats & BRC, 32 Ch. (66inpu) 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 32'2" 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
Darling Harbour Studios Ike Brunt (02) 211 1474 10 x 12m		Tour room.	
Midnight Oil	Malcolm Burns	Malcolm Burns	Demos-D88 24TK
Ghost Writers		Julian Slade	Demos-Live to Dat
Billy Thorpe	Billy Thorpe	Julian Slade	Demo's-Live to Dat
Eclipse Music Studios Jodie Sharp (02) 264 7734			
Silverchair	Nick Launay	Nick/P.Munro	Mixing
V Dub & Ugg Boot	Martin White	Martin/P.Munro	Mixing
Dearly Beloved	Grag Clark	G.Clark/M.Ward	Mixing
Nargs	W.Gillespie	B.Clark/Phil Munro	Mixing
Carol Young	Mark Moffatt	Clark/Moffatt/Munro	Mixing
Bain Maries	Fraser Stuart	Fraser/Mike Ward	Mixing
Eclipse Music Studios Jodie Sharp (02) 264 7734 Mitsub 32 Trk Digi/Studer 24 Trk An. (Studio A) SSL Suite			
Tumbleweed		Paul McKercher	Mix Album
David Lane	Mark Moffatt	David 'D.P.'Price	Mixing Tracks
Magic Dirt		Paul McKercher	Mix Album
Bellydance		Martin White	Mix Tracks
Crank		Russ Pilling	Mixing
Love Me	Tim Rodgers	Phil McKellar	Mix Album
Festival Studios Catherine Knapman (02) 660 4022 2 x Analogue Multi-Tracks or Digital Multi-Track			
"McLoud's Daughter"	Guy Gross	Simon Leadley	TV Series
"Nokia"	Wayne Goodwin	Glen Phimister	TV Commercial
Little Hornet	Craig Beck	Craig Beck	Single
Ian Moss	Don Walker	M. Thomas	Overdubs/Mix(Album)
Yothu Yindi	Lamar Lowder	Mark Thomas	Album/Mix
"Paradise Road"	Bruce Beresford	Glen Phimister	Track (Soundtrk.)
Luclinda Street Recording Rick Mostyn (042) 291169 Dig. Mobile Multitrack			
David Scheel	Rick Mostyn	Rick Mostyn	Live Recording

ARTIST	PRODUCER	ENGINEER	PROJECT
Main Street Studio Rob Specogna 042 834 515 16 Track			
Rimana	Band/Rob	Christian/Rob	CD Album
Midnight Strollers	Rob/M.Ferguson	Rob Specogna	CD Album
Nod Scene	Band/Rob	Rob Specogna	CD Album
Karen Frencham	Karen	Rob Specogna	Album
Scattered Delusion	Rob Specogna	Rob	Demo
Megaphon Studios Guy Dickerson (02) 550 6575 24 Track & 48 Trk Analog.			
silverchair	Nick Launay	Nick/Jason Blackwell	
Bob Down Band	Neils	Guy Dickerson	Cable TV
Maria Stratton	Guy Dickerson	Guy Dickerson	Album
Mirage Gerry Nixon (02) 211 3915 24 Neve VR Dolby SR Focusright etc.			
Leonardos Bride	Justin Stanley	Keith Cooper	Album Mix & O/D
Mother Hubbard	Mark Thomas	Mark Thomas	Album Mix
Dan Penn	Rick Hall	Tom Misner	Album Mix
Steve Croper	Croper/Dunn	Jonas B.Danielsen	Demo Album Tracks
James Carr	Chips Moman	Tom Misner	Album Mix
Don Covay	Larry Uttal	Al Walden	Single EP Mix
Pathways Studio (02) 212 3101 Frank Kerestedshijan 24 Trk 2" Anal. & CD Mast.			
Gang gajang	Gang gajang	Frank K	Album
Allen Dargin	Mark Callaghan	Frank K.	Album
Waldo Fabian	Frank & Waldo	Frank K.	Album
Brien McVernon	Brien McVernon	Frank K.	Album Mix 14 Trks
DEF FX	Jamie & Shawn	Frank K.	Tracking Drums
Brien McVernon	Brien McVernon	Frank K.	Mastering Album
Paradise Studios Lien Chew(02) 357 1599 48 Track A'log, Custom Mixer			
Trout Fishing in Quebec	Mark Roberts	Mark	Album
Kieren Halpin/Anth Kaley	Brian White	Brian/Lien Chew	Album
Fragile	Simon Holmes	Lien Chew	Song for S/Track
Simon Barker	Band	Lien Chew	Demo
Arizona Prod.	Peter Kaldor	Mike Duffy	Jingle
Margaret Urlich		George Gorga	Demo
Paul Bryant Mastering Paul Bryant 02.748 6055 mastering Suite			
Discordia	Siren	Paul Bryant	CD Mini Album
China White	K.O.Kazokas	Paul Bryant	CD Mini Album
Best of Pro DJ	Geoff Sturre	Paul Bryant	CD Album
Alistair Hulett	Alistair Hulett	Paul Bryant	CD Album
Jiri Neradilek	Jiri Neradilek	Paul Bryant	CD Album
X-Files	Pro DJ	Paul Bryant	CD Single
Powerhouse Studios Doug Henderson (02) 318 1220 32 Input Neve Console 24 Trk.Studer			
Trillion	Band	Steve Hartley	EP
Jay Aldis	Powerplay Records	Doug Henderson	CD Album
Brass Monkey	Band	Boyd Moore	Single
Exploding Overies	Band	Assist.Boyd Moore	Album
Plasticine	Band	Steve Hartley	Single
Armoured Angel	Jaz Coleman	Boyd Moore	Album
Q Recording (02) 212 4851 Gordon Sullivan 24 Trk Studio, 02R, DA-88			
Jennifer	Rick O'Neil	A.McKenzie/C.Cooper	Album Track
Powder Finger	Tim Whitton/Band	Tim Whitton	Album Track
Sons of Mozart	Band/R.M.	Richard Muecre	Demos
80's Flashback	Alex Wong	Alex Wong	Demos
Sophies World	Mark Thomas	Anthony McKenzie	Album Track
Godstar	Nick Dalton	Richard Muecre	Album O/Dubs



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Write in Reader Service Number: 100

Workbench

cable - which I definitely don't recommend - you'll probably get away with it over very short lengths.

However, Star Quad type cable which has 4 signal wires carries a particular problem. In this kind of cable, the two blue wires are normally twinned together at each end, as are the two white wires. This sends digital signals absolutely crazy as the multiple signal paths and wrong impedance cause zillions of reflections. It really is best to use the correct cable to avoid trouble. And don't use Y-cords to get out of a signal routing jam. If you find that you can't achieve something without wanting to use a Y-cord then you've already reached the point where you need to seek advice.

The other great no-no is patch bays. No, you can't simply wire up your analogue patch bays with 110 ohm cable and expect it all to work - after all, life wasn't meant to be easy.

Digital signals don't take kindly to being passed through jack plugs, patch leads, Krone blocks etc. The annoying thing is that

some bodgy connection may well seem to work when you first set it up, but then fail once every so often. The best approach is to go for point-to-point connections for all of your gear.

Well, it's a complex subject and there's a lot more involved than I've got room for here. So, remember to read your manuals carefully and pay attention to the basic rules - you'll find your trip into the brave new world much more enjoyable.

P.S. Thanks to all those Connections readers who visited our stand at Entech - it was great to meet you all and I hope you enjoyed the show as much as we did.

Howard Moves Shop

Studio Solutions have moved into bigger premises in St Leonards. Howard Jones says that the new workshop has a considerable increase in floor space and that there is now a separate showroom area. See them at Level 5, 80 Chandos Street. Phone remains the same, (02) 9906-4363.

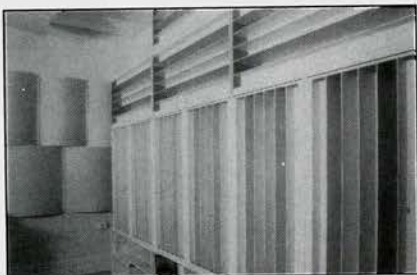
CD Mastering

paul bryant

M A S T E R I N G
PH (02)748-6055 FX (02) 748 6152

Digital Editing

Studio Acoustics



Manufacturers of high performance modular acoustic panels.
4 - 6 Star Avenue, Croydon Park S.A. 5008
Ph (08) 346 4199

ARTIST	PRODUCER	ENGINEER	PROJECT
R. & R. Recording Robert Zimola (02) 672 4494 16 Track 1'			
CJIM	Mike Kerin	Robert Zimola	Album -CJ Turner
Blacktown Chamber of Commerce			R.Zimola
Hear We Are		R. Zimola	Demos
Sound Level Joe Breen (02)552 3200 16 Track Digital Tascam DA88			
Andy Gander	John Soane	John Soane	Demos
Drums of Mer	Christine Anu/J.Soane	John Soane	Theatre Dance Backing
Indelible Ink	Jorden Brebach	Jorden Brebach	Live to DAT
Michael Galeazzi	Randy Frasz	Randy Frasz	Vocal Tracking
Duster	Duster	Jorden Brebach	Multitrack EP
Seamus Carlice	Randy Frasz	Randy Frasz	Live to DAT
Studio Arts Productions (042) 849128 Ed Lee. Independent Recording Studio			
Altered States	Band/Ed Lee	Ed	CD
Movement	Band/Ed Lee	Ed	CD
Erika's Jive	Band/Ed Lee	Ed	CD
Hi-Profile Studio Recording Course		Tutor Ed Lee	
Trackdown Digital Marcus Leadley (02) 550 6890 24 Analog SR/24 Dig. (Adat) 2 x 16 Voice Protocols			
Russell Crowe	Tim Ryan		Album
Aboriginal Nations	Leon Horrocks		TV Animation
Blinky Bill CD Rom	Leon Horrocks		Audio Post
Samuel	CTW	Tim Ryan/Leon Horrocks	Audio Post
Woolly Mammoth Mik Sanning (02) 557 2721 16 Trk. Digital W/Midi			
Mid Nyt Sun	Gordon Hunte	Nik Sanning	Demos
David Bullock	David Bullock	Nik Sanning	Album
Urban Guerillas	Ken Stewart	Nik Sanning/Gavin Drew	Album
Bliss	Bliss	Nik Sanning	Demos
Snoopy	Snoopy	Adrian Stubbs	Demos
Queensland			
Digital Paradise Ian Peters (07) 5527 0722 32 Trk. Dig. Rec.Studios			
Mario Wari	Ian Peters/Mario	Ian Peters	Album Project
John's Not Dead	Band	Ian Peters	Demo Album
High Class Company	Band	Ian Peters	Album Project
Stephen Hayes	Ian Peters/S.Hayes	Ian Peters	Corp.Video S/Trk
Active Model Agency	Ian Peters/Melinda	Ian Peters	Fashion Show Program
Alva Turner	Ian Peters/A.Turner	Ian Peters	Promo. S/Track
Grevillea Recording Studios Malcolm Jacobson (07) 3262 8422 24 Trk. Analog/16 Digital/CD Mastering			
R.G.F.	Malcolm Jacobson	Malcolm Jacobson	CD Mastering
Tycho Brahe	Tycho Brahe	Malcolm Jacobson	EP
The Dudes	Tony Byrne	Tony Byrne	Album
Mark Antony	Tony Byrne	Tony Byrne	Album
123	123	Malcolm Jacobson	CD Mastering
Abstraction	Transmission Communications	M.Jacobson	CD Mastering
Prodigious Audio (07) 557 11400 Richard or Marty. Hard Disk & Dig. Tape,			
Baby Jay	Mark Munro	Mark Munro	EP Rec./Mix
Untouchables	Mark Munro	Mark Munro	Album
Michael White	Mark/Michael	Mark/Richard	Album
DB's	Darrell	Mark	Radio Jingle
DB's	Darrell	Mark	Television Adv.
Sunshine Studios Leon Prescott (07) 844 6844 36 Channel Neve			
Powder Finger	Tim Witton	Tim Witton	Album Trking.
Madagril	Leon Prescott	Leon Prescott	Demos
Linoleum	Leon Prescott	Leon Prescott	Demos
Total Advertising Production Paul O'Connor (074) 792277 16 Track Digital			
Gold FM	Dave Atkins	Anthony Marsh	Station Promo.
Betta Electrical	Barrie Morrisson	Anthony Marsh	National Jingle
Urban Dynamics	Ben Elliott	Anthony Marsh	HIA Nat.Awards
Vandersound Studios Eric Vandersande (075) 468100 8 Trk. Adat/XT & 8 Trk. HDR Dig. Console			
Grain	Eric	Eric	Mini Album
Julie Shepard	Eric	Eric	Demo
Anthony Sheridan	Eric	Anthony	Demo
Ben Burton	Eric	Ben	Demo
Craig Ellis	Eric	Craig	Demo
Ken Forbes	Eric	Ken	Demo
South Australia			
Disk-Edits Neville Clark (08) 340 1377 Digital Editing & Mastering			
Puppet Head	Band	S.Feildhouse	Mastering
Miracle Fish	Band	N.Clark	Mastering
Maritime Museum	N.Clark	N.Clark	Soundscape
Scorched Earth Policy	Band	S.Feildhouse	Mastering
Eleventh Hour	Band	N.Clark	Mastering
Adelaide Chamber Singers	Crossin	N.Clark	Mastering
John Reynolds Rec. Studio Nick Love (08) 410 3044 24 Trk.Dig/16 Trk.Anal.			
Fuse	Nick Love	E.Sikorski/Love	Album CD
Polly Xenl	Nick Love	Nick Love	CD Alb/Film S/Trk
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'			
Tantra	Geoff Stapleton	Mick Wordley	Tracking
Reckoning	Band/Mick	Mick Wordley	Album
Falling Trees	Band/E.James	Evan James	EP
Jason Waldron	Jason Waldron	Steve Fieldhouse	Album
Rash	Lachlan McGoo	Lachlan	Album
Jeff Lang	Kerin Tolhurst	Mick Wordley	Album



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ARTIST	PRODUCER	ENGINEER	PROJECT
Victoria			
Big Beat Studios (03) 9898 5815	John 'Shadow' Toth	16 Trk. Analog. 1", 32 Trk. Auto Session 8 Hard Disk	
Amanda	John Toth	Single/Album	
J.F.K.	John Toth	Single/Album	
Blue Tongue	J.Toth/Ben Williams	Dave Borgeest	Demo
Clambake	D.Borgeest/J.Toth		EP
Incline	John Toth		EP
C.O.D. L4	John Toth		Album
Fortissimo (03)9699 5811	Melita Jagic/Adam Quaife	2" 24 Trk.Auto. Harrison Cons. 40 Ch.	
Warren Ellis	Graham Lee	Andy Parsons	Album Tracks
Chris Copping	Chris Copping	Adam Quaife/Melita	Jingles
Overdrive	Overdrive	Melita Jagic	Orig. Demos
Dreadnaught	Band/Ernie	Ernie	Mix. Album
Gotham Audio Tom Kehoe (03) 987 99400	SSL Console/Sony	48 Track Digital	
John Farnham	Ross Fraser	Doug Brady	Album Rec. & Mix
Savage Garden	Charles Fisher	Chris Lord-Alge	Album Mix
Ken Lym	Phil Buckle	Spiro Fousketakis	Recording
Motional	Dean Jones	Aaron Humphries	Singles
Russell Beggs	Doug Brady	Doug Brady	Recording
Sing Sing Kaj Dahlstrom (03) 9428 4622	SSL, Neve 24/48 Trk. Dig. & An.		
Brown Hornet	Kaj Dahlstrom	Kaj, Adam, David	EP Rec. & Mix
Atlas Strings		Victor Van Vugt	Mix
Mark Seymour	Barry Palmer	Kalju Tonuma	Album Rec.
My Friend the Chocolate Cake	D.Bridie/Jeremy	Jeremy Allen	Mix
Kate Ceberano	Ashley Cadelle	Ashley Cadelle	Mix (Single)
AutoHaze	Victor Van Vugt	Victor Van Vugt	Album Rec.
Sound Around Trevor Cronin (03) 9531 3891	Mobile Sound	Studio	
Naked Raven	Band/J. Smith	Jeremy Smith	Album
Nude	Band/A. Quaife	Adam Quaife	Album
T.I.S.M.	Laurence Maddy	Rhodes/Cronin	Live Video/CD
Various	Trevor Cronin	Cronin/Rhodes	As Music Day/MMM
Weddings Parties Anything	Cameron Craig	Dillan Hughes	Album (in Tas.)
Studio 52 Paul Higgins (03) 9417 7707	Studio A - 32 Tk. Studio B Adat		
Cinema	Band/Mgt	Trevor Carter	Album Tracks
Creature Seed	Simon Segal	Simon Segal	Demos
Kay Dean	Kosta Dean	Trevor Carter	Mixing EP
Society Syncopators	Chris Ludowyk	Trevor Carter	Mixing EP
Ramnath Iyer	Ramnath Iyer	Rowan Jarl	Album
Black Mary	Rowan Jarl	Rowan Jarl	Demos
Wombat Road Studio (051) 454204	Barry Clissold 24 Trk. Plus full Midi Facilities		
Crossroads	Garth/Twite	Barrie Clissold	Album Tracking
Bronwyn Kernaghan	Bronwyn	Barrie Clissold	Album Tracks

ARTIST	PRODUCER	ENGINEER	PROJECT
Shannyn Ashwood		Barrie Clissold	Demo Tape
A Tractor Prod.	B. Baker	Brian Baker	Jingles
Needham Prod.	J. Needham		Message on Hold CDs
Jill Meehan	J. Mehan	Barrie Clissold	Album Tracking
Western Australia			
Bonsai Recording Studio Tom Thorpe (09) 349 6029	24 Track		
Excel Human Resource Develop.		Tom Thorpe	Tom Thorpe
Lecture Tapes			
Studio Trax	Tom Thorpe	Tom Thorpe	Demos
PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles
Kay Redman	Tom Thorpe	Tom Thorpe	Jingles
Witzend Recording Studio Alan Dawson (09) 3311818	16 Track		
Mardi Picassos	Band/Alan	Alan Dawson	Album
Z28	Band/Alan	Alan Dawson	Demo
Dumb Angels	Band/Alan	Alan Dawson	Album
Watermouth	Band/Alan	Alan Dawson	Demo
Lead Feather	Band/Alan	Alan Dawson	Demo

Listings free, call Elaine on (02) 876-3530.

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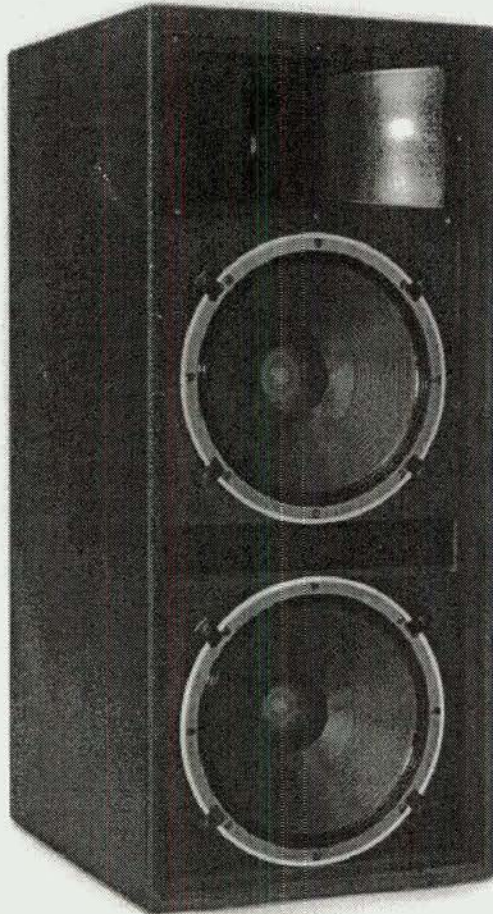
NSW: Audio Visual Designs (02)281-2444, Silver & Ballard (02)439-5355, Independent Tape Supplies (02)436-0666.

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.



Thunderbolts Are Go!

They're here! The big news of the *Entech 96* exhibition - the exciting new Thunderbolt speakers from ARX. Loud, clean, and powerful.

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cessed switch on the rear panel changes the cabinet from a passive system with a built in crossover, to an active 2 way system.

In active 2 way mode it can either be used with an active 24dB per octave 2 way crossover, or with an ARX 2 way ISC speaker processor. It's your choice.

They're Here Now!

Your nearest ARX person has full details on the new Thunderbolt speaker systems. Call them for a brochure.

Thunderbolt

FROM **ARX**

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,
Hightett, Victoria 3192, Australia.
Phone 03 9555 7859 Fax 03 9555 6747

Write in Reader Service Number: 124

BUYERS GUIDE

REVERBS DELAYS MULTI EFFECTORS

Prices quoted are Retail including sales tax, as supplied by Distributor at 10th April 1996.
All care taken, but Connections is not responsible for any errors.

Signal Processors Missed last month

We don't automatically run listings we missed, but here are some from last month. (Sorry!)

EQUALISERS

DRAWMER Amber Technology (02) 9975 1211

1961 Dual channel vacuum tube equaliser. Each channel has 4 main EQ sections each with 6 selectable frequencies, bandwidth control and +/- 18dB cut/boost. Also Hi & Lo pass filters and insert points. 2U high, balanced XLR in/out. \$4495.

TC ELECTRONIC Amber Technology (02) 9975 1211

1128 Fully programamable 28-band EQ/Spectrum Analyser, +/-12 or 16dB cut/boost, 100 pre-sets, auto feedback "Search & Destroy", versions for ful remote control and Crown IQ bus. 1U high, balanced XLR in/out. \$5955.

1140 Mono 4-Band Parametric EQ with +/- 20dB cut and boost, 20dB pre-amp for low level signals, dynamic range >116dB, 1U high, balanced XLR in/out. \$1630.

2240 Stereo 4-band parametric with features identical to 1140 above. 2U high. \$2720.

SIGNAL PROCESSORS

APHEX, from East Coast Audio, call (03) 9428-9797

APHEX Aural Exciter Type G2 model 104 with big bottom \$662.

DRAWMER Amber Technology (02) 9975 1211

M500 Multi-dynamics processor with programmable compressor/limiter/expander/gate/de-esser/auto-pan & auto fade. Full edit control, 2 channel, 1U high, Bal. XLR in/out, Midi Control. \$3795.

RAMSA Ramsaudio P/L (02) 477 7377

WZ-DE40 2RU, 54 Band Mono Graphic or 27 Band Stereo Graphic or 8 Band Stereo Parametric, Compressor/Limiter, Delay, Notch Filter, Spectrum Analyzer, 99 Memory, 20 Bit AD/DA, Balanced. \$5788.

LIMITERS, COMPRESSORS

APHEX, from East Coast Audio, call (03) 9428-9797

APHEX 108 Easyrider 2 channel au-

tomatic compressor \$544

APHEX Easyrider 4 channel compressor Model 106 \$816

APHEX 661 Expressor, tube compressor/limiter \$1498

APHEX Dominator II precision multiband peak limiter \$2836

DRAWMER Amber Technology (02) 9975 1211

DL-241 Dual-Channel compressor/limiter with auto or manual attach & release, single control expander/gate, peak limiting, hard wire bypass & full metering. 1U High/Balanced XLR in & out. \$1895.

DL-251 Dual-channel "spectral" compressor with "spectral enhance" to restore HF energy normally lost during broad-band compression. Auto attack/release as with DL-241. 1U High/balanced XLR in & Out. \$2295.

DL-441 4-Channel compressor/limiter. Auto attack/release, switchable hard/soft knee compression, peak level limiting, hard-wire bypass. 1U, bal. XLR in/out. \$2495.

1960 Dual channel vacuum tube compressor with mic. pre-amps compressor stage features "soft knee" operation, variable threshold & switchable attach/release, up to 20dB gain "make-up". VU metering, 2U high, Bal. XLR in/out. \$4395.

Multi Effectors

DIGITECH from Central Musical Instruments (03) 9315 2244

STUDIO QUAD 4 Totally independent inputs and outputs, 5 disc technology, extensive library of reverbs, delays, choruses, pitch shifting, EQ's and more. Full midi implementation. True stereo effects. 1 RU. \$1249.

TSR-6 True stereo, multiple simultaneous effects in series or parallel. 18 b t A/D, 20 bit D/A, 46 Hz sampling. Parametric EQ, reverbs, delays, pitch shifting and more. 1RU. \$699.

STUDIO 400 8 Totally independent inputs and outputs, dual S - Discs, 24 bit dram data path, THD less than 0.03% (1kHz). Balanced 1/4 and XLR inputs and outputs. Internal power supply, 2 RU. \$1999 (Est.)

DOD from Central Musical Instruments (03) 9315 2244

DR-512 True stereo multi-effects processor with dual mono real time parameters. Effects include multiple reverbs, delays, choruses, flanges and pitch shifting phasing, tremolo and pairing all in series and parallel combinations. 44.1 kHz sampling. 1RU, 1/4" TRS connectors. \$499.

ELECTRO-VOICE from Mark IV Audio (02) 648 3455

DRP 10 Musician/Live FX Processor - 24 Bit multi FX unit, 1 RU, 240 factory presets, 259 user memory positions with reverbs, delays, chorus, flanging, phasing and pitch shifting. Up to six effects simultaneously, 20 Hz-20kHz band width, > 90dB dynamic range and <0.03%



distortion.

DRP 15 Studio FX Processor - As per the DRP 10 with a far greater range of programmable parameters to meet the precise needs of the studio engineer, up to 23 parameters per program patch editable via the front panel or MIDI.

SONY from Sony Australia Ltd. (02) 878 9790

DPS-V77 52 Bit DSP Multi-effects processor, 2 FX blocks + 2 EQ blocks flexibly assignable. Reverbs, delays, pitchshifting, dynamics, vocal processing, equalisers. Balanced (XLR) + unbalanced (6.5mm jacks) analogue I/O at +4/-10dBv; AES/EBU+SPDIF Digital I/O. MIDI in/out/thru. 1RU. \$2920

HR-MP5: 48 Bit Stereo Multi Effects processor, with EQ, dynamics, pitch shifting, delays, reverbs, vocal canceller, ring modulator, tuner. H/Phone output, Pedal Input, 200 memories. MIDI I/Face. \$899.

HR-GP548 Bit Digital Guitar processor with simultaneous compressor, distortion, EQ, amp simulator, Modulation & reverb. Tuner. Pitch shifter, 200 memories, MIDI I/Face. H/Phone output. Pedal Input. \$899.

YAMAHA from Yamaha Music Australia (03) 9699 2388

SPX990 20-bit AD/DA balanced stereo, ins/outs; 180 memories, 3 stage effect config.; intelligent pitch change s/specified key and scale type; midi; 1U rack. \$1995.

ZOOM from Dynamic Music (02) 9939 1299

1202 1kHz Sampling Rate. Ideal for recording. PA or Live. Total of 512 Studio quality sounds. Can be used as a stereo Processor or as a fully discrete Stereo Processor. 1RU. \$495.

9200 Highly Flexible design allows creation of unique effects. 44.1 kHz Sampling. Four separate balanced inputs & outputs. Card slot allows factory patch modification or user storage of patches. \$5495.

Reverbs

ALESIS from Electric Factory (03) 9480 5988

MICOVERB 4 16 Bit reverb. 256 Programs, reverbs, gated reverbs, delays & multilap delays. 100 Hz + 4kHz EQ controls allow custom contouring of each program. \$699.

NANOVERB 18 Bit digital converters, lush hall, plate and room reverbs, stereo chorus, flange & delay. Multi effects 1/3 rack space. \$379.

MIDIVERB 4 128 Factory preset + 128 user programmable effects inc. reverb delay chorus etc. 1.3 seconds total delay time. 18 Bit 128+ over sampling. A/D contours. \$899.

Q2 8 Simultaneous effects, 2 independant ins/outs. Greater than 90dB dynamic range. Overdrive and sampling in new V.2 software. Balanced and Unbalanced outs. \$1799.

ENSONIQ from Electric Factory (03) 9480 5988

DP-2 Two DSP chips, true stereo, 65 algorithms, 600 presets, Balanced ins/outs. Front panel, Input 19" 1U rack. Ongoing special. \$1399

DP-44 4 Simultaneous independent processors. 4 Assignable ins/outs. Balanced outs, built in guitar tuner. New guitar amp algorithms. \$3149.

YAMAHA from Yamaha Music Australia (03) 9699 2388

PRO R3 Reverb system with pre EQ/reverb processor/dynamic filter/compressor/post EQ/noise gate; 180 memories; midi controllable parameters; balanced ins/outs; 2RU \$2495.

REV100 16-bit stereo; 99 memories; 3 parameter rotary controls; 7 reverb/effect types; midi controllable parameters; 1RU. \$699.

Delays

DOD Central Musical Instruments (03) 9315 2244

DR-811 Digital room delay. 1.25 to 1280 ms delay time. 16 bit converter, 51.2 kHz sampling, >90dB range, adjustable level controls (in & out) XLR and post connectors. 3 Second by-pass relay, 1RU. \$999.

ELECTRO-VOICE from Mark IV Audio (02) 648 3455

DDL 204 Line Delay - 2in and 2+2 out or 1 in 4 out digital time alignment delay unit with 24 bit processing. Balanced XLR inputs, individual time delay for each of the 4 balanced XLR outputs, maximum delay time 2798ms, 30 user programme positions, user assignable lockout code, 20Hz-20kHz bandwidth, <0.02% THD. \$2299

DDL 102 Line Delay - As per DDL 204 but a 1 in 2 out configuration. \$1850.

YAMAHA from Yamaha Music Australia (03) 9699 2388

D5000 Specialist delay; extra long multiple delays, single/dual mode; flexible feedback config; modulation, gate, ducker delays; freeze; 100 memories; midi, balanced ins/outs; 1U rack. \$2795.

Calendar

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*

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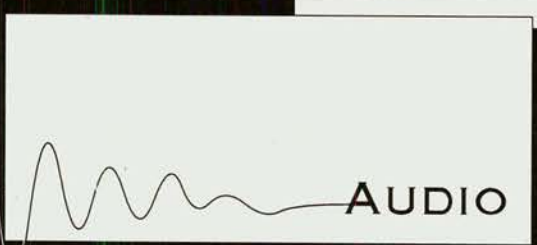
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Also Stolen in Geelong, Victoria 2 x JBL EONS - Serial numbers are prefixed with JBL-168 or JBL-167, then 020653 and 020840. Therefore the

numbers should read - JBL-167-020653 and JBL-167-020840. An emblem with G.H.C. Geelong and 'Virtus Vera Nobilitas' was printed on one of the JBL speakers. 1 x Ibanez EQ - Model number GE1502, serial number 01225. 1 x Blue "Strat shaped" Charvel guitar and engraved on the back is the name "Duncan Hallas" and a phone number. 1 x Yamaha combo amp, the right hand side of the cabinet has a long break in the wood, the foot switch has been chopped off, and two control pots stand out more than the rest of the controls. If anyone sees any of this equipment, please call Toby on 019 341169 or during business hours on 550 6255.

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Duncan Fry

Rastaman in Cartoon Scandal



I recently went to a reunion at Channel 8 in Mt Gambier, the small TV station I worked in when I was a youngster. But don't worry, I'm not going to bore the living shit out of you by reminiscing about old times (*not this time, Dunk? Ed*). No, I only mention it because it has started me thinking about Bob Marley.

And just what has Rastaman Bob got to do with Channel 8, I hear you ask.

Well, at the time I worked there, the TV station wasn't the slick operation that it now is. Firstly we're taking black and white days here, and secondly the station had no video facilities, and everything was either live or on film.

Consequently the kiddie viewers suffered endless reruns of the Banana Splits, two very early American ancestors of Bananas in Pajamas. Two people in furry yellow banana suits (I'm guessing they were actually yellow - all viewers saw was a pale grey), constantly whizzing around and

crashing into each other in little cars, and getting into trouble.

They also constantly sang that irritating La la la song, the one that has recently been covered and used for one of the cartoon shows on TV. "One banana, two banana, three banana four..." You'd know it if you heard it. The tune gets a grip or your mind and is impossible to shake off.

Then the other day we were listening to Triple J at work, and on comes Bob Marley singing Buffalo Soldier. And guess what? Bob's got the same chorus in his song

as the Banana Splits have. Only instead of La la la it's Yo yo yo. It's true - check it out for yourself.

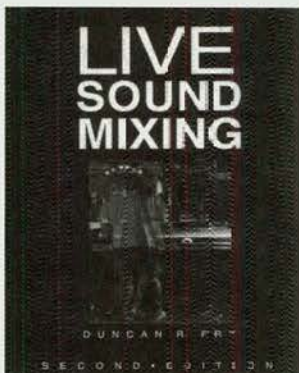
So the scene I can imagine is a very young Bob Marley, sitting in nappies and dreadlocks in front of an old black and white TV in Trenchtown, not sucking on a baby's bottle but chuffing away on the ganja pipe, getting this riff burned into his mind. And years later, searching around for a catchy hook in the recording studio, out it comes, with Yo's instead of La's.

Sure, most music is derivative. But

if three notes in a row cost George Harrison a cool half mil for My Sweet Lord, then how much is a whole chorus worth?

Of course, Rastaman Bob has smoked his last joint and shuffled off to that big concert in the sky, leaving us with his famous last words "I been smokin' de herb all my life mon, and there be nothing wrong wid dis piece of lung I got left" so we can't ask him where the inspiration came from. It looks as though it's going to remain one of those unsolved mysteries. Maybe it'll pop up on Channel 10.

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CLUBBLAND & DJ NEWS

KC Keeps his Crown

Over 1000 come to DJ National Championships at ENTECH

By Madeleine Murray

In spite of the pandemonium, the Technics DJ competition grand final held at ENTECH was way cool.

Hundreds of teenagers started arriving at Darling Harbour around noon. The adults among us went on red alert seeing so many youf, but they were pretty well behaved. They came into the hall, sat down, and waited for the first contestant. And waited, and waited.

The hall was dark, except for some overhead lights (JB moving Lights) which rotated giving off beautiful striped shafts of light. Smoke swirled lightly through the shafts, making a gorgeous effect of organic and geometric. A very good DJ called Lance, followed by DJ Sing, played the whole afternoon, so the crowd didn't mind waiting too much. I wandered through the crowd, and got their impressions of the DJs.

All the acts were good. DJ Junior from WA had a "lot of ideas, but didn't have the technique to match." Another person thought he was "awesome, great style, great level of tricks and skill."

DJ Junior told me after his set that, "It stuffed up. The needles were not balanced, so they kept jumping. It's really unfair. Everyone should use the same equipment, but a lot of people bring their own stuff. But that's the only disadvantage that I had. It sounded better at home."

DJ Junior's father, Frisco Soliano, a jazz bass player, came to the competition with his son. What does he think of his son's strange musical activities? "It's ok, he's got something to keep him busy, but his study must come first. I'm getting a bit deaf, but



he's making it an art. I felt that when he was getting in a groove, he should have kept it longer."

DJ Rub-a-Dub, performing with MC Sherlock, from Victoria, have won the state championships twice in a row. I asked him how he was feeling before the show. "We just want to get this over and done with. We just want to represent Melbourne, and do a good job of it." His partner said, "I'm feeling a bit nervous, but as soon as I hit the stage, I'll be all right. We've been in training for about three weeks." One of the boys rapped through the innovative set.



DJ Sonny from NSW played a fast, strong set, with some mad scratching, good contrast and control. He was able to isolate words. "It was good," he said after his set. "I did my best, I enjoyed it. I've been DJing for about eight years, this set here I did today, I put it together this morning. I just bought the records last night. I used about eight records."

South Australia had a duo called 937 DJs that was pretty hot.

But the big moment came when the defending champ, KC, came on, after a very long wait. "And now, without further ado!" as the

MC kept saying. KC played a set with Brian A.S.K. and Skizo from Italy. It was definitely thrilling, six decks, three mixers, and the boys moving brilliantly around their desks, scratching with their hands, feet, back, shoulders, sharing the turntable sometimes. The crowd, what was left of it, loved it, and the KC team won. DJ Sonny from NSW came third, and 937 DJs from South Australia came second.

KC is notoriously shy, but I spoke to the very intense Skizo after the set. "I'm from Italy, but I'm from all over the world. I represent Zulu Nation for Europe right now. Zulu Nation is probably everything you don't know about hiphop, and it's gonna be like that forever. We won this comp, it was a big training, a lot of effort, but my work is going to the people on the street, the people with no deal, no money, like I am. I do this for life. I don't do this for the jacket, all right. I do this instead of going on the street and rob. That's what I do, and it's true, believe me."

Comp Learning Curve

We expected 300 DJs and club owners for the final at ENTECH, which was to comprise one six minute set for each state. Instead we got chaos and the organisers were untogether. It kicked off late and dragged on. Audience were turned away in droves - it was a full house. But everyone survived! Dance Music and Top 40 it was not, this is a new music culture which has caught people, me included, by surprise. - **Julius Grafton.**

Cocaine, Martinis, and Lush Babes. (Not)

Profile of a hard-working nightclub owner

By Madeleine Murray

Whatever happened to the pros, crims, drugs, and orgies? If I was hoping for John Travolta and scenes from Pulp Fiction, and I was, I was disappointed.

Club 77 is set just down the road from the real action, Kings Cross. Three working girls are hanging around the car showroom. One girl has on a silver sequin dress with the hemline around the middle of her bare bottom. The traffic slows down to have a look, and I go downstairs into the Club.

Brass railings along the black bar make it seem like a hotel or cinema queue, except for the turquoise, purple and deep blue walls, the cluster lights and mirror balls above the mottled stone dance floor.

Robyn McCoy is drinking herbal tea, and polishing the brass railings around the club fastidiously. Looking like kd lang, with dark cropped hair, and chiselled features, Robyn is dressed like a clean cut cowgirl. She has been here since 6 pm, because of the archaic state licensing laws. There is no such thing as a nightclub, but a 'restaurant with entertainment.' Nothing happens until 11, because it is illegal to serve a drink without a meal. The doors must open at 6, and there must be a chef and food in the kitchen. The capacity is assessed by the number of people that could be seated at tables in the room.

"It's hogwash, really, but the hotels pay such high licensing fees that they can make it hard for clubs," says Jo, Robyn's partner.

On the wall near the cash register is a sign that reads, "To comply with NSW licensing laws, it's illegal for staff to serve alcohol before 11 pm without a meal. Staff must ask patrons, 'Are you intending to dine with us?'"

The club license is for 180 people, that is 150 seated, and 30 standing. This archaic and unrealistic assessment dates back to cabaret days, when people sat down in their organza gowns to

watch the feathered ballet dancers and singing dogs. Not when hundreds of twenty year olds stood around with drinks listening to happy hardcore at sternum shaking volume.

"The licensing police that we've had over the four years are very polite," Robyn says. "They have to show their badges, and come and speak to me. I have to be on the premises all the time. We deal with Kings Cross—they're not heavy." The club was booked once for overcrowding, and paid a \$4000 fine.

Around 10, the staff come. An innocuous looking guy in jeans and a plaid shirt at the doorway up in street level, a girl who takes the cover charge at the bottom of the stairs, a few bar staff, and an Amazonian man with a body like Stallone, an Aztec face, and a long braid. He does security by just wandering through the crowd, and looking awesome.

The crowd start to arrive after 11. Each night is organised by a promoter, who books the DJs, does the advertising, arranges the lighting and decor, and sells the tickets. The DJ tonight is Sugar Ray, owner of Reach 'n' Records. The crowd is twenties, wholesome, English. A blond Jodie Foster type in a short tight red dress, three impossibly tall girls in black, lots of guys in white T-shirts and baggy pants. Each night is different. Sunday has an arty/gay crowd.

The DJ starts mixing, and the lights spinning and flashing colours. The music is good, very loud, people buy beers, cider, and water. The bar staff are rushing around with buckets of empty bottles, and buckets of cold beers. There is a continuous turnover of drinks from back fridges to front, collecting and washing glasses and ashtrays, serving customers, and making sure everything is working. Robyn keeps her eye on the clientele, the security, the promoters. It is non-stop work, no break,



lots of cooperation between the staff, until 5 in the morning.

Then they turn on the 'ugly light,' the spotlight, the DJ plays one more song as an encore, and everyone leaves. Robyn and the staff clean up, find all the lost property, and the occasional person who has fallen asleep. "You have to wake them up carefully," Robyn says, "because you don't know how they're going to react, spin out on you, throw up all over you, or start abusing you. Someone fell asleep in the toilets once, and got locked in.

"Our staff have all been with us for three to four years. We're like a family. We never ask anyone to do something we wouldn't do, like clean a toilet. We have great staff that think. Trust me, it's very rare out there."

Speaking of cleaning toilets, "The walls. The walls!" says Jo. "They go through one door and hit one wall, then they go through the other door, and hit the other wall. Then they get to the toilet, and fall on the floor."

The club is run carefully, as a business, rather than a lifestyle. But some nights, things do go

wrong. One night, the needle on the turntable went, and Robyn had to drive all over Sydney to find one. Now she keeps spares. One night, everything went wrong at once.

"The plumbing backed up. Jo's cleaning up one toilet, I'm doing another, we've got 300 people here. We had to rush and call the plumber. Guys are walking into the toilet, and you're trying to explain. A barman comes in and says the post machine has to be changed. The licensing police turn up. That's an unusual night. You've got to be prepared for things to go wrong, in order to fix them. Those sort of nights age you about ten years. Being a nightclub owner is bloody hard work."

Club 77 runs on Wednesday, Friday, Saturday and Sunday nights. On Monday, Robyn recovers. She does nothing, no phone calls, no business, just "bumping into walls." At the beginning of the week, she makes sure that all the staff are booked for their shifts. Then she does a stocktake, and the shopping. She cleans up the club, checking on what's broken, damaged, or needs painting. She handles deliveries, checks up on promoters, takes more bookings. To relax, she goes horseriding, walks her puppies, or takes her mother shopping.

"Things are always changing in clubs. You have to keep moving with the changes. You're learning constantly. You've got to keep listening to what people want, and what promoters are talking about, even though it's not your cup of tea. Unless you keep your ears open, and constantly read about what's going on at other nightclubs, you could lose the plot real quick."

Robyn and Jo have had the club for four years, which is a long time in clubland. The first year was a

Club 77
(continued)

nightmare, second was a struggle, and by the third year they were doing well. Robyn spent sixteen years working in a bank, and four years promoting before buying the club. She sees it as a business, which can make money if it's run well. She is straight forward and reliable with the promoters, and friendly to customers.

"It's hard work. Either you're cleaning up somebody's sick which doesn't happen often, but when it does, it's not a pleasant thing to do. Or you're copping across the bar how expensive drinks are, and we are the cheapest nightclub in Sydney. Or the pick up lines that some of the people get. Having to run over, and calm two people down. Having things ready for the DJs, watching the security, talking to the licensing police. If somebody faints, you have to have the knowledge to call the ambulance. There's so much responsibility on a club owner."

Riche, the Sydney Hilton nightclub

Riche, the Sydney Hilton nightclub, opened on February 29, after a \$1 million refurbishment. The club, formerly Juliana's has been entirely gutted and revamped.

The design is based on flowing lines. Undulating purple walls, gold curved walls, large columns painted with the swirling colourful Guatav Klimt images. The round stage is sunken two steps down. The lighting rig above it is circular, echoing the shape of the stage. Goldenscans and monitors hang from the rig around the stage.

The club is available for hire for product launches, fashion parades, and cocktail parties. Robin Williams was there in March for the launch of his new film, *The Birdcage*.

Riche operates as a buffet lunch restaurant Monday to Friday, 12 pm to 2:30 pm.

Riche is open as a nightclub

from 9 pm to late Wednesday to Saturday nights, and from 5 pm on Fridays.

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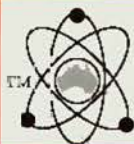
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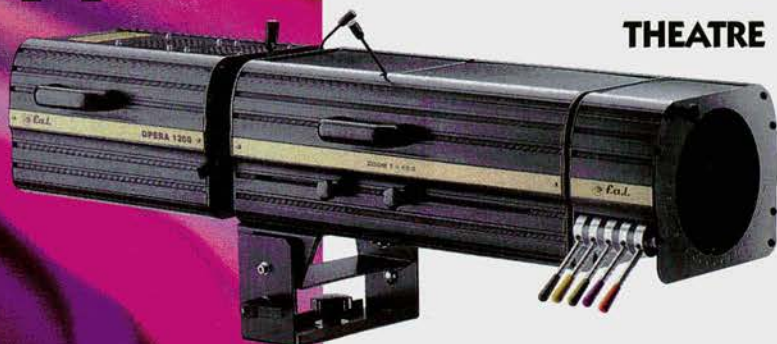
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LIGHTING MONTHLY

May 1996

Edited by Catriona Forcer

Chameleon Launch Sales

Chameleon launched their new sales division at Entech with an impressively designed stand from which they could successfully promote the growing numbers of products they now distribute.

Already well known as a hire company, winning the 1996 Entech Lighting Production Company of the year, Chameleon have been steadily gathering products to offer.

"The show has been very good for us as it's been the launch of our sales company and the relaunch of Altman (see page 87) products in this country," said Tony Davies, Managing Director of Chameleon. "We have a lot of Altmans on theatre shows but here we can expose them to amateur companies, regional theatres and other rental companies.

"We've also had a lot of interest in the Wybron Auto Pilot (see page 96) but mainly as a rental item, I don't think a lot of people will be rushing out to buy it."

Chameleon also have access to White Light effects products and Tony admits they are still looking at other gear.

"It's early days for us in sales," he told me. "We don't want to take on a lot, just a few key items so we can look after the product properly and represent one manufacturer in one area so there are no conflicts of interest. Our rental department will still buy products that we don't sell if they need them.

"The quality of the people coming through has been good and there's been real interest. I don't think a hell of a lot of sales will happen over night. I think people will remember products when they revamp in the future. That's where we're going to win in the next two years. This is basically an investment for us."

Well, that's as far as the story can go this month. Next month's Connections will have a further update on just what Chameleon are up to.

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(02) 310 5511.



AC Lighting to open in Australia

AC Lighting of the UK, who exhibited for the first time at Entech, announced that they will be setting up shop in Australia. AC Lighting tend to take on product manufacturers who are not big enough to market themselves worldwide and the range includes: Wholehog II lighting control consoles, WYSIWIG software, Chroma-Q colour changers, Gelsream colour changers, Vision Light Enhancer haze machines, Power Lock electrical connectors and Procolour filters.

David Leggit of AC Lighting told me that the Australian representative over here will be Sue Green. More information on this and the above products in further issues of Connections.

For further enquiries call the UK office on 0011 44 1494 445000.

JASON WAIDE

Winner of the 1996 Roger Barratt Lighting Scholarship

The Roger Barratt Lighting Scholarship came about as a common idea at Rogers funeral last June. Since then the Scholarship has been established with a legacy from Roger's partner Andrew Morgan to train a young person.

Roger Barratt was one of Australia's leading lighting designers. He took young people under his wing and helped them greatly.
(continued page 103)



Martin Gruppen buy two companies

In line with the strategy announced earlier this year, Martin has signed a Letter of Intent to purchase Tracom, which is the distributor of the company's products in the US. If this acquisition is completed, Martin is expected to significantly strengthen its position in the US market.

In addition, Martin has signed Letter of Intent to purchase the British company JEM Smoke Machines and JEM Pyrotechnics. If these potential acquisitions are completed, Martin is likely to almost double its sale of smoke machines and smoke liquids.



STUDIO COLOR available first at Entech

High End Systems win court case

Just prior to Entech on the 19th April, a judgement was finally made in the Vari*lite versus High End Systems case regarding the Studio Color - High End Systems won. Consequently Entech became the first trade show where the light was actually really for sale!

"As you know we recently met our friends from Vari*lite in the courts because they wanted to prevent us from making Studio Color," said John Adams of High End Systems. "The judge listened to all the evidence and decided that Vari*lite didn't have a reason to stop us making them and their claims were found to be unsubstantiated. Studio Color has been on the blocks for about a year and we've previewed it in Europe and the USA. Here it is in it's final production version and we're now shipping. We have sixteen here at the show which we've sold and, as a result of the show, we've got another bunch of fixtures coming into the production and rental market here. (John McKissock of Clearlight bought the six-



Noel Bourne of GUVT pictured with John Adams of High End Systems

teen Studio Colors). It differs from the original version in that the product has come a lot further both in terms of light source and capability of the product. It has full colour mixing, a discreet colour wheel, mechanical dimming, uses a discharge lamp, has colour correction, iris, pan and tilt. We're doing two versions of it - an installation version with a magnetic ballast and a touring version with a solid state ballast which saves weight".

"There's a lot of excitement about the Studio Color because the nearest product which exists on the market can only be rented so a lot of production companies will take the opportunity to buy it and make money.

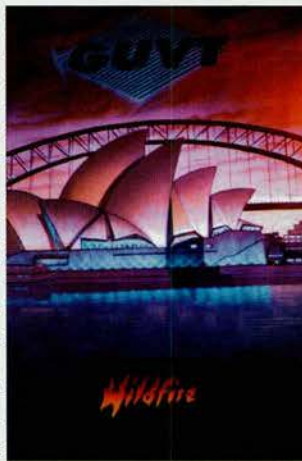
"I think the traffic has been low but the quality has more than compensated for that. I think we're all a little bit tired of exhibition organisers opening the net just to make the numbers up as it looks good on paper. It's good to see Connections didn't do that", said Adams.

"We've been real impressed with the response to the Studio Color," said Noel Bourne of GUVT. "We've had a lot of Studio Colors on back order for quite a long time. It's going to be a good product for us.

"Wildfire has also attracted a lot of interest and I think you'll see a lot of set designers and rental companies take it on board. Our little Caterpillar from Lighting Technology has also been a notable product of the show."

The GUVT stand won 'Best Stand of The Show' at the ENTECH Awards.

For further info call: GUVT (07) 358 5022



Bytecrafft dramas

Bytecrafft experienced last minute hassles when the Status console used to control the Status Flying System did not arrive in the country until the day before Entech - unfortunately it arrived in Melbourne!

"I don't know how it managed to get here by the Tuesday but it did," said a relieved Shirley from Bytecrafft. "The new Strand catalogues also arrived Monday afternoon and I think the ink was still wet! The new Strand Bambino and Supernova 200i arrived on Monday afternoon also."

Bob Fletcher of Bytecrafft said that items attracting particular attention were the Strand Bambino 650, a compact 650W compact location fresnel, the Supernova 200i, a daylight 200W HMI light with built in electronic ballast and the Strand Videolux, a range of low energy, high efficiency lighting instruments for the small television studio. Also popular from Strand were the portable lighting kits.

Many people were interested in the Status console as a Flying System has just been installed in the Sydney Opera House. The LSD Icon Washlight was also a crowd drawer.

For further info call: Bytecrafft (03) 9587 2555



L.S.C. ELECTRONICS

L.S.C Electronics debuted the Avolites range at Entech and reported their first two Avolites sales - a Pearl to Phil Stafford of Entertainment Lighting Services, Queensland and another Pearl to Greg Keen of Lotts of Watts, Sydney. Greg purchased his Pearl at the same time he purchased 24 Studio Due Stratos lights, a nice neat system for him.

L.S.C also showed the new Axiom 48 specifically designed to provide control of mid-sized light shows, yet provide the operator features normally reserved for the larger capacity lighting console.

For further info call: L.S.C. (03) 9561 5255.



Alan Graham and Andy Meldrum of L.S.C. with the new Axiom 48



Jands flat out

Unprecedented Interest at Entech

"We've been doing trade shows for about fifteen years and I've never, ever experienced the level of interest in our products that we've had here,"

said Paul Mulholland of Jands. "We've had practically every one of our sales people here all day for three days and they've been flat out. Every other show you get periods where nothing happens but here we've never stopped once."

"What's been really encouraging for us is our move into the theatre fabric area and there's been a huge amount of interest there. The Magic Lock from Hoffman, a safety rope lock for flying systems has created a huge amount of interest. The ETC Express and Obsession have captured a lot of interest. But the interest in the staging area has been really exciting".



"We didn't expect to sell here as it's a pro show unlike a music show but clearly that's not the case. We've sold a lot more here than at AIMs. The other thing that surprised us is that we didn't expect it to be a dealer show. We figured we would have dealers here but it wouldn't be hugely attended by them but it has been. The other impressive thing I heard was that network 7 flew all their Lighting Directors here, had a meeting and then bought them down to the show. It's been really busy!"
For further info call: Jands (02) 515 3622.

Clay Paky/Show Lighting

Clay Paky Australasia is now to be known only as Show Lighting Australia Ltd.

"Show Lighting Australia Ltd will represent



exclusively Clay Paky for the Australian market," said Enrico Caironi of Clay Paky Italy, pictured with Peter McKenzie.

Head of Show Lighting will still be Peter McKenzie who was having a very good Entech.

"It looks like we've just about sold the entire stand," said a very pleased Peter McKenzie. "Not to one individual person but different clients and dealers of ours. Entech was very much a launch of Clay Paky as an individual company. There has been a lot of good quality people coming through the show, especially theatre people"

For further info call: Show Lighting (02) 898 1666

ULA

"We've found that our deals are being done on the final day which is good," said Cuono Biviano of Universal Lighting & Audio. "We've sold all of our Abstracts from the stand to Geraldton for a club in Perth. At this very moment we're concentrating on the JB Lighting gear which is either going to New Zealand or to Adelaide. We're working that out as we're speaking."

"The interest in the JB lights has been very good. I thought I'd bring in another line of scanners 1200 HMI and see how we go but the interest has been very good. People like the fact they're made in Germany with German engineering."

Making its debut at Entech was the JB Lighting Varyscan 4 Compact Plus 575 HMI which only weighs 18 kilos. It has a sliding technique for the motors and gobos making ease of use. Output is the same as a 1200 HMI fitting. Also new was the JB-Scancontrol 1612, a universal DMX unit to control up to 16 scanners with 12 channels each.

For further info call: ULA (07) 5532 9922.



Cuono Biviano with the Varyscan 4 Compact Plus 575



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ACT/COMM/002



SIMPLY RED

new Icon desk trialed on tour

Lighting operator Mark 'The Pope' Payne is back in Australia with the Simply Red 'Life' Tour, originally designed by Patrick Woodroffe. Again Mark was the LSD guinea pig with a new Icon product.

The tour started last November in Europe with an unusual stage set up - a small stage and a big stage, linked by a bridge, in the arena auditorium.

"The idea was that the audience were pretty well lit all the time," said Mark. "We wanted to bring everything to Australia but as usual it all cost far too much. It can be shipped down here, which isn't very expensive, but it would have to fly back. So we decided to do a smaller version starting off using some of the set elements and an end show. We wanted to do in the round but it all becomes far too complicated and I don't think we've sold fantastically, we're playing reduced tonight."

Mark decided to put just a plain cyc at the back of the stage giving a very neat and clean show. There's no smoke or projection. I asked Mark what he had in the rig.

"I don't actually know what I've got!" he



Photo: Bob King

laughed. "Because with the Icon desk we have now you don't have to do numbers any more. You just call everything a name and you don't

have to know the numbers any more. I think we have 12 VL5's, 28 VL6's, 8 Cyc lights with Molemags, truss cones in the truss fingers, lots of Par 20 practical lights around the stage and in the sun itself as well as 5K *a large sun, which moves into different positions during the show, is suspended centre stage*). More 5K are on the floor and the stage is littered with little 0.5K Coda's. Added to that are the 12 Icons.

"With the new Icon desk I don't have to think whether the light is an Icon or VL6 or VL5. When we were in Europe we were using hundreds of DMX channels so Mark Hunt, our software guy, had to rewrite everything to make it work. So we've been using emergency ver-

sions of the desk for 3 or 4 months now. We've been testing it out and now LSD have just released the official version 3 of the desk. The great thing about the software is that it can be modemed, all runs off a Mac and I can just log in to LSD bulletin board to talk to Mark. Then he can send me new versions of the desk and so on. It's worked out really well and the desk is a doddle to run. It's getting easier and easier from thinking about what you want to do and to actually doing it."

The new Icon desk will run anything that works with DMX which has been handy on this tour with all the different colour changers that have been encountered. Three racks called VME's convert the Icon signals to Vari*lite signals so that they will run with the Vari*lite repeaters.

"Technically it's all gone very well compared to when I was the first to take Icons out with Depeche Mode," said Mark. "They're a very good light although they're still labour intensive but if you have a good tech you don't have to worry about it."

• Cat Forcer

Tour Personnel
Production Manager Nick Levitt Sound Engineer Robbie McGrath Monitor Engineer Steve Flewin Systems Engineer Paddi Addison Sound Technician Dee Miller Lighting Director Mark Payne Lighting Crew Chief Mark England Vari*lite Tech Ben Van Gruiten Lighting Tech Simon Harraghy Riggers Jon Bray, Richard Wythes
Australian Tour Personnel
Production Manager Ian Digance Sound Jack Bain, Dave Vinnicombe Lights James Straw, Andy Cowen Vari*lites Paul Kent



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GamFusion 10-30 Ideal for use in followspots. Softens hard edges of the spotlight. Spot intensity 89% (-1/8f stop). Flood intensity 76% (-1/2f stop).

GamFusion 10-40 Softens edge and smooths the beam. Light scatter apparent. Barndoor & Shutter control affected. Spot intensity 88% (-1/4f stop), Flood intensity 64% (-1/2f stop).

GamFusion 10-50 Softens the beam, spreads the light. Clearly effects barndoors and shuttering of light. Spot intensity 85% (-1/4f stop). Flood intensity 45% (-1f stop).

GamFusion 10-60 Beam still apparent but edges very soft. Barndoor and shuttering effected with resulting soft light quality. Spot intensity 75% (-1/2f stop). Flood intensity 24% (-2f stops).

GamFusion 10-70 Beam is hardly perceptible. The light is very diffused and wide. Barndoor and shuttering dramatically effected. Spot intensity 52% (-1f stops). Flood intensity 7% (-5f stops).

GamFusion 10-75 Almost total elimination of beam, shuttering and barndoor edges. Spot intensity 28% (-2f stops). Flood intensity 3% (-5f stops).

GamFusion 10-80 Eliminates beam edges. Barndoor and shuttering are not apparent. The light is totally diffused. Spot intensity 20% (-2f stops). Flood intensity 2% (-6f stops).

GamFusion 10-90 Total diffusion. No apparent edges. Ideal for light boxes where camera or audience will look into the light source. Spot intensity 14% (-3f stops). Flood intensity 1.5% (-6f stops).

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Write in Reader Service Number: 125





Premier Lighting Brisbane Bounce Back

Cat Forcer talks to Jared Hawke, the man behind the transformation

The Brisbane branch of Premier Lighting was not exactly dynamic and so, nine months ago, Jared Hawke was dispatched to run it and put some life back into the business.

"I had been working at Graftons and DMC in Sydney," Jared told me. "I arrived here to revamp Premier Lighting Brisbane and I started by moving the office to 32 Chester St, Fortitude Valley. It's a really nice, high tech office. I also increased the staff level to six full time employed people. When I first came here there was just me!"

Since his arrival, Jared has scored some pretty big contracts including consulting for Players Nightclub, supplying equipment for the Conservatory at the Reef Casino in Cairns and he is now very busy doing a large entertainment venue in Auckland, New Zealand. In fact Jared has doubled the profits in this short space of time.

Jared is quite a fan of High End Systems equipment and so he supplied Players Nightclub with Trackspots, Colorpro, Vipers, and an F100. He also designed the stage area, which has a revolving stage, and supplied a lot of fibre optic step lighting.

"High End products I find very reliable," said Jared. "I also find dealing with Noel Bourne to be quite decent as he's a great guy to deal with."

The New Zealand job is an entertainment nightclub with four, separate large areas for live bands, cabarets, dancing etc. Although the



Ben Aid, Factory Supervisor, at Premier Brisbane's new premises

equipment spec is still open to a certain degree there will definitely be Cyberlights with Lithopattern gobos on the outside of the building to light the architecture. Other equipment decided on includes a Viper laser system, Emulators and a large number of Trackspots with an LCD controller.

"We're putting eight Caterpillar moving lights into the entrance hallway for an effect," Jared said. "With it will be a 9ft tall dye waterfall using Wild Fire water dyes, which is really way out. As well as the dye, there's also a Wild Fire 250 watt fixture to light it.

Ben Melrose is the Hire Manager at Premier and Bret Hodges is in charge of the sales division at Premier Brisbane. Hire stock caters for all areas including film and television, often supplying gear to Movieworld.

"We were the main supplier of 2K's and 5K's for the *Phantom* as well as Jands HF dimmers," said Jared. "We just supplied gear for a two week under water shoot that was done in a pool."

Premier are also agents for several manufacturers including Manfrotto, High End, Kino Flo, Selecon and Jands, recently becoming Jands Dealer of the Year.

"We sold some Kino Flo gear (couple of four bank units and a single bank unit)

to a panel beater next door to us!" laughed Jared. "He wanted to see the differences between tungsten and daylight on the Ferraris that he panel beats. So when the Ferrari parks outside the front of the Sheraton Wentworth, it doesn't look like a different colour paint!"

Possible future jobs on Premier Brisbane's books include a large auditorium in Singapore and a theatre in Brisbane.

For further info call: Premier Brisbane (07) 3257 0443.



Shane Jacobson (kneeling) of Premier Melbourne and Jared Hawke of Premier Brisbane



Musto, 15 x 5K HMI on location for 'Acric', a Japanese mermaid film.



BUYERS GUIDE

Effects Lighting

CENTREPIECES

COEMAR

Coemar De Sisti Australia (03) 9467 8666

Comet (new product) Seven beams of concentrated light with 1460 pre-programmed scenes incorporating rotatable multicoloured beams controlled by dichroic filters. Unique and rapid strobing effect only available with the Coemar Comet. \$2,995.00.

TAS

Coemar De Sisti Australia (03) 9467 8666

Synchro Digital A 575 HMI effects unit which produces dancing beams of multi-coloured light. Internal preset programmes can be accessed via analogue signal or the unit offers total independent control of all functions via dedicated controller. DMX addressable via stand-alone control desks. \$4,100.

Duetto Twin mirrored moving light effect which brings the advantages of moving mirror technology to the centre-piece lighting effect. With inbuilt audio control or analogue and DMX signal control options, the Duetto offers a twin head moving mirror set up with internal colour and gobo changer. Uses high output dichroic 250W lamps. \$2,400.

GRIVEN

Universal Lighting & Audio (07) 5532 9922

Splendid 16 well defined beams, coloured by dichroic 8 pre-set sequences with several scenes. Sound to light or 0-10V lamp, available in an HMI 575W or HMI 1200W. Weight 39kg. \$3480.

Helios 8 arms with mirrors that reflect coloured beams 8 pre-set sequences, sound to light or 0-10V control. Safety grid lamp - available in HMI 575W or HMI 1200W. Weight 41.5kg. \$7103.

LYTE QUEST U.S.A.

Disco World (03) 9735 0588

Alien 6 dichroic coloured beams on 3 axis create a spinning frenzy. Uses a 240 volt 500W bulb. \$1350.

Spider DMX controllable centre-piece, 12 stepper motors, 4 arms each containing 4 dichroic colours + white, 3 gobos with 2 colours, 2 carousel mirrors, 2 rotating mirrors, arms fold in for easy transport. Lamps - 4 x ENH 120v 250 watt. \$2400.

Raven 100 moving colour beams crossing one another with sound activation. 24v 250W EHJ lamp. \$980.

Renegade 4 rotating dichroic mirrors, 16 colour beams and the ability to automatically keep to the beat due to exclusive sound activation technology. 24v 250W EHJ lamp. \$980.

F.A.L.

ELSTA (02) 568 2100

Galactica large 16 mirror music activated centre-piece, 0-10v, 17 motors, HMI 575 lamp. \$3032.

Mini Octopus medium sized centre-piece featuring 4 deflecting mirrors and 2 pairs of mirrored discs, 0-10v, 9 motors, HMI 575 lamp. \$1639.

Pentagon large centre-piece with 5 couples of deflecting mirrors projecting onto 3 moonflowers and 2 rotating cylinders, 8 rotating dichroic filters, 16 motors, 0-10v, HMI 575 lamp. \$2660.

SUPERSTAR

ELSTA (02) 568 2100

Nike Star sound animated centre-piece that projects 8 beams, each one projected twice by 2 motorised mirrors creating moonflower effects and rotating beams, HMI 575 lamp. \$1639.



The Dragon from UL Lighting

TELSTAR

ELSTA (02) 568 2100

White Raggi medium sized centre-piece that utilises one EVD 36v 400w lamp and produces the classic raggi look through 103 lenses, suited driveway hire. \$737.

Coloured Raggi similar to the classic astroraggi but with 2 EHJ 24v 250w lamps creating 206 pencil beams which move to the music, suited driveway hire. \$737.

UL LIGHTING

ELSTA (02) 568 2100

Motor Head 4 channel DMX disco lighting or centre-piece effect featuring 360° head rotation within 2 seconds, 234° tilt within 1.5 seconds and 2 white gobos, 3 colour gobos and 1 multicoloured gobo and an independent colour wheel with 6 colours + white, strobe effect, 0-100% dimmer, ELC 24v 250w lamp. \$1999.

Dragon DMX controllable medium sized centre-piece

suiting to driveway hire. Similar to four basic intelligent fixtures in one, the Dragon features multiple effects and gobos. \$2299.

ACCESSORIES/OTHERS

N.J.D.

Black Express Light & Sound (02) 559 4363

Data Moon DMX controlled/stand alone flower effect with 8 different colour/gobo possibilities. Uses a 250 watt ELC lamp. \$1051.

STROBES & STROBE CONTROLLERS

COEMAR

Coemar De Sisti Australia (03) 9467 8666

Strobe 1000 - 5000 A high-powered range of strobes including 1000, 2000 & 5000, variable rate strobe housed in an aluminium housing and complete with lamp. From \$695 - 1180.

PROGRAM SYSTEM

Black Express Light & Sound (02) 559 4363

1500 watt Strobe can be triggered to audio or run manually via separate controller. \$899.

OPTIKINETICS

Lightmoves Technologies (02) 560 0000

White Lightning Strobe 150W max flash rate 15/sec. \$865.

Terra Strobe 400W max flash rate 15/sec. \$1155.

Super Slave Strobe 70W max flash rate 15/sec. \$395.

TEATRO

Lightmoves Technologies (02) 560 0000

Strobo 1500 1500 watt DMX controlled strobe, Ch 1 rate, Ch 2 intensity, weatherproof; - colour frame and barndoors available. \$1450.

Strobo 2500 2500 watt DMX controlled strobe, Ch 1 rate, Ch 2 intensity, weatherproof; - colour frame and barndoors available. \$1890.

ORION LIGHTING UK

Universal Lighting & Audio (07) 5532 9922

25 - 75W Power Strobe has internal or external control, adjustable flash rate, fully UK made. \$231.

Orion Strobe Controller 0-10V controller compatible with any other strobe. \$129.

LIGHTOMATION

Universal Lighting & Audio (07) 5532 9922

Megastrobe 1500 watt strobe, internal control may be triggered manually or remotely, may use strobe con-

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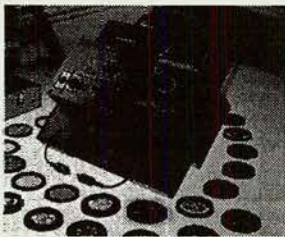
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OPTIKINETICS



BUYERS GUIDE Effects Lighting (continued)

EFFECTS PROJECTORS

COEMAR

Coemar De Sisti Australia (03) 9467 8666

Graffiti 1Kw TH oil effects projector. 24° beam angle. 3-8m throw, with analogue input. Produces the popular 60's oil effect with a wide beam angle. Suitable for permanent or mobile installations. \$2,650.

Versatile 750w or 1Kw static 'finger' beam projector with 115° beam angle and a 3 to 12m throw. Uses the unique Roundlux lamp to produce cones of light through eight lenses. Able to utilise integral reflector lamps to produce shafts of light. Effective in a chase sequence. \$315.

Baby Colour Mini projectors utilising a 250W dichroic lamp with 8.5° beam angle and 3 to 12m throw. Internal 10 colour changer and manual gobos. Produces a flat field and come in two versions: Eco (4 unit system) and Pro individual configuration. \$900.

LEISURE LIGHTING

Coemar De Sisti Australia (03) 9467 8666

Kassiopi 250 250w projector with front dichroic three colour prism, together with switching options to give a choice of four effects. Twin motored unit, with on-board sound electronics and fan forced cooling. Available in smaller 100W Supernova version. From \$515.

Jakstar 1Kw projector producing dichroic shafts of light. Incorporates slip clutch system to produce contra-rolling effects. Houses on board sound electronics with fan forced cooling. Long life linear lamp can be replaced with 300 or 500W lamps if required. \$800.

Megastar High powered moonflower scanner with combination switching allowing for multiple effects. Pure dichroic colours and high reflectivity mirror. Available in two models using 100W or 250W long life projector lamps. From \$500.

Superzap High powered barrel effect with internal 10 dichroic colours, combination switching allowing for multiple effects, and adjustable barrel positioning. High reflectivity mirrors. Uses 250W dichroic lamp. \$680.

TAS

Coemar De Sisti Australia (03) 9467 8666

Dominator Creates 16 beams of light which rotate and intersect. Synchronise to music via internal audio electronics, but also allows for individual motor control via analogue signal. Rotation speed and direction can be controlled individually. \$960.

Nabila Creates 8 sharp blades of light which rotate and intersect. Synchronise to music via internal audio electronics, but also allows for individual motor control via analogue signal. Rotation speed and direction can be controlled individually. \$815.

Carosello Creates blades of dichroic light which rotate in a contra-rolling manner. Synchronise to music via internal audio electronics. Utilises a long life powerful 1Kw linear lamp which can be replaced with a 300W or 500W lamp if desired. \$850.

Mini Series A complete series of effects lighting similar to those described above, and others, particularly suitable for smaller installations or mobile work. From \$190.

with glass heat absorbing filter; whisper quiet, fan cooled. For projecting scenery or moving effects.

Toccata 2500W throw condenser optical spotlights. Even flat beam for accurate cut and crisp gobo projection. Three plane fully rotatable gate with 6 shutters. Available as 10/260 or 15/380 beam angle. \$2251.

Optique 1200W condenser optic projector with flat field for sharp projection. Rotatable gate assembly. 8° to 17° beam angle. Also available as 150 to 420 model. \$916.

GRIVEN

Universal Lighting & Audio (07) 5532 9922

Circus two rays rotating on 2 independent axes. Two gobo wheels, 9 sequences + black out. Sound to light or 0-10V control. Lamp available in HMI 575W or HMI 1200W. Weight 30kg. \$2936.

ABSTRACT

Universal Lighting & Audio (07) 5532 9922

Galactic Moon 2 CE 20 high powered beams, 8 colours, 7 gobo patterns microstepped, DMX512, sound to light, A1/232 - 15V 150W dichroic lamp, variable speed shutter, electronic or switch settings. Weight 6kg. \$710.

Twister 3 16 colours, 20 laser-like beams that change colour and direction to music. A1/231 - 12V 100W punch lamp. Weight 5.2kg. \$463.

Hyper Rave 6 colours, 6 gobo patterns combined to create an effect of beams that move and change colour to the beat of the music. Mirror barrel offers alternative to moonflower effect. Lamp A1/231 - 12V 100W. \$535.

Gladiator CED 12 colours, 12 gobos deflected off mirrored 40 rpm barrel. Barrel rotates and elevates through 50°. DMX512 control or via internal pre programs. Lamp GE arc stream 150W HQI 4000K, 6000hr. \$1229.

METEOR

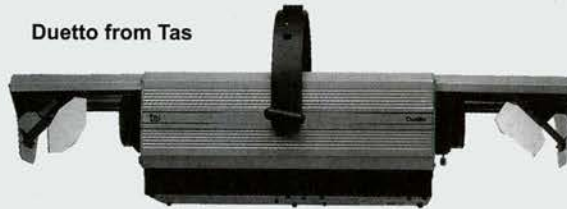
ELSTA (02) 568 2100

Probeam 75 effects projector, 3500 watt hour lamp life, uses stancard 6" (150mm) wheels from oil wheels to graphic wheels and fog effects, well suited to drive-way hire. Lamp type EYF 75w 12v.

F.A.L.

ELSTA (02) 568 2100

Starburst music activated multibeam effect, interchangeable reflectors, optional mirror head that converts the unit into a scanning effect. Selectable se-



Duetto from Tas

OPTIKINETICS

Lightmoves Technologies (02) 560 0000

Solar 250 Projector, 250W lamp, wide range of lenses and accessories, supplied std with 85mm lens. \$675.

K1 Projector 250W lamp, wide range of lenses and accessories, supplied std with 85mm lens, colours black or white. \$1225.

K2 Projector 200 MSD 2000hr lamp, wide range of lenses and accessories, supplied std with 85mm lens, colours black or white. \$2750.

Solar 575 Projector 575 MSR 400hr lamp, range of lenses and accessories, supplied std with 85mm lens. \$7000.

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609 Mt. Eden Road, Mt. Eden, Auckland.
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quences 0-10v or stand alone, suited driveway hire. Lamp type HMI 575. \$1389.

LIGHT EMOTION

ELSTA (02) 568 2100

Powermoon bright moonflower effect, sensitivity control for music to light animation, EHJ 24v 250w lamp, suited driveway hire. \$368.

Hypermoon projects multiple moonflowers through a dichroic glass prism that sweep from side to side to the music, 24v 250w ELC lamp, suited driveway hire. \$573.

Earthquake constant colour changer coupled with fast sound activated mirror movements simulate a laser beam, 24v 250w ELC lamp, suited driveway hire. \$573.

Sagazap 100w MR16 reflective capsule offers bright output, a 4 way switch facility allows various combinations for constant or sound to light animation of both the colour changer and the barrel or concave reflector, 9 dichroic colours + white. \$368.

SUPERSTAR

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Skylight projects 36 coloured beams through 18 lenses, uses EHJ 24v 250w lamp. \$491.

Full Moon1 projects single cone of beams creating a laser like cone of light that rotates to the music, 24v 250w EHJ lamp, suited driveway hire. \$409.

Comet modern version of the derby that projects 2 beams through each of 8 lenses that move to the music, 24v 250w EHJ lamp, suited driveway hire. \$491.

TELSTAR

ELSTA (02) 568 2100

ETs fan blade effect that projects 2 laser like thin coloured beams, normally used in conjunction with a chaser, QI 300 watt lamp. \$73.

Helicopter 4 head lamp type 4515. \$188.

PROJECTION ACCESSORIES

DHA

Rosco Australia (02) 9906 6262

Animation Motor Units (AMU) come in a large range of sizes to fit most popular lanterns from mini Parcans to 2.5K units. Fixed speeds and Varispeed DMX motors accept DHA animation discs. From \$320.

Animation Discs attach to the AMU on a lantern. Twelve patterns to choose from and when used with a gobo on a Profile gives effect including waves crashing, rippling water, flames, rain, snow clouds. On a Fresnel or Parcan will give a subtle moving light pattern.

From \$120.

DHA Gobo Rotator available to fit a number of Profile spotlights and allows a gobo to be rotated on its centre axis. Effects include whirlpool, laser cone and other 'disco' effects. Particularly effective in conjunction with smoke. A Double Gobo Rotator is also available for effects that include snow and reflected water. From \$800.

Rosco Rear Screen projection materials in 1.4m and 2.4m widths in white for front or rear projection, grey for wide viewing angles in moderate ambient light and black for situations of high ambient light and where fine resolution with a strong image is required. From \$38 per linear metre.

Data Moon from N.J.D.



OPTIKINETICS

Lightmoves Technologies (02) 560 0000

Wheel & Cassette Rotators for all Optikinetics projectors, wheel rotates at speeds: ultra slow, 0.5, 5, 20, 90 rpm. \$90 - 110.

Wheel (150mm) + Cassettes (75mm) available from stock in a wide selection of designs. Custom logos etc available. From \$80.

Liquid Wheels + Cassettes the original psychedelic effects. \$110.

Solar System DMX driven effects unit creates 64 effects, from 2 selectable wheels, each with 8 effects slots, dimming/strobing shutter and internal memory. \$4200.

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Rosco Australia (02) 9906 6262

Rosco Fluorescent Paints are vinyl acrylic colours that are visible and brighter in normal light, and fluorescent under UV or black light. Eight colours plus invisible blue which is clear under normal light and fluoresces light blue under black light. Test kit with one of each colour \$30. All colours supplied in 0.95 litre cans \$35 each. Colour samples at Rosco dealers.

Rosco Glo-tape and **Glo-paint** glows yellow-green in the dark and can remain illuminated for hours. Tape is 25mm wide with adhesive backing from \$18 for 4.5m. Paint \$10 for 30cc container.

LIGHT POINT SYSTEMS

Lightmoves Technologies (02) 560 0000

Blackflood 400W metal halide 1000hr. Flood Reflector 1050 x 600 throw 12.2m, spread 31.5m. Splood Reflector 650 x 650 throw 16.8m, spread 19.5m. \$3175.

Weather Black 400W metal halide 1000hr. Flood Reflector 1050 x 600 throw 12.2m, spread 31.5m. Splood Reflector 650 x 650 throw 16.8m, spread 19.5m. Suitable for outdoor installation. \$4225.

Mini Black 300W mercury vapour flood, 5000hr lamp 350 beam covers 6.7m, throw 10.5m. \$995.

UV Filters for most intelligent lighting available for colour or gobo wheels. POA.

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Universal Lighting & Audio (07) 5532 9922

400W UV Projector sturdy aluminium construction, front grill. Weight 8.5kg. \$449.

WILDFIRE INC

GUVT (07) 3358 5022

WF-400 S/F UV Spot/Flood Fresnel high intensity focusing UV Spot/Flood fresnel, throw of 150ft. \$5809.40.

WF-400 UV Flood self ballasted long throw UV fixture, throws over 175ft with a wide 105° field. \$3421.60.

WF-250 UV Spot/Wide Spot Flood range of high intensity UV fixtures, self ballasted in 200, 500 and 900 models with 150ft throw. \$2111.20.

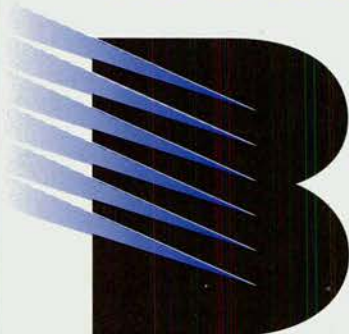
Wildfire Accessories including visible/invisible paints, plastics, water dyes, wallpapers, make-ups and hair products. P.O.A.

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Write in Reader Service No: 101



The Entech LX Product Award Winners

Full Size Moving Light Clay Pakys Golden Scan III

Since its release in 1993, the Golden Scan 3 has won many major awards in the industry. Some of the main features include 30% more light output than the GS2, 24 colours plus 24 bicolor beams, colour temperature correction, 4 way prism, frost, iris and four rotating gobos each of which can be stationary or spin in both directions. The GS3 is available with an HMI 575 lamp or a more powerful HMI 1200 lamp.

For further info call: Show Lighting Australia (02) 898 1666.



Compact Moving Light Martin Roboscan 812

The Martin Roboscan 812 is tailor-made for portable lighting systems or in-store merchandising purposes.

Using the HTI 150 (6500K) or CSS 150W (4000K) lamp which can be remotely switched

for even greater economy, this lightweight compact robotic projector delivers a choice from 11 radiant dichroic colours, plus open white.

There are 11 remotely selectable gobo patterns plus open and blackout and you can



strobe between black and any colour, or between neighbouring colours to create animations and effects.

Coated lenses are used to optimise light output and the focus objective lens provides a beam angle of 14.7°.

Control can be by a Martin RS-485 or s protocols while stand alone operation offers music and auto trig.

For further info call: Show Technology (02) 898 1111.

Colour Changing Product Martin Robocolor Pro 400

By combining two dichroic colour wheels, and hot and cold colour modifiers, 32 colours can be achieved with this latest, third generation,

MSD 200 version of the Martin Robocolor colour changing spotlight.

Ten saturated dichroic colour filters on the two selectable colour flags plus open white, but when combined, or modified by the hot or cold colour correcting filters, a total of 32 colours and hues may be achieved. Colours can 'snap' from one to the next, or be scrolled at various speeds, and you can mix adjacent colours to achieve subtle splits.

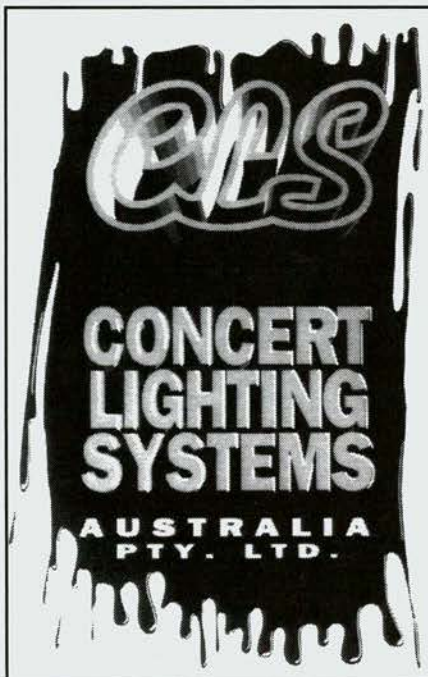
The field angle of the Pro 400 beam may be



remotely adjusted to four different dimensions from a narrow spot of 7° through 14° and 21° to a full wash effect.

Control can be by a Martin RS-485 or DMX512 protocols while stand-alone operation offers auto and music trig.

For further info call: Show Technology (02) 898 1111.



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Compact Lighting Control Desk Jands ESPII

The Jands ESPII is available in 24, 48 and 60 channel versions. The boards are provided with 'Wide Mode' which doubles the number of control channels making the control of moving lights, colour scrollers and other DMX devices easier. All units allow for up to 30 pages of screens.

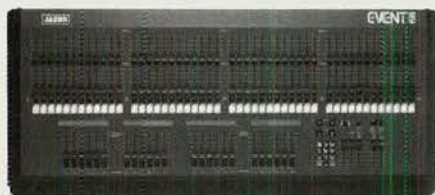
The ability to run chases on the Scene Master faders is another feature. The Cross-Fade (XF) section allows for timed dipless crossfades and the Effects (FX) section provides 100 snap change cues

A LCD display window in the centre of the



console shows the settings for the Scene, Chase, XF and FX controls.
For further info call: Jands (02) 516 3622.

Mainstream Lighting Control Desk Jands Event Plus



The Jands Event Plus is available in 48 and 60 channel formats with two rows of preset faders and 24 assign masters.

The ability to 'build' memories makes the operation of conventional or moving lights easy. An enhanced control interface including function keys for automating repetitive tasks is featured. A new superwide facility on the Event Plus provides 252 channels of control. Assign masters offer all the benefits of traditional scene masters along with the ability to control chases and even theatre style timed crossfade stacks.

For further info call: Jands (02) 516 3622.

Power User Lighting Control Desk Jands Hog

The Jands Hog moving light console comes in two units - the Jands Hog 600 and the Jands Hog 250.

The range was the result of a collaboration between Australia's Jands Electronics and the creators of Wholehog, Flying Pig Systems.

The Jands Hogs have instant access to console features and there are installed personalities for most fixture types. They can handle any combination of lighting fixtures, moving or static.

The configuration of the desks make programming easier with six menu banks of palette buttons (four on the Jands Hog 250) giv-



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The Entech LX Product Awards (continued)



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NJD LOGIC TS10R

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NJD LOGIC S12 Touch Panel

- 12 channels • 5 amps per channel • 40 amp total load • Latch/Flash • Master/Slave feature.

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ing instant access to Group, Colour, Beam, Position, Pages and Macros. Liquid crystal displays provide continuous feedback on the programming and playback status together with cue or palette lists.

Other features such as Automenu and advanced fixture control are all part of the function set provided on the Jands Hog range of consoles.

All shows are stored on standard 3.5 inch floppy discs. Cues, cue lists, effects and presets can be merged from one show to another.

For further info call: Jands (02) 516 3622.

Dimmer Jands HP-12



The Jands HP12 digitally controlled 12 channel/10 amp dimmer is designed to meet the demands of touring companies and theatres.

A function keypad, LED fault indicators including 'neutral failure', selectable output voltages, built-in test facilities, fast-acting circuit breakers and a variety of output connector options are just some of the features provided. Being microprocessor controlled, future upgrades to the operating system are also possible.

For further info call: Jands (02) 516 3622.

Smoke Machine JEM ZR31E

The ZR31E from JEM is a DMX512 controlled 2.5kW smoke machine which also has 0-10v input. It has a twin pump bi-phased system and a 2.5kW vapourising chamber. Other features include a 5mm high-velocity cuprous



helicoil for greater output (3 times more than a ZR201), an onboard/removeable timer remote with output level, and heavier paint work finished in tough wearing grey.

The ZR31E is capable of producing a fine haze using DX stage haze fluid and comes with a five year guarantee from JEM.

For further info call: Show Technology (02) 898 1111.

Luminaire of the Year Selecon Arena Profile

The Arena range of 2.0 and 2.5kw luminaires from Selecon include a comprehensive range of Zoomspots, Fresnels and P.C.'s for the larger stage and studio.

Constructed from unique interlocking extrusions, the Arena Profile Zoomspots come in the following three beam angles ranges: Narrow 9-18° for long throw applications, most commonly used in the front of house lighting positions; Medium 14-32° for onstage and shorter throw applications including pattern (gobo) projection; and Wide 20-37° for onstage and studio short throw applications including pattern (gobo) projection.

Versatility is offered by interchangeable Zoomspot Medium and Wide lens trays with the change able to be made from one to the other in seconds.



Separate rotation of the two opposing shutters on the Arena Zoomspots provide an infinite range of masking angles while reducing focus time. Two adjacent shutters can be moved to mask the same side of the beam. The four shutters are individually held by brass spring tensioned plates holding the shutters precisely in position once set.

For further info contact your Selecon dealer.



In the Limelight



Jack Exell of Lighting Technology demonstrates the Limelight follow spot

UK firm Lighting Technology exhibited their Limelight 2kw Xenon followspot at Entech.

Coming in a standard 2kw throw version, the Limelight has colour rendition 6000°K, cool operation, electronic ballast weighing only 21kg, built in soft focus effect and full balancing adjustment.

Lighting Technology also displayed the Floppy Disc, a six colour effects wheel and colour changer designed to fit the 650w and Par36 luminaires and is available as an analogue as well as a DMX version.

Catching attention was the Flicker Candle made famous by the Lloyd Webber production of *Phantom of the Opera*.

For further info call: Lighting Technology 0011 44 161 876 1576.

COEMAR DE SISTI

With the Neil Diamond tour proving so popular, Coemar De Sisti found a lot of attention paid to their NAT lights during Entech.

Also proving popular were the Doughty range of stands and the Zenith, Status and Alpha winch ups, shown for the first time in Australia.

The De Sisti Remington 1200 Par, Goya 1200 MSR, Goya 2.5 and 4K and the massive Leonardo 20K were also exhibited for the first time.

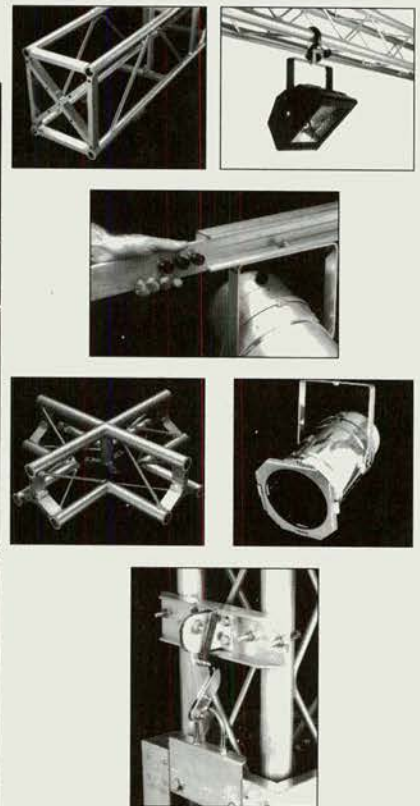
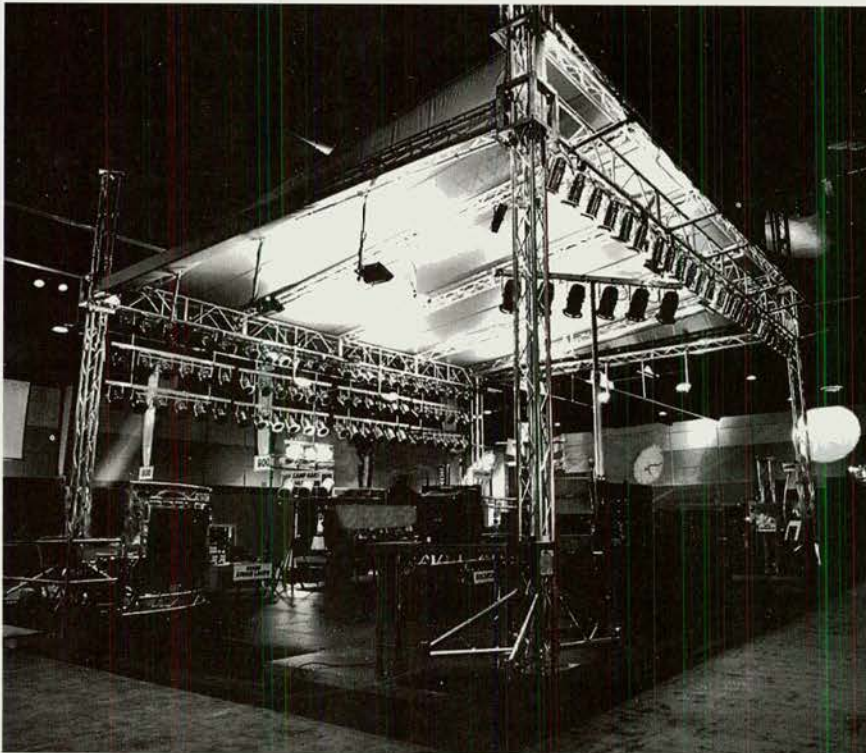
New to Coemar was the Stingray lasers and the Apollo Spectrum range of effects lighting from the UK.

Coemar told me that they had just sold a Superovation console to the ABC in Melbourne.

For further info call: Coemar De Sisti (03) 9467 8666.



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Six Kilometres of Truss

David Murray lights Puccini

by Madeleine Murray (no relation)

"I'm short, fat, middle-aged and bald," David Murray told me over the phone, as a guide to recognising him at the cafe. "I'm the female equivalent," I replied. We spotted each other immediately.

PUCCINI

Murray is currently working on the lighting design for *The Puccini Spectacular*, which promises to be big.

"It's such an exciting project, with new challenges," Murray says. "I've never done an opera on this scale. It's a whole new concept. Soundwise, the orchestra is 50 metres away from where the principals are singing, which creates the problem of sound delays that have to be addressed. The production needs to be an entity, and we all have to be aware of each other's problems, and solve them before we get to the venue."

Puccini, staged by the Victorian State Opera, is going to be performed in the Melbourne tennis centre, now called Melbourne Park, and

the Sydney Entertainment Centre. Because huge venues are so expensive to hire, all rehearsals, including lighting, will be done on the set in a hired venue. The VSO have looked at airport hangars, factories, and wool sheds to rehearse in. The place has to be big enough to take the set, acoustically right, and warm enough.

The central revolve is about 10m across, with two 4m doughnut revolves on the sides. A catwalk joins another stage area, and a smaller stage area where all the principals appear, and some chorus members.

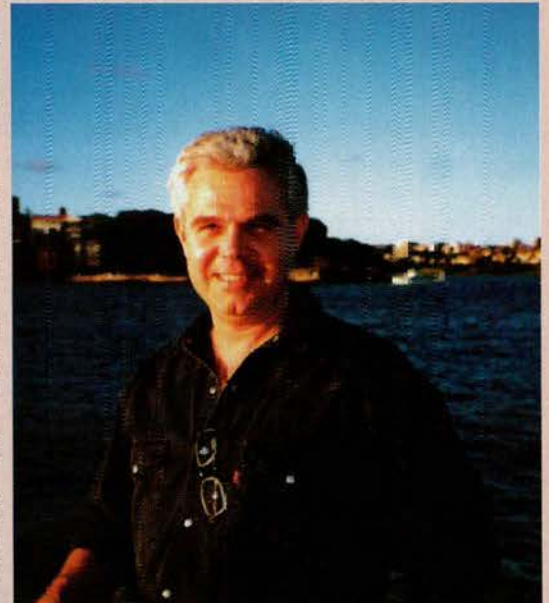
"It's big, it's very big. I don't think I've seen a revolve that big in my life,"

Murray says. "The little stage is too big to fit on the State theatre stage, and that's one of the smaller stages!

Puccini with his piano has his own circular stage with a lift. Then there's the orchestra area, so it's vast. It's wonderful that local production companies are using local designers. Normally we don't do these productions in Australia, so we import everything, including designers."

Six kilometres of truss

"We'll put up a massive truss. A lot of it is circular, to be a mirror image of the set. We have to put up the crossbeams as well, so we have a mother truss, and all of its daughters, sons and various families of trusses underneath which will be on motors which will lift to different heights. This is the plan, if we can afford it. I'd love to see a dome for Tosca, so we get that cathedral feeling. We have the ideas, we'll achieve as many as we can afford to do."



David Murray

"We come in with semi trailers of gear. There's a number of companies that we're negotiating with to supply equipment. It's too large for just one company, and I like to share it around a bit."

Everything has to be supplied by the production, apart from a handful of follow spots, which are already in the venues. The tennis centre has a moveable space frame in two sections that tracks along the RSJ, but don't cover the full area, which is 65m x 30m.

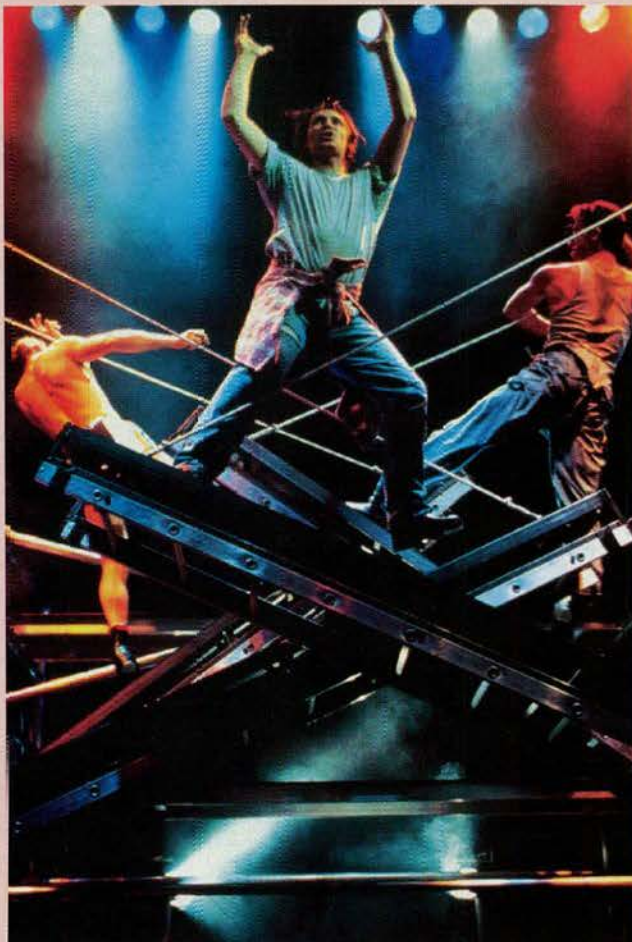
"I was very careful to find out what was available before I did the truss plans. It will be coordinated by one rigging company, and three or four companies will supply the truss."

Everything will be brought from Melbourne to Sydney in four semi trailers.

The lights

"For the colour wash sections, the VL5s are fantastic, a wonderful lantern. They're frostable, repointable, and the colour range is great. There's now a VL5b which is fantastic for theatre. It has the more subtle colours that theatre needs, like 201s, colour correction colours, as well as your rock and roll colours. They've only recently been released, so we don't have any here yet, but I'm sure we will.

"The VL6s are great for go-go washes and things like that. We'll be using lots of moving



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PHILIPS

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Six Kilometres of Truss *(continued)*

lights in fact. Icons which are focusable, and rotating gobos which I need for some effects, to do crosses in the cathedral scenes, to build up a big cross so we can zoom them into the right size, and I'll rotate gobos which are indexable.

"There's a lot of lights, because of the area, the different stages, and the demands of the production, the fact we're doing four different operas with four specific looks. I'd like about 40 Icons, 50 VL6s, 80 VL5s, and 24 HMI profiles, which aren't really available here, plus dimming shutters for them. 12 follow spots.

"It's a great cast, and a large cast, including 20 Chinese acrobats, and an Italian band of 60."

THE PAST

Way back in the past, Murray was a hippie, whose excursions into psychedelia and '60s light shows gave him a taste for the cosmic. He played in successful rock bands around Lismore when he was fifteen, and then won a scholarship to the Sydney Conservatorium of Music to study the piano and the flute. "I had a wonderful tutor who unfortunately died after one of my lessons. It became quite a joke."

Murray is a naturally exuberant, bouncy, highly amiable person, who started off as a waiter who filled in for a stage manager one

night at the Manly Music Loft Theatre Restaurant. "I'd had very minimal background. They raced me into the corner, and told me what to do. It was wonderful, I had to do the lights, the sound, make the props, fix the props, do the cleaning. I got to work with Jill Perryman, the Toppanos, and all those people who really knew their craft."

He stayed there for about eight years, teaching himself about lighting as he went along.

Since then, Murray has been LD for *Hair*, *Rocky Horror*, *Tap Dogs*, *Circus Oz*, *Expo '88*, and many operas and dramas.

IDEAS AND MEETINGS

"I like to meet with the director, alone, though it's not always possible. Then meet the designer, and the choreographer, just to see what their vision of the production is. Because lighting's interpretive, it's the last element to meld it all together. It works in time, space, all those other different dimensions. I have a basic concept of what the production will look like, but most of my ideas come from rehearsal.

"New technology allows more flexibility, you can make lots of changes, colours, focus. And they're more affordable now. Quite often it's better to use the more expensive technologies,

and less lamps because of the time.

"In rehearsals, I get most of my cueing ideas, the balance of how the production takes shape. I change concepts completely. Music has a big impact, the rhythm. Spatially, how it all falls."

LIGHT

"We all respond to light. I change my opinion of light all the time. It's such an emotional thing. When I'm working on a production, it's emotional responses that trigger everything that I do. Apart from specifically needing to see something, I'm quite happy to see people in silhouette now. I think they're more visible at times than if they are well lit. I like the big picture to be as strong as the detail. It's too easy to get caught in minutiae and 45 degree angle stuff. I try to avoid that as much as possible. Each production I look at as a fresh new slate, and they're all quite different."

THE LATEST LIGHTING

"I think the colour flexibility has made a big difference. It's become much more subtle. Apart from scrollers, you do have colour fading units that give you an infinite variety of colour. The new Source 4s profiles from ETC have a wonderful clean, crisp beam of light. The HMI units cut through and give you a clean image. The

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Altman in Australia

Entech chosen as re-launching pad

variety of frosts that are now available is great. GAM has ten steps of frost, and that makes a big difference to me. The softness on a piece of scenery can have a huge impact.

"In the right context, the moving light Profiles are ideal for rock and roll. You can interpret so much. Like *Rocky Horror* had over 500 lighting cues. It gives you the flexibility for the lights to dance along with the music. It's great to be able to just instantly add a little cue to point out an actor, that nudges the audience where to look. It's useful to be able to point a light easily wherever you want. HMIs are great for that huge quantity and shafts of light.

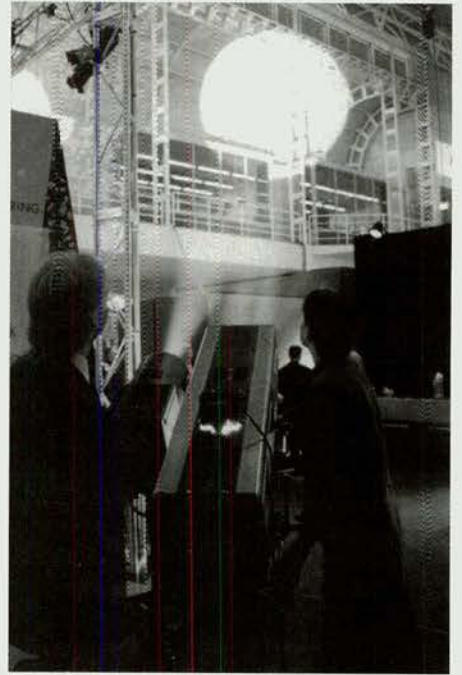
"Control has developed, which is necessary, because it's become so complex. Sometimes you've got sixteen parameters, like where a light is pointed, where it's focused, what colours, what gobo, whether it's moving, which way, how fast. There's so much, the new control desks are starting to deal with those aspects. I think there's still a little way to go developing software for them, but with the improvement of chips, it's becoming affordable."

The Puccini Spectacular plays Melbourne 23 & 25 May, and Sydney on 5 & 6 June.

"Entech has been very successful for us," said Robert Kliegl of Altman who was on the Chameleon stand. "We've been successful with the shoot-out with the zoom profiles, a lot of people come back to us saying they like the new unit. The energy savings are always a plus for people. The show in general is pretty much Altman's launch into the Australian market although we've had dealers here for a long time. It's been very successful, people are looking at the follow spots, the television line, and the new blacklights. It seemed the right time to come in to Australia - the lamp technologies available, the fixtures are upgraded.

"I was surprised at the size of the show and the amount of people here. We've had several confirmed sales for major shows coming up and I expect there'll be some announcements soon. On the floor we've sold about seven of the follow spots, which are pricey items, several hundred of the Shakespeares, some of the Blacklights and some more. So financially it's been well worth us coming to the show and with Chameleon supporting us with this big both, it's been great."

For further info call: Chameleon (02) 310 5222



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CHOOSING COLOUR

a two part guide for students of theatre lighting

STAGE LIGHTING

Stage lighting has a higher purpose than just illumination of the actors and scenery in a production - its an art, because every decision you make as a lighting designer can - and should - make a contribution to the experience of the audience watching the performance. Making the right decision, even if it is a very simple one, is important to the whole scheme of the way in which the audience reacts to the words, sounds and actions of the performers and the solid reality of the set.

Colour decisions are perhaps the most important decisions of all in the theatre because the conventions, styles and preconceptions of the audience are more closely aligned with colour than intensity or contrast or any of the other variables that you can control in the modern lighting design.

Stage lighting has a number of functions in the modern production. It may illuminate the actor and scenery, or conceal them. It can convey information, such as the place or time in which the action is taking place.

But, most importantly, the stage lighting can offer support to the atmosphere, mood and emotion of the play or performance. This is possible because it relies upon the main source of human sensory information - light as perceived by the human eye.

Stage light is nowadays very controllable. We can select and change a number of variables to make our task as 'artistic illuminators' or lighting designers more successful; Intensity, Contrast, Colour, Texture and Movement.

STAGE COLOUR

Of the lighting variables, perhaps the most exciting and certainly the most easily adapted to emotional ends is colour. We often judge the mood and feelings of our surroundings by the colours in the environment around us.

Being able to use colour to make statements in the theatre, now that such a wide range of quality filters is available to us, is a major part of the lighting designer's art.

Choosing colour can be one of the most exciting tasks facing the person responsible for lighting a play. Because of the importance of the lighting colour, the decisions taken quite early in the production process have the ability to make or break a production.

When you choose your colour, from the vast range available to you today, you must do your best to get it right.

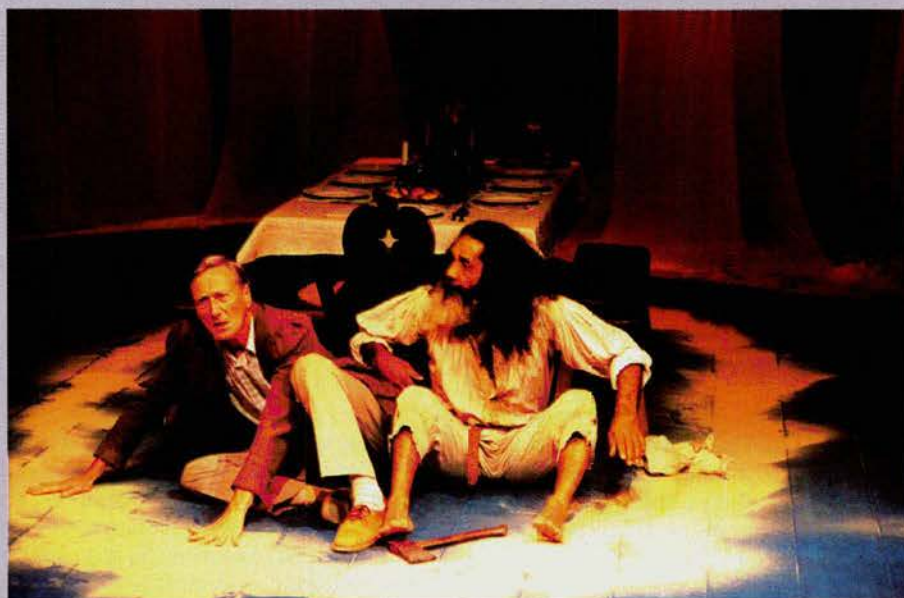


Photo: Jeff Busby

My Father's Father, Melbourne Theatre Company, lighting design by Jamieson Lewis

WHY?

Stage lighting colour is the product of three criteria:

- The colour of the light source*
- The variation (by gels or reflectors) of the light leaving the stage light*
- The subject being lit*

All colours are perceived at the end of their journey by the eye, and this too can have an influence on the way in which our colour

choices are received by the audience.

The colour of the subject is usually decided by the director and designer, but the other two criteria are up to the lighting designer.

The choice of lighting instrument controls the intensity, texture and colour of the light sent off towards the subject. Higher wattage (650w to 2000w) tungsten halogen lamp sources and profile spotlights and beam lights tend to have a crisper, cooler colour and quality than low wattage (200w to 500w) spot-



Photo: Elise Lockwood

Heretic, Sydney Theatre Company, lighting design by David Murray

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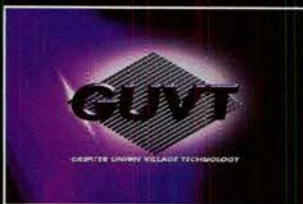
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CHOOSING COLOUR

(continued from page 88)

lights and floodlights.

The colour filter placed in front of the stage light will be the main means of affecting the colour of light. Normally in modern stage lighting the colour medium is a heat-resistant plastic coloured filter, which self extinguishes in case of fire.

HOW?

Colour choices should be made early in the lighting designer's development of his or her lighting for the production. It can be a very useful process, when reading the play, to note down in the margin a colour for each scenic moment in the text, such as a scene on a heath, or sunset. More difficult, but perhaps even more useful is the discipline of attributing colours to particular dramatic moments in the play such as an intimate sad scene or a melodramatic murder.

Although these colours might not actually be used, they help the designer to index the play with emotional key words. Colours are a good medium for joining the reactions and emotions that we get when we read plays, just as they are when we see a well lit play in the theatre.

WHAT IS STAGE COLOUR?

Stage colour can be organised into a number of families. With such a wide range of colours available to the lighting designer a means of categorising colour filters is needed to help the designer make the right choices as soon as possible in the production process.

Stage lighting filters work subtractively, that is, they take away colours from the spectrum apart from those associated with the filter's 'colour'. Thus a red filter removes the green and blue parts of the visual spectrum and allows the red parts only to pass through. The blue and green light is absorbed as heat energy in the filter (and some reflected).

FAMILIES

Whilst these categories are useful in the examination of different colour choices, the designer's art must always be based on a personal reaction to the play and not hard and fast rules set externally.

Open White

'open white' is the bare stage lantern, without coloured filter. The actual colour of this light can vary according to the type and wattage of the lamp in the stage light and the setting of the dimmer; the lower the level of the dimmer, the more the lamp colour shifts towards amber.

Saturated

Saturated colours are the deep blues, reds and greens around the primary colours. Because

the colours are 'pure', much of the rest of the spectrum is filtered out and thus more light energy is required to achieve high levels of light from the saturated colours.

Saturated colours, whilst exciting and 'visible', must be treated with care on the stage as their strong modifications to the colour of performers' faces can be disturbing and continual use can give fatigue to the audience's eyes. They can also hide or over-emphasise particular colours in the scenery and costumes.

Pastels

The pastel filter colours have a lower concentration of filtering elements and give stage colours closer to 'open white'. They allow a high transmission of light energy and so make efficient use of stage lights.

Pastels are easier to use for lighting performers faces and reveal more colours in costumes and scenery.

The Whites

Increasingly common use is being made, particularly in modern realistic drama, of colour filters which only slightly tint the white light leaving the stage light. These filters include the colour-correction filters developed for film and television use, but extend as far as the chocolates and greys which shift the light either towards amber or towards blue in a similar manner to the way in which we encounter warm and cool light in everyday life.

INTENSITY

Colour, as we have seen, is perceived in the theatre as the result of the source, filter and subject. The stronger the colour used, the more aware the audience will be of the colour and the lighting, particularly if the objects on the stage that are known to be white or neutral in colour take on a vivid or bright colour.

In particular, greens must be treated with great care not only because as they are very un-complimentary to the colour of human skin, but also since the eye is most sensitive to light in this section of the spectrum.

Scenery that is without form, such as a white cyclorama or backdrop, or an open platform stage, can accept much higher intensities of coloured light. Complex shapes on stage (and we can include the human form and face in this category) become confused when illuminated in strong and intense colours. It is often better to begin with white as a concept and then to move slowly away to achieve the degree of modelling with coloured light that you require.

Next Month: The Lighting Palette and Getting Control of Colour

★ Taken from the Rosco Choosing Colour brochure written by David Taylor

K2



Neil Rice behind his K2's.

Neil Rice of Optikinetics was overwhelmed by the response to the K2 projector which was shown on the Lightmoves stand at Entech.

"We have more orders than we can supply at the moment," he said. "That's unusual for us because we usually work from stock. We've hired extra production people to try catch up." For further info call: Lightmoves Technologies (02) 560 0000.

freedom (ˈfri:dm) *n.* 1. the state of being free, esp. to enjoy political and civil liberties. 2. (usually foll. by from) exemption or immunity: freedom from taxation. 3. liberation, as from slavery. 4. the right or privilege of unrestricted access: the freedom of a city. 5. self-government or independence. 6. the power to order one's own actions. 7. ease or frankness of manner. 8. excessive familiarity.

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Celine Dion in concert

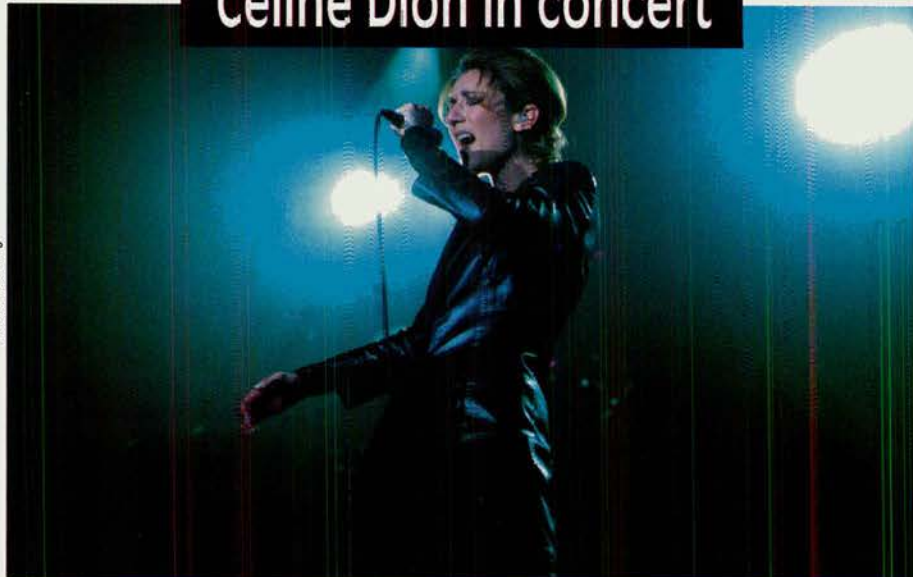


Photo: Bob King

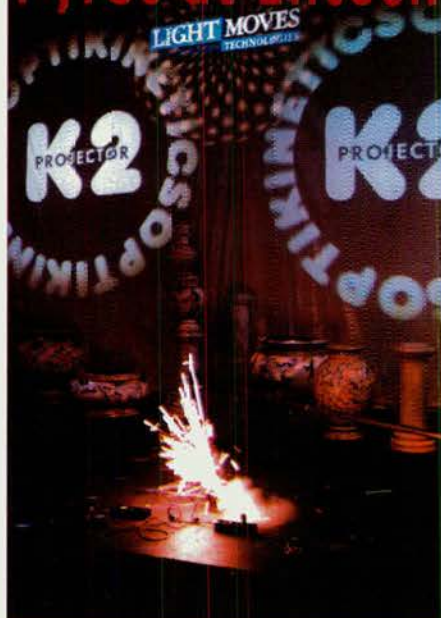
Celine Dion has recently finished her tour of Australia and New Zealand with equipment being supplied by Solotech Inc of Montreal, Canada and production out of Sydney by Jands.

Lighting designer for the tour was Yves Aucion who has worked with esteemed performers like Julio Iglesias. He was assisted on tour by Normand Chasse who has worked with him for more than four years.

Equipment specifications for the tour were:

- 24 x Clay Paky Superscan Zooms
- 8 x Clay Paky Polycolors
- 12 x Pan Command Prospots Deluxe
- 42 x conventional fixtures
- 18 x Whisper Colour Changers
- 1 x Compulite MLC-72
- 1 x Compulite Compact
- 1 x Pan Command MP-100

Pyros at Entech



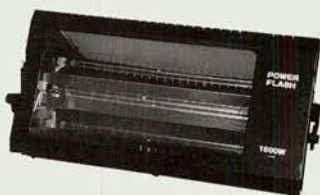
Harold Berlinski, the chairman of Le Maitre, was delighted to be able to do a pyrotechnics display within the Entech Hall 4. He said that he has never done an exhibition before where this has been possible.

The pyro display was coordinated by Lightmoves Technologies and drew crowds of up to 200 people each time.

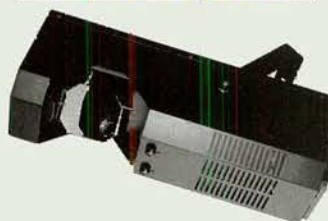
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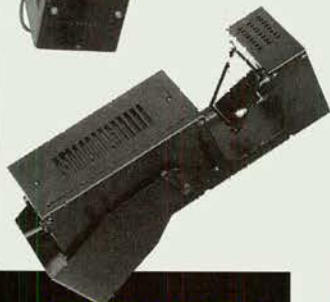


LIGHTEMOTION

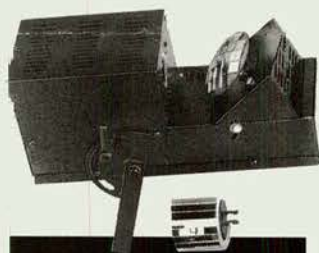
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WILDMOON



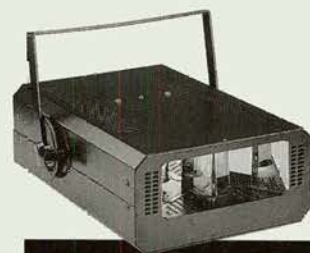
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LASERVISION LIGHT UP SENTOSA ISLAND



In a statement issued by the Australian Trade Commissioner in Singapore it was announced that Laservision had secured a \$1.8 million contract on Sentosa Island. The budget for the current upgrade of the Island by the Sentosa Development Corporation is estimated at some \$20 million.

The final stage is to be completed in June and opened by President Lee Kwan Yew. Laservision's key part of the project involves the installation of the company's laser control technology in a vast new Merlion, the centrepiece and star attraction of the Island park.

Singapore's mythical Merlion is a half lion, half fish sculpted in concrete and steel, a monumental figure of fantasy towering some 12 stories high. Laservision's first phase of the attraction contract, completed prior to Christmas, included the upgrade and modification of the Island's major water attraction, the Sentosa Musical Fountain. This comprised of a completely new multi-media control system that synchronises the existing fountain with a new Aqua-Laser screen, enhanced theatrical lighting, surround sound, special 3D laser virtual effects and animated projected Laservision animation.

The Laservision installation is controlled by the Spectravision Laser Control System which, although unseen, coordinates a multi media special effects performance. The presentation includes multi track sound, atmospheric effects, smoke effects and the water fountain display in a series of animated 12 minute laser shows, which are performed every half hour throughout the evening 7 days a week.

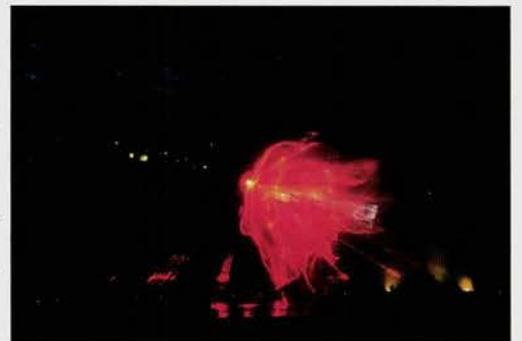
The Laservision shows, which are pro-

jected onto the water screen, feature leaping dolphins, gliding fish and soaring birds presented in pseudo holographic form. The water display of the musical fountain is composed of three linked ponds set in front of a large rock waterfall, surrounded by a 5000 seat amphitheatre. The largest is centrally placed and oval, flanked on either side by smaller circular ponds elevated for dramatic impact.

The musical fountain's centrepiece is Laservision's new aquascreen, a fan shaped wall of water over 30m in width, onto which Laservision animation is both front and rear projected.

Powered by 3 phase, 150 horse power pumps, the fountain requires 3000 litres of water per second.

The Merlion is set back from the fountains upon the hill top and when revealed, it's emerald green eyes emit powerful beams of laser light. The laser beams penetrate Singapore's night sky for tens of kilometres making Sentosa's new centrepiece visible from many parts of the Singapore mainland. The \$10 million Merlion was engineered with the assistance of many Australian contractors.



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Wherever you are and whenever you call, Clay Paky is there to assist you with solid experience in professional lighting applications. Clay Paky means you can be sure of making safe, intelligent and profitable investments for the present and future of show-lighting.

Clay Paky, is your guiding light.





NEIL DIAMOND

The stage set up for the Neil Diamond tour was certainly unusual. Playing in the round at the Sydney Entertainment Centre, the circular stage had a revolve which happily spun the musicians around during the entire show. One newspaper critic said it was like watching your luggage go past on the airport conveyor belt.

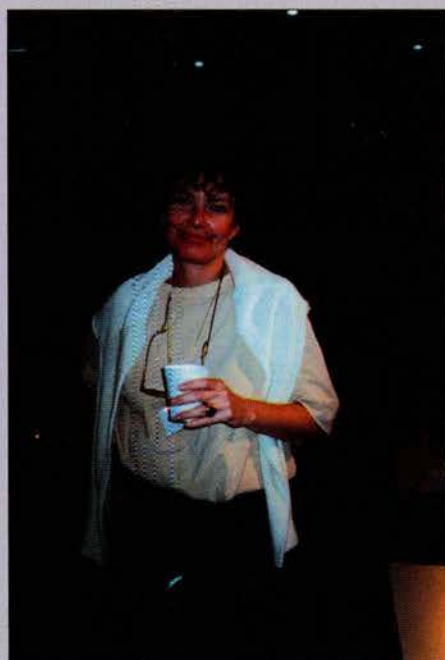
I found myself sitting on the front row which turned out not to be the best position. Firstly, you're very close to Neil and so you spent a lot of the show staring directly at his ankles. Also you're often highly visible due to the follow spots crossing over the stage, and he always seemed to be right in front of you just as a yawn took over my face. Plus I refused to sway along with the rest of the crowd to *Song Sung Blue*. I just hope the empty seat half way through the show wasn't too noticeable.

Lighting designer Marilyn Lowey was happily lighting four shows on the world's largest ship, the Sun Princess, as it crossed the Atlantic when she received a 15 page fax of Neil Diamond's proposed schedule for 1996. Initially she thought 'Oh my God!', as she already had a ticket booked for the year. But with the help of her assistants, Marilyn somehow has managed to juggle her work so she can still design the Neil Diamond tour as she has been with him since 1980.

"I wanted to have a completely different look this time," she said. "For the past eight years we've been using a Morpheus system of about 140 colour faders, 60 PC spots, 12



Photos: Marty Williams



Marilyn Lowey

Telescans, lasers etc. I needed a different look more for myself than the show because I've been working for Neil for so long. I needed a different palette, patterns and movement.

Consequently Marilyn designed a rig consisting mainly of 170 VL5's and 45 Coemar NAT TM's. Instead of truss spots, she chose to use the Wybron Auto Pilot system with five 2500 watt NAT's to follow Neil intermittently during the show. Eight FOH follow spots are also used as well as 20 Clay Paky HPE's.

"I put together a healthy package to light thirty or forty songs that had a barrel of looks which I could select from," said Marilyn. "I then went through and hand picked gobos. In the NAT all the gobo wheels rotate, all the

diffusion rotates so you can layer, get textures and some fabulous looks. As we're playing in the round, the stage becomes the palette. There is no other scenery, the lighting becomes the scenery and the stage becomes a kaleidoscope."

From my viewing position at the show I've no idea how this 'kaleidoscope' worked.

A month was spent rehearsing the show in a sound stage in Los Angeles, a luxury for most designers. A system was shipped to Australia with VL5's and trusses whilst another system was hung in the sound stage.

"We took all the NAT's, HPE's and Auto Pilot and applied it to the lighting system in

(continued on page 102)

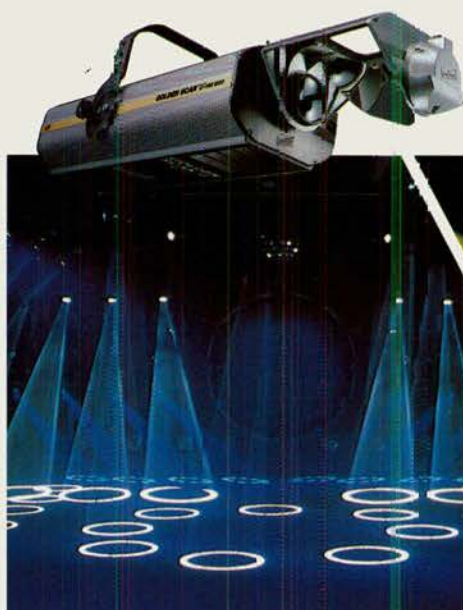
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Standard lens	24 and 15 degree	11°	9°
Optional lenses	13 and 9 degree	16° - 3° - 11° - 9°	15°
Electronic focus	*	—	—
Wheel with 7 colours + white	*	*	*
Wheel with 7 special colours + white	*	—	—
Special light blue filter	*	—	—
Rainbow effect, two-colour beams	*	*	*
Colour temperature correction filters	2	2	—
Max. No. of colours	113	24	8
Rotating gobos in dichroic glass	2	Optional	—
Rotating M-size metal gobos	2	4	—
Fixed metal gobos	M-size 4	—	Wheel with 5 gobos
Variable speed indexed two-directional rotation of gobos	*	*	—
10 additional gobos in metal	*	*	—
Fixed prisms	1 (5 facets)	1 (4 facets)	—
Rotating prisms	4 (4 facets, 3D wake, image doubling)	—	—
Frost filters	2	1	—
Iris	increased speed	*	—
Dimmer	*	*	—
Stop - High speed strobe	*	*	*
Rotation of mirror adapter on projector body	360°	360°	—
DMX 512, RS 232 (PMX), analogue 0-10V controls	*	*	*
Number of control channels	12	6/8 selectable	4

The following are available as standard on Golden Scan HPE and the T.V. version of Golden Scan 3: lamp hourmeter, side carrying handles, graduated scale on bracket and mirror, built-in power factor correction system, safety cables. Silenced versions available on request.

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ROCK LOBSTER

Showing for the first time in Australia at Entech was the Wybron Auto Pilot system which just happened to be in use further down the road at the SEC on the Neil Diamond show.

The Australian distributors, Chameleon, had a couple of guys from Wybron Inc., USA displaying the system with the help of a rather large lobster. The system on display had actually been bought by Channel 9 Melbourne for use on *The Logie Awards* and subsequently lent back to Wybron for use at Entech.



Craig Shertzer of Wybron Inc with his lobster

"It was a very last minute decision to come to Entech and it's

been a lot of fun for us," said Craig Shertzer of Wybron Inc. "There's been a lot of interest in the Auto Pilot and I was surprised by the amount of people we've seen. Hopefully we'll come down again."

The Auto Pilot consists of a DMX compatible system controller, four backpacks and eight ceiling receivers. The system controller is connected between the lighting console and the automated lights. The controller receives DMX512 data from the lighting console and passes along all lighting parameters except pan and tilt to the lights.

Each performer wears the backpack (powered by a standard 9 volt battery) which sends signals to the ceiling receivers overhead. The computerised system controller then uses this data to generate and insert pan and tilt information into the DMX data stream.

Because it does not use radio frequencies, the Auto Pilot works without to/from interference from wireless microphones. It adjusts automatically to any of the world's standard voltages. A handheld terminal with LCD display and keypad offers step by step instructions for system setup, test diagnostics and operation.

For further info call: Chameleon (02) 510 5222.

COLOURBOX 2

The Colourbox-2 colour changer from Teatro has been designed with the traditional theatre market in mind. Immediate access to the colours is possible as there is no 'scrolling' through a sequence of colours. It uses three belts of colour and each belt has two colours in it. They all sit under the beam and are individually pulled up into the beam. Because there are three independent belts, any of the six colours can be mixed or combinations of all of them.

The Colourbox-2 can use a single DMX channel to select six fixed colours, it can use 3 DMX channels and it can be used in a different mode again to get proportional fader control. It doesn't have a fan in it so it is quiet. It has mains power and DMX.

The Colourbox-2 is available in a 150mm diameter for 1K profile spots, 200mm diameter for 2K's and one which fits the Diluvio 1000 cyc flood system taking it into the architectural market.

For further info call: Lightmoves Technologies (02) 560 0000.



Constella



"Constella is a new product to Australia, we're actually based in WA as the official distributor," said David Clare of Show Structures. "This is the first time a lot of people from the Eastern states have seen the products. So far we've got two confirmed agents for Sydney and we're working on ones for Brisbane and Melbourne. We've got one in Adelaide, possibly also another, and there's been a lot of interest from New Zealand."

The world release of Constella's Starfire was at Entech. The Starfire projects 20 individual images which change together and incorporate a strobe effect. Units can be linked together by a simple cable which will synchronise up to 4 units. The units have a single switch to choose between stand alone and synchronised mode. Retail at \$795.

"We have the first sixteen Starfires off the production line," said David Clare.

For further info call: Show Structures (09) 470 4794.

Colourset Series 2 popular at Entech



Lee Conlon and his staff from Showcraft were kept busy at Entech demonstrating the Colourset Series 2 range of colour scrollers. The scrollers provide both real time continuous fader tracking and precise frame to frame operating modes. They come in 1K for par 64's and profiles up to 8 inch, 2K to suit fresnels, 2.5K for cyc floods, 4 way DWE and 8 inch fresnels, 5K specifically designed to suit the Desisti and Pollux 5K and the 8W specifically designed to fit the 8 way Thomas/LSD DWE fitting.

For further info call: Showcraft(02) 9698 2009.

CONCEPT



SGM



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Two new gems have been added to SGM's wide range of scanners - the result of our lengthy experience in this field, the VICTORY scanners are a combination of smart lines, avant-garde performance, great light power and truly innovative technical ideas. 16 colours, obtained with carefully selected dichroic filters and used in 2-tone beams, adjustable speed rainbow effects and music sync.

7 gobos, of which 4 can be rotated at adjustable speed, rotating prisma at adjustable speed to obtain 3D images - adjustable strobe with a rate of up to 10 fps - 0-100% dimmer - frost lens - possibility of automatic operation and 16-bit control facility definitely give VICTORY scanners a well-deserved place among the top in their category.



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COLORLAB 250

COLORLAB 250 is part of the Victory series, and features all its quality and performance. COLORLAB is a highly versatile colourchanger suitable for any type of application and has: 16 colours obtained with carefully selected dichroic filters - 2-tone beams - adjustable speed rainbow effect - sound light - light combinations - adjustable speed strobe - 0-100% dimmer and frost lens. Can also operate automatically.

Patrizio Ciotti - 0541/969109



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The Entech LX People Awards



1 Rohan Thornton

Rohan Thornton is the Lighting Supervisor at Channel 9, Melbourne and has designed the lighting for *Don't Forget Your Toothbrush*, *Ray Martin Presents*, and most notably *Hey Hey It's Saturday*. When Ray Martin travels abroad to interview stars such as Madonna and Elton John, Rohan goes too. He recently did *The Logies Awards* in Melbourne and is still recovering.

Rohan is also co-director of On Air Productions and has recently returned from Hong

Kong where he has been lighting new sets for a cable network company.

Rohan also works as a part time fireman just to keep himself sane.

2 John Rayment

John Rayment was with the Sydney Dance Company in what he describes as 'the glory days of 1978 - 82' when the big deal was touring Dubbo and three years later the company were in New York.

After freelancing, John returned to the company in 1992 upon Graeme Murphy's request.

Last year John managed to worry the lighting crew at the Sydney Opera House by installing moving lights for the Sydney Dance Company's *Fornicon*. As follow spot operators they feared they would be out of jobs! A few phallic gobos later, and the crew lost their fear of the new technology.

3 John Kulakowski aka Felix

Felix is a production manager, or is it sound engineer, or maybe lighting designer but then again he could be a truck driver.....

For seven year Felix did all of this for the Australian Doors, often playing as many as 280 gigs a year. He started with 6 par cans. Low budgets, unreliable trucks, dodgy equipment - he's seen it all. Add to that the long hours and it's no wonder he nearly had a breakdown.

Felix represents many Australian road per



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- 1 rotating prism
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sonnel who slog the country with a variety of acts - whoever pays the money. They're not the big names we know.

Currently Felix is still at it working with other cover bands such as The One Hit Wonders.



LIGHTING PRODUCTION COMPANY AWARD



Lighting Production Company of the year goes to Chameleon Touring. We had so many nominations for this company, and its people, that it was a walk-up start. Chameleon are very successful because they have adapted to the times. Starting as a rock and roll touring firm in the early 1980s, Chameleon moved into business theatre and professional theatre. Their client list is a who's who. Their internal structure is orderly, their staff are motivated, and their equipment is well presented.

YOUTH TECHNICAL DEVELOPMENT AWARD

This award was created following a lot of nominations for our winner. From many quarters for some time we have, at Connections Magazine, had comments from young people that they have been assisted by this person over time. The winner has been in the industry for over 25 years, and known to us at Connections for most of that time. The Youth Technical Development award goes to Phil Cullen, from Electric Sunshine Lighting.



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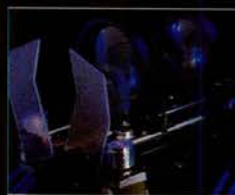
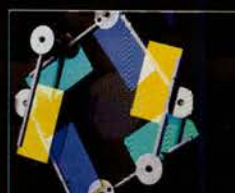
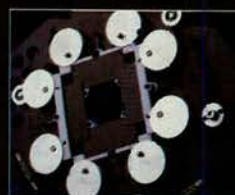
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Neil Diamond *(continued from page 94)*

the sound stage before air freighting it all over to Australia," continued Marilyn. "The rest of the lighting system used on the sound stage took a slow boat to London ready for mid-May. We're just fly the rest everywhere we go. I've never worked that way before and I find it quite interesting."

Marilyn will be with the tour intermittently until September when her lighting director will take over.

● Cat Forcer

Tour Personnel

Production Manager Sam Cole **Technical Director** Doug Pope **Stage Manager** Michael Weiss **Laser Manager** Ed Ayswicks **Sound Engineer** Stan Miller **Monitor Engineer** Bernie Becker **Lighting Designer** Marilyn Lowey **Loadmaster and Grid Tech** Richard Bray **Lighting Director** James Smith **Lighting Programmers** Arnold Serame Dale Polansky **Lighting Crew Chief** Kevin Cassidy **Lighting Techs** Charles Cochran, Charles Evans, Rob Fry, Eugene Langley, Greg Wershing, Ken Young **Sound Crew Chief** Greg Lopez **Sound Techs** John Drane, Arthur Isaacs, Brian Keefe **Laser Operator** Michael Moorhead **Laser Tech** Ken Schmitt **Show Rigger** Dean Hart
Australian Tour Personnel
Production Manager Garry Brokenshire **Electrician** Peter Wilson

White Light

White Light premiered their 'Wave FX' projection system at Entech which produces a wave effect from 2Kw/2500w projector by using an arrangement of slides. The Wave FX is similar to the VSF90 projection system which was also on display.

"We've made some good contacts and Chameleon now have our products as well as Strand and Selecon," said Bryan Raven of White Light. "A lot of people haven't seen the effect and hopefully we'll see some business from it. The Wave FX is really a replacement for the old Strand box wave effect which hasn't been made for about 30 years. I think the Sydney Opera House have still got one and one guy from Perth came up and was very excited. He had lost his and his insurance company won't pay him some money until he knows what it's worth to replace it. So we were able to tell him."



Bits

Entertainment Installations (043 243873) of NSW report the following sales:

- 2 x Martin Roboscan 812, 1 x JEM Showfogger to a local production company.
- 2 x Martin Spinners, 1 x Geni XTC, 1 x Showfogger to Ants Mobile Disco.

From **Theatreworks** (09 227 7015) in WA.

- University of WA purchased a turnkey lighting system comprising of Jands digital dimmers, Strand MX desk, Prolite profiles, fresnels and cyc units.

From **Selecon** (09 360 1718) in NZ:

- CLS supplied Acclaim fresnels and profiles finished in powdercoat white to the Melbourne Casino.

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

- Finland Broadcast Commission have ordered 20 LSC Multisplit 10's for DMX512 distribution in their new TV studios.

Coemar De Sisti (03 9467 8666) sales:

- DF-50's to Jands Productions, TCP NSW and Vari*lite Hong Kong.

- **Black Express Light & Sound** (02) 559 4363 have installed lighting gear into the Castle Hill RSL nightclub: 4 x Sagitter Prince scans 575 + controller, two Program System Talisman effects, one Typhoon and a 1500w strobe.

Selecon

Award winners debut new products at Entech

Selecon displayed their award winning range of luminaires at Entech as well as a couple of new items.

Selecon are now offering the new Rainbow 8" Pro from M&M with the following features:

- will work with up to 33 colours
- motorised gel load
- auto range set including gel set feature
- no start up procedure, unless required
- internal auto modes for scrolling without control desk
- working nodes may be customised by user

- remote operation of fan, LED's and re-calibration
- all Rainbow Pluscard features
- universal fixtures adaptation included, size 7.5" to 10"
- enlarged front aperture for less light cut-out
- LED address display
- heat baffles factory fitted
- front fixing for 10" barndoor /gel frame/ snoot etc
- heatshield holder included
- any rainbow special fixture adaptor may be used

The Artistic Licence 'Scroll Control' is a sophisticated DMX hand held scroller controller for up to 30 colour scrollers. It has 100 colour memories, 50 sequences, independent step and fade times and is good for controlling 'real time' DMX scrollers. Other features include alphanumeric colour names, external trigger from analogue lighting console and is rechargeable battery powered with plugback input for fixed use.

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The Spiralift

Glanre Engineering exhibited the Spiralift, pictured right, manufactured by Canadian firm Gala.

Gala claim that whether your need is a thrust stage for concerts, two or three rows of additional seating, the ability to fine tune the level of the pit or a quick way to get the road boxes into the basement storage, a Spiralift can do it. They further say that Spiralift is the world's most popular orchestra lift with installations in the US, South America, Europe, Asia and Australia.

The Spiralift has many features including:

- least pit depth requirement and no caissons required

- can be installed in an existing pit
- low sound pressure level on new models
- is built to any capacity required (three lift element sizes)
- built to any shape you may conceive (not dependent upon scissors or shape restrictive elements)
- average two wheel installation for one lift
- adjacent lifts may be synchronised and operated together
- no pump room required
- full compliment of safety equipment and controls

For further info call: Glanre Engineering (03) 9882 1439.



Roger Barratt Lighting Scholarship (continued from page 69)

Grafton was one once, a long time ago, Tony Davis another, and most recently of course is Gavan Swift.

The scholarship will carry on his work. It is run by a group of industry people including Andrew Morgan, Cat Forcer, Simon Jenkins, Gavan Swift, Tony Davis and Julius Grafton.

This year the scholarship will put a young person through a three month program of secondments. They will be with major productions, leading production companies and top Lighting Designers. At the conclusion of the three month program the trainee will go to London for secondment there.

The 1996 trainee is Jason Waide, a young person chosen from a strong field who responded to the call in Connections magazine.

Jason comes from Lismore in Northern NSW and is aged 20 years old. He comes with an impressive track record in regional theatre. He has his school certificate, his rigging ticket, Pyro ticket, a truck license, and a first aid certificate.

Importantly Jason has combined himself towards his ambition, which is to become an internationally recognised Australian Lighting Designer and Production manager.

The morning after the Awards Ceremony, Jason was still on cloud nine.

"I've been blown away by it all," said an ecstatic Jason. "The atmosphere here at Entech is great. I've been loving it and having a great time. The exhibitors have just gone all out. I'm really impressed with the standard here and the amount of equipment."

Jason admits he had such a good time at the Awards Dinner that he can't remember much about it!

"Waking up wasn't such a problem this morning as moving was," he said the next day. "It was a good night and enjoyed myself thoroughly meeting everybody and networking. That's another thing I've learnt, the family that's here is so strong in the entertainment industry."

ROGER BARRATT LIGHTING SCHOLARSHIP PLEDGES

Pledges received at the ENTECH AWARDS 1996. All for \$100 unless noted.

Name	Position	Firm
Lloyd Bevan	Proprietor	Brite Lite Productions
Glen Gitsham	Proprietor	Quantum Efex
Yvonne Rigby		Eurovision AV Hire
Enrico Caironi	Sales/Marketing Dir.	Clay Faky SpA
Jeremy Collins	Managing Director	Selecon NZ Ltd
Rohan Thornton	Proprietor	Or Air Productions
Don Gunn	Asst. Branch Secretary	Media, Entertainment, Arts Alliance
Marcus Dowling		Chameleon Touring Systems
Martin Rutter		David Atkirs Enterprises
Frank Harlow	General Manager	High End Systems (Singapore)
John Adams	Managing Director	Universal Lighting & Audio Pty Ltd
Cuono Biviano	Managing Director	Jands Electronics
Jeff Bolt	General Man. Sales	Music Box
Greg Leto	Managing Director	Geri Electronics Co Ltd
Douglas Nelson	Director, Int. Sales	Herkes Electrical
Tim Kennard	Prof. Lighting Div	Selecon NZ Ltd
Simon Garrett	Aust. Sales Manager	G.U.V.T.
Noel Bourne	Nat. Product Manager	Stage & Studio Productions WA
Byron Tarry	Manager	Rosco Australia
Ian Baseby	Managing Director	CCT Lighting
Don Hindle	Jnt Managing Director	Clearlight Shows
John McKissock	Director	Celco
Colin Whittaker	Sales Manager	Chameleon Touring Systems
Tony Davies	Managing Director	Altman Stage Lighting Co
Robert Kliegl	Sales Manager	Syd Exhib & Conv. Centre
Al Craig	Snr Project Manager	Critical Difference Proj. Serv
John Buckley	Proprietor	Premier Lighting
Andrew Holmes	Director	System Sound
John Scandrett	Managing Director	JMC - Audio Vis. Design
Anthony McKenzie		Bytecraft
Carl Sorger	Project Engineer	Vision Design Studio
David Bird	Consultant	Vision Design Studio
Gordon Richmond	Consultant	Show Technology
Rod Salmon (\$300)	Director	Flying Pig Productions
Ian Hamilton (\$200)		Show Technology Aust
Emmanuel Ziino (\$500)	Managing Director	Martin Professional (Sng.)
Troels Volver (\$500)	Managing Director	

The pledges above total \$4,900.

In addition, cash totalling \$250 was collected, of which \$150 came from ARX Systems.

Total scholarship funds pledged to date: **\$5,150.00. We must now collect this money, and need more**

ABOUT THE FUND - HOW TO DONATE TO THE SCHOLARSHIP (and do it now!)

Industry accountant Bruce Rowland will audit the Scholarship. The funds are held in the Connections Publishing trust account. If you pledged money or wish to donate, please make cheque payable to: Roger Barratt Lighting Scholarship and send to Connections, PO Box 439, Epping NSW 2121. We will note -and thank- all donations in these pages unless you expressly mark your donation 'private'.



My Fair Lady

written by the not-so-fair Geoff Squires

Hot on the heels of *Rocky Horror* in the Lyric Theatre, Brisbane came *My Fair Lady* doing a one town tour. While the show has been done before, it was brought out of repertoire for this special season with talk of more cities next year. Brought to us by the VSO, who were also responsible for *West Side Story*, it featured a lot of familiar faces in the technical areas.

Directed by Rodney Fischer and starring Anthony Warlow and Maree Johnson it is playing largely to the Blue Rinse Set and broke Lyric box office records for pre-booking sales.

It is performed on a set designed by Ann Fraser and Jennie Tate with lighting by Nigel Levings and sound by Ron Barlow. The Stage Manager is Mel Robertson.

The set consists of five large trucks supported by smaller elements which make up other scenes. Higgins' study is the largest weighing in at about six ton according to Steve Reardon, Head Mechanist. It's supported on 65 wheels and uses nine pneumatic cylinders by Festo to hold it in place. Each cylinder is about 100mm high with a lift of about 30mm and has a lifting capacity of 463kg, needing about 400kpa to fire. They are controlled in individual groups of three areas and finally by a master switch.

It was all original designed for the Victorian Arts Centre which has a 12.9m revolve but the touring revolve is only 10.9m, which is why the pneumatic lifters are necessary. They help keep the truck in place but, through selective



use, still allow the revolve to spin if the truck isn't quite in place. Higgins truck also has part of the street scene on it's back area making the revolve a very handy thing.

Other trucks include a pub, conservatory, ballroom, and St Paul's Cathedral, with small ground rows and flown elements to make the remaining settings. Twenty mechanists comprising of up to six fly men provide the muscle for some very fast and smooth scene changes.

Because of the revolve the entire Lyric floor and prompt wing space needed to be built up to height and, as the floor comes from three different productions, it makes a little bit of noise during some of the quieter numbers. The revolve is motor driven by means of a cable around the base and uses regenerative braking to slow it all down, and for us idiots that means the motor drives in the opposite direction.

A pre-production period of five weeks (plus a few scammed from *West Side's* post production) was required to get it all ready and the necessary bonus of two extra days in the rear stage behind *Rocky Horror* meant it all was set up in time, a feat as it is all quite huge.

Jo Lehman controls a crew of two and collectively they are the props people. 'More flowers than a botanical garden' and changing set dressings during scene changes keep these guys busy.

A lot of props had to be made from scratch such as parasols from umbrellas because you just can't get them. They even hired real dictaphones (run with toilet paper rolls) and a stuffed bird from the Science Museum, inventing a new species when new feathers were added. Chocolates and sterilised marbles are also part of the fun.

Wardrobe Master, Wim de Souza copes with 500 costumes and pieces which were designed by Jan Hurley who has an extensive film background. She used materials which were very delicate and

while fine for film, they were a little difficult for theatre requiring careful attention. Wim looks after eight dressers and works with the house wardrobe people to repair and launder the costumes. It's a job Wim likes because of the people he works with and I've seen him around QPAC a lot, always with a smile.

Head Electrician, David Brown and assistant, David Mansfield, are the guys behind Nigel's rig. Because Nigel lit the original production but was stuck in New York doing the King & I, assistant designer Jill Judges was there to recreate his work and I suspect to keep the two Dave's in line. Using the house equipment of an Avab Expert and 370 Strand and Bytcraft dimmers the show was supplemented by scrollers, cantatas and lekos from Bytcraft.

Not being a really technical show it only has 160 cues and runs a crew of three domes, one desk and two floor. Items of note include ministrisps as footlights and fifteen animator wheels. David Brown said that they had problems finding the fifteen wheels and in the end it was cheaper to have their own laser cut than hire them anyway. They now come complete with the VSO name and the Dave's' initials. Other pre-production tasks included making all the pracs easier to mount with plugs and so forth rather than terminal blocks. Something I am glad they did as it was my job to fit all the set pracs up during bump in.

Both David Brown and Steve Reardon finish this to tackle the next project, *The Puccini Spectacular*, an extravaganza destined to be talked about for years, with the set designed by the designer of *Jesus Christ Superstar* and lighting designed by that really nice guy of lighting design, David Murray. Good luck guys.



Steve Reardon, Head Mechanist and David Brown, Head Electrician

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THE PA PAGE

The Importance of keeping it together

Quantigy

Part 4 in a series, by Michael Orland.

LIFTING THE LID ON AMP MAINTENANCE

Poking around inside amplifiers can be a tricky business. I'll never forget the first time I poked around inside an Auditec amplifier about 17 years ago. I got a belt from it that scared the crap outta me. I was totally dumbfounded. How could I get an electric shock from something that wasn't even plugged in?

Well, see, it's those sneaky capacitor thingys I mentioned last month. It's their gig to store electricity, sometimes days or weeks after they're unplugged. And sometimes lots of it. Some amps have little resistors soldered across the terminals of the main supply rails' filter caps. These are called "bleeder" resistors because they can bleed the charge away within 5 to 10 minutes after the amp is turned off, making them safe to service. Others remain potent.

The worst case scenario is the common one where a supply rail fuse blows at a gig, leaving no possible path of discharge. The next morning the owner takes the lid off to look for clues and sticks his hand inside, only to get thrown halfway across the room.

Whether you think your amp has bleeders or not, always attempt to discharge the amplifier before servicing. Stoopid people do this by trying to short tails with a screwdriver. There have been cases of said screwdrivers becoming flash welded to said rails. Many technicians use groups of resistors soldered to flywires for discharging but this is really only recommended for those who know what they're doing.

Touching one of these wires against the wrong spot can unnecessarily blow fuses. The really cool trick for discharging amplifiers is to use an ordinary 240 volt light globe in a socket going to two wires with stripped and tinned ends. One end should be soldered to an alligator clamp and attached to the earth lug on the amp's mains plug. The other wire can then be touched against either the terminals of the main filter caps,

or the terminals of the supply rails' fuse holders. If there is any significant charge remaining within the amp, the globe will flash briefly giving a visual indication of the amps' discharging, rendering it safe to go exploring within.

So all this aside, why would anyone non-technical want to go inside an amp anyway?

Well, the main reason would be to clean it, especially if it has internal fans. A clean amplifier is a happy amplifier. Most professional repairers have horror stories of very unhappy amplifiers that have been brought to them, that looked like someone had emptied a full vacuum cleaner bag into them. And surprise, surprise, most of the time all faults can be traced to overheating. Often, these amps can be easily cleaned with a soft brush and a vacuum cleaner, or a compressed air gun.

Occasionally this isn't enough. I've seen amplifiers that have come out of disco installations where grimy nicotine goo has caked itself to the circuit boards. If the amp in such a case lends itself to being easily pulled apart, as in pull-out modules with push-on connectors, then you're probably best off removing each module and soaking it in a small tub of warm water with a little detergent.

Carefully dislodge the goo with a soft brush and rinse clean. Don't panic at the suggestion of immersing circuit boards in water. The trick is to get them absolutely positively bone dry as soon as possible after cleaning using a hairdryer or low setting on your heat gun. Water won't damage the boards but corrosion will. There was a story going the rounds a while back about a rack of open mesh type amplifiers sitting behind a PA stack at a crowded gig, that someone accidentally tipped a jug of soft drink into. Before you could say "%*!@", the owner pulled the mains plug on the rack. Then, before a bunch of totally stunned onlookers, he picked up the tub of water that the band's

drink rider had been cooling in, and tipped it into the rack. I daresay there would have been substantial follow-up flushing and drying when he got them home, but the story has it that everything worked fine the next night.

<Do NOT try this yourself! -Ed>

Many amplifiers come fitted with bits of foam fitted over their air inlets to filter out grime and dust before it gets in. This is the designer's way of saying "I don't trust you to keep the amp clean". And often this is more than fair enough, especially if the previous model was prone to clogging when it wasn't cleaned regularly. A classic example is the Jands 920 which follows the J1000. Even if you can't be bothered rinsing these filters under water, there really isn't any excuse for not taking a few seconds to peel them off and hit them against the edge of a case of whatever, to loosen and remove any dust matting. Many people maintain that when the dust filters get as thin as they are on amps such as the Jands SR3000, then they are doing more harm than good.

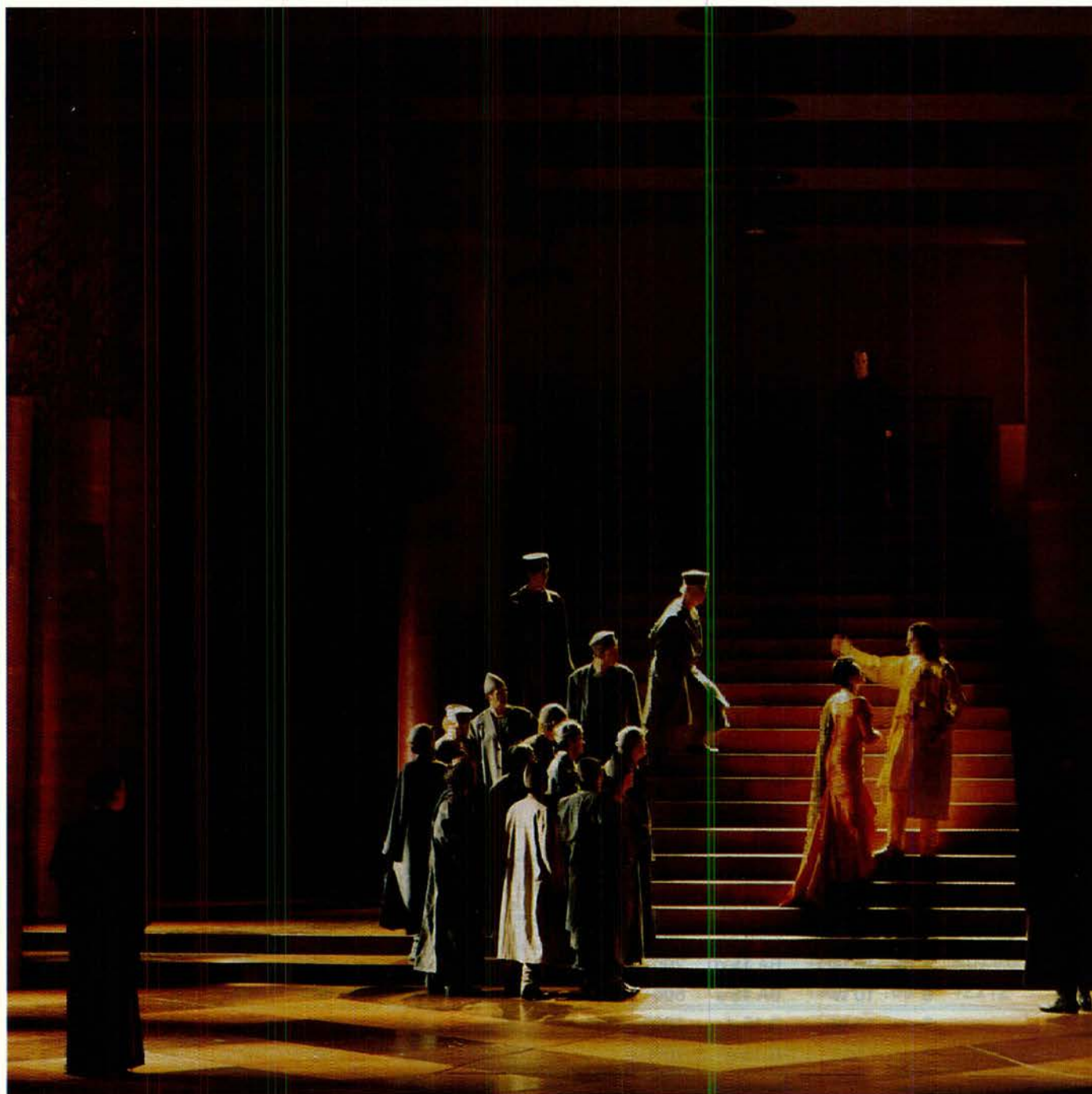
These can clog quickly and restrict air flow, getting us back to overheating. The ultimate solution is to remove the filters and enclose all amplifiers within their own air conditioned room, taking dust out of the equation, such as they've done at South Sydney Juniors and other prestige installations. For those of us who can't justify transporting our own private air conditioned amp rooms, it all gets back to routine regular cleaning. Stop moaning. You wanted to run a PA, shaddup and do your homework.

While I'm being all arrogant and bossy, let me finish with another direct order! Never poke around inside anything that's still plugged into the mains unless you are qualified to do so! And by qualified I mean you'd better know a lot more than I do because I never would! Later dudes.....

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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