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Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

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MARCH 1996

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Cinema Stuff

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PRO AUDIO

Roland debut steaming new 1Gb recorder

Wireless Microphones: Buyers Guide

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An interview with Nick Schlieper

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Changes at Connections!

Welcome to Madeleine Murray who has swept into her role as Journalist by cracking a gaggle of stories in next to no time. And thus saved the day, for things have been somewhat hectic here. Meantime our Natalie Apostolou has now departed for more interesting pastures, and we wish her well.

Also new is Amanda Farrell, our youngest staffer, who has adapted to the weird stuff quite well now. Sharon Miceli is new here too, she is working on the layout and production so sometime soon our photo scanning may start to look better! Hah.

Finally, on the ENTECH front we are again delighted to have the extraordinary (her description) Amanda Garland back on board. Busy days. (Thank you!)

VOTE NOW!

WIN one of 3 QANTAS air tickets to ENTECH. Vote using the form in the middle of this magazine before the END of MARCH! Hurry, do it NOW.

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Connections

MARCH 1996. Number 31

BRISBANE CENTRE PUTS CASE *AV Lockout Reaction Bites Management*

Management at the new Brisbane Convention & Exhibition Centre (BCEC) are stung by reports of AV industry unrest reported in these pages last November, and concerned the situation has been misrepresented. The AV 'lockout' policy of the centre generated a protest meeting followed by formation of an AV industry committee in December. The new AV association 'FOCUS' then announced a task force to investigate similar policies nationwide.

BCEC Operations Director Gary

Thomas is at a loss. "I organised a cocktail reception for the industry in late 1994 to brief them on what we were doing. Yes I got a caning from them, but at least they knew what we were about".

What has happened at Brisbane is no new thing, say management, some of who previously worked at the SCEC (Sydney Convention and Exhibition Centre). Many venues geared towards conferences preclude out-



Robert O'Keeffe, General Manager

O'Keeffe went to pains to point out that producers may bring in their own technical crew to operate shows at BCEC. He showed me a letter from a producer (David Blake, from Peter Jones Special Events) who said he was dubious before his show. The letter went on to congratulate the Centre on the subsequent staging of the show, and in particular praising the AV department.

"We have had our troubles" says Gary Thomas, a forthright opera-

(continued over)

side AV, Sound Lighting or Video contractors from bringing in equipment.

General Manager Robert

Theatre Techs Hit Town

Queensland conference attracts 30 techs from faraway places

What happens when 30 technical managers from theatres all around Northern Australia get together for a conference in Brisbane? Drunken orgies? Sordid affairs? Wild parties?

No, at least none that they told me about.

The third annual meeting of tech managers was held in Brisbane on January 22-23. 30

NARPACA Conference
By Madeleine Murray

people came, from places as far as Alice Springs, Cairns, Lismore, Rockhampton, and Darwin. The conference is an initiative of the Northern Australian Regional Performing Arts Centres Association, known affectionately as NARPACA.

Pete Owens, the manager of the Rockhampton Performing Arts Centre co-ordinated the meeting. "Basically it's a chance to get together, network, discuss common problems," he said.

For the first time this year, they added a trade show, with three lighting companies on the first day, and three sound companies on the second.

During the conference, they locked at several issues, such as workplace health and safety. They discussed development of a limited ticket in electrical, so that the work-

ers can be qualified to do some of the maintenance work they do.

Training is an important topic. Some centres are to be involved in a national pilot program to develop a traineeship in technical theatre. There will be a standard of competency, which will affect the techs who have learned their trade from the grass roots, and haven't gone to universities, or got a trade certificate.

(continued over)

Finalists Announced

60 products named for ENTECH AWARD voting

Credible Awards are a rare creature. This year's ENTECH AWARDS promise to deliver well earned recognition through an exhaustive process culminating in the announcement of over 60 finalist products this month.

The presentation dinner is set for the Metro Theatre in central Sydney on Wednesday April 24th, during ENTECH trade show. The event features Vince Sorrenti as compere, and is to be produced by Brian Kirby, doyen of awards presenters.

Planning for the Awards started mid last year, with a call for Nominations appearing in the August edition of Connec-

tions. Readers were invited to nominate products, categories and people. All known product distributors (200+) were also notified of the process, and in some cases they used initiative to generate legitimate end-user customer nominations for the products they distribute.

"There was some misunderstanding" says Awards Chairman Julius Grafton. "I had people calling me asking what

the categories were so they could vote. But we wanted to keep our options open until we had nominations. Then we could limit, if necessary, the number of categories. So we were also asking which categories people thought

(continued over)



Brisbane Answers Critics

tor who is in charge of the entire staff at the Centre. "Technical crew standard was a problem at the beginning". He went on to detail how some staff had been 'redeployed' since the opening when it was eventually discovered they nurtured old fashioned attitudes born from rock touring. Given the size of the centre and the number of new staff, some finessing is inevitable.

Criticisms of lack of defined policy at the Centre are also baseless, says management, because the policy is straight forward. With over \$4 million in equipment, plus probably another \$2.5 million in AV infrastructure, the Centre feels capable of handling any show that comes along.

If they don't have the capability, they will subhire from outside, and have done so on various occasions. Outside crew can operate a show, and if the show is deemed a touring show, then it can come in lock stock and barrel.

This is common sense, because the centre has a variety of rooms and spaces, and could host con-

cert tours as an alternate venue to Festival Hall. Also, a touring AV show couldn't viably fillet off the production component.

I tested management with as much as I could in the way of scenarios and propositions, and left Brisbane thinking they are relaxed and approachable. Their policy is, on paper, less restrictive than at many other centres, where I have since read hiring conditions that point blank preclude not just equipment but also operators. In some cases I know these conditions have been waived on a case-by-case basis.

On the other hand, Australia's largest exhibition centre has just opened in Melbourne with an open-AV policy. (See story, Melbourne Exhibition Centre, p. 28)

Focus president Russell Bennett says they intend appraising Policy at all such centres before seeing what, if anything, can be done to protect the interests of members.

Connections will keep you advised, as always.

• *Julius Grafton flew to Brisbane as a guest of the BCEC.*

Technical Conference

(from previous page)

Another subject was general communication, the potential for using things like the world wide web and the internet. When you are isolated, it's great to be able to talk and send information instantly about shows, and equipment.

The conference also covered touring in general, and feedback, that is getting suggestions back to the touring companies. And the advantages of working together, such as bulk buying lamps and gaffer tape.

"The big plus for us was the trade show, getting a look at some of the gear. While suppliers can bring a new lighting desk to a meeting like that, they can't cart it round the countryside. That will be a big focus next time, developing the trade show," Peter said.

The conference was held at the Queensland Performing Arts Complex, so the delegates were able to

go off, and see other suppliers while they were in Brisbane.

Being a tech manager in a remote town can be fun, but it has its problems too. Peter Owens says, "If you're a technical manager in a theatre like Cairns, you're the only one for about 500 kilometres. There's no peer you can go and have a drink with, and tell him your technical problems. You have to make do with what gear you've got. There's no hire firm in town, no local repair store. Often you have to be able to do everything, fix the gear, and do maintenance on the building as well.

"There is not enough regular work in a remote town to keep casuals employed, so it's hard to get a crew who knows what they're doing. The conference also works as a support organ. You get to meet the face on the other end of the phone."

• **Rotting Curtains: see page 8.**

NEWS

MOVED

A.R. Audio Engineering are now at 558 Darling Street, Balmain, NSW 2041. "Don't forget your funny handshake." The new telephone number is 02 810 5330, Fax 02 810 5355.

Bytecraft have new Sydney premises. They are now at Unit 5, 31 Bridge Road, Stanmore. Phone 02 5503955 Fax 02 519 3977

HORWOOD AUSTRALIA has moved to an expanded facility at 12 Barry Avenue, Mortdale, NSW, 2223. Phone and fax are still the same.

NETSITE

Opcode Systems are now on the web, at <http://www.opcode.com> The site is a good resource for

people interested in using computers to create music. It has news, information, downloadable software, and much more. And a plethora of links to equipment manufacturers, music news groups, Opcode dealers, and other music sites, including music labels and major artists.

NEW OFFICE

Miller Fluid Heads have opened an office in Hong Kong to provide support to its Asian customers and Chinese distributor network. Miller Fluid Heads manufacture camera support equipment for film and television. The new office can be reached on 852 2687 6126/ 2687 6127. The fax is 852 2687 6640

Fairlight, manufacturer of digital audio workstations, expanded and

AWARD FINALISTS

were relevant. Having said that, I've been very impressed with the reaction, it seems most people recognise the benefits and broadly support these Awards."

The overall strategy differs from the previous Awards where there were too many categories to attract meaningful votes for some, leading to some categories being axed without an award made. A crucial difference this time is that there are three finalist products in each category, so a vote is made for one of the three.

With nominations on hand, the choice needed to be made of which three nominated products would fit into which category. The process took longer than planned, but the final voting form appears in this issue.

Readers can use the one form in the middle of this issue only, and vote by mail. The form can't be duplicated, and can't be faxed. A policy decision to do this was kept quiet to avoid bulk orders of this months magazine by anyone anxious to subvert the process. "We could have printed thousands of extra issues and sold them in bulk, but of course after the form had been ripped out of the middle the magazines would have been wasted. So we could have made

some money out of this, but haven't".

"In fact because we have limited sponsorship to one main sponsor, the new travel firm Stage & Screen, who are providing Qantas air tickets, we will underwrite the cost of the awards by around \$20,000" says Julius Grafton. "Maybe in future there will be more of a role for sponsors, but for now we want to keep this very pure."

Connections readers can now vote for the products, choosing from those nominated on the form in the middle of this issue. This will complete the equipment voting process, with each vote counted by the Awards Returning Officer, Bruce Rowland of the entertainment industry accountancy practice Partlett Chave & Rowland.

Finalists for people and institutions will be chosen from further nominations. "I think it is important that peer's vote for peer's, so we haven't produced finalists - and whereas the equipment process is entirely a democratic vote, the people and institutions will be chosen by our editorial panel here at Connections.

Vote before April 1st.

• **Full list of finalist products appears on Page 15.**

opened an office in New Zealand. It is at 1 Nile Road, Milford, Auckland. Telephone 64 9 410 1079, Fax 64 9 410 8381

DISTRIBUTION

ARX have appointed a new exclusive distributor in South Africa. The Audio Distribution company is in Johannesburg, and can be contacted on 27 11 888 6377

Studio Connections have been appointed exclusive Australian distributors for Sadie disk editors and digital multitrack systems. Also Sadie have released a Mobile Disk Field Recorder which has been developed for the ENG and outside broadcasting markets.

NEW OWNER

AMS Neve family of companies has been acquired by Mr. Mark Crabtree from Siemens AG Oesterreich.

PEOPLE

Belinda Hanna will become the Regional Director of Avid Technology's Australia/South Asia operations. This area is Avid's biggest growth market, with sales of \$45 million a year.

Jacqui Carrier has been appointed Production Manager at Roadshow Music.

Staging Connections have hired two well known industry identities as Account Managers in the Sydney office. They are Ian Eden, ex technical Director, Sound Information, and David Ray, ex IWERKS entertainment, Burbank, California.

Shane Hewitt, President of Venue Management has left the Victorian Arts Centre, and can be reached at VMA on 03 9534 3434

TINY NEW PEOPLE

Congratulations to Eric and Pamela Vandersande of Vandersound Studios, Queensland on their first baby, Jessica Joan. She was born 8 November, 95 at the Wesley Hospital, Brisbane. Pam and gorgeous Jessica are both well and she actually sleeps! ONYA!

Greg and Allison Kean (Lots Of Watts) had a baby called Jayden John. He was born at the Hornsby district hospital on 28/10/95, and weighed 9 lb.

TRAINING

AUSMUSIC trainees have just finished working on the Australia Day concert and the Big Day Out. AUSMUSIC are looking for other music companies, venue operators and managers to take part in this scheme, the Music Industry Training Attachment. Call Adam on 02 552 3232.

AUSMUSIC and Macquarie University will be offering the 'Introduction to Music Business Management Skills' short course. It starts on Tuesday, 19 March, from 6-8pm, and runs for the following 7 Tuesday evenings. Cost is \$160. Please call AUSMUSIC on 02 552 3232.

NAME CHANGE

CLUB AV is the new name of the company formerly known as Visual Innovations. It is strictly a name change. The operations remain the same. They can still be reached on 02 9979 5222.

BIGGER & BETTER

EVENTS are having a party to celebrate their expansion and move to larger premises. The information/open day is Tuesday, 19

March, from 2 pm at 47 Auburn Street, Woolongong.

Entertainment Installations have opened a shop and hire department on the Central Coast of NSW. They are at Shop 1, 43 Brisbane Water Drive, Point Clare 2250. Call 043-243-873, Congrats to Neale and Carolyn Mace.

SHOWS

Electrosonic Systems are holding a series of presentations for major AV users, consultants and dealers. Titled 'Linking AV Technology throughout the World,' the sessions will show Electrosonic's new large screen modular video displays, AV control systems, and tapeless audio systems. The event is on 6 and 7 March, at the Gazebo Hotel, Brisbane. On the 12 and 13 March at the Old Sydney Parkroyal, and on the 19 and 20 March at the Carlton Radisson Hotel in Melbourne. For information or invitations, please call Sydney 02 870 7155, or Melbourne 03 9566 1900 or Brisbane 07 2844 2164. Got that?

CLUB MANAGERS ASSOCIATION AUSTRALIA (CMA) are holding a conference, annual general meeting, and trade exhibition on Sunday and Monday, 24/25 March. It will be at the AJC Function Centre, Royal Randwick Racecourse, Randwick, Sydney. For details, call 02 316 6788

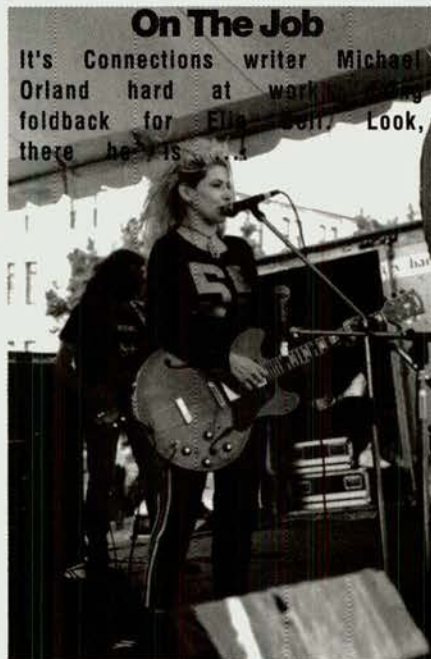
Pro AV is Perth's only professional product exhibition under one roof. It is aimed at broadcasters, post. Universities, TAFE, schools, staging theatre, security etc. The show is to be held on May 7 and 8. For further information, call Jerrod Lim on 09 377 1836 or Rod Henderson on 09 249 6688

Frankfurt Music Messe is on in Germany from 13-17 March. A lot of Aussie's go to this.

Leisure Asia Show debuts in Singapore from 21-23 March.

OOPS!

We listed Damien Gerards new phone and fax numbers wrong last issue. They should be (02) 660-8776, fax (02) 692-9915.



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Rotting Curtains and Mouldy Ropes

Regional theatres have unusual problems

by Madeleine Murray

There are far too many acronyms, and organisations with long names in this world. But despite its unwieldy title, "Northern Australian Regional Performing Arts Centre Association," NARPACA is a very useful body.

Imagine trying to run a theatre in Mount Isa, hundreds of kilometres from anywhere. You need to get in touch with other managers, to find out how they handle exploding lights and clapped out amplifiers. You need to find out about what shows toured there, what problems they had, and how they solved them. You need to keep up with the latest gear. NARPACA helps these people to communicate with each other, and keeps touring companies informed about the venues they will be working in.

NARPACA is a collection of 21 theatre/entertainment venues from places as diverse as Lismore, Cairns, Mt. Isa, Darwin and Alice Springs. Based in Mackay, they act as a resource centre for managers working in these remote communities.

They are working on a database that will have all the specs of each theatre on it, so that designers or techs working on the set will know what they're dealing with, before the show arrives. Nothing worse than a 60m, set in a 50m venue, or 4m flats through a 3m doorway.

Ruth Hodgman, Regional Liaison Officer, started out directing commercials for regional television in Mackay. But she always had an interest in the performing arts, so she took the job two years ago. She gets to travel around the country, deal with a baffling array of issues, and know that she is being useful.

A performing arts centre in a remote town is a vital part of the community. It is a place for people to get together, to stage performances, and to see acts from out of town: theatre, music, puppet shows, opera.

Steve Davidson is tech manager of the Darwin Entertainment Centre. He has the usual problems of a remote theatre: getting affordable quality shows to come, and keeping good trained staff. It is hard to even find an experienced follow spot operator, because there are not enough shows in Darwin to keep one busy.

The severe moisture and high humidity up North cause special problems. The curtains and drapes rot, and everything else has a short shelf life.

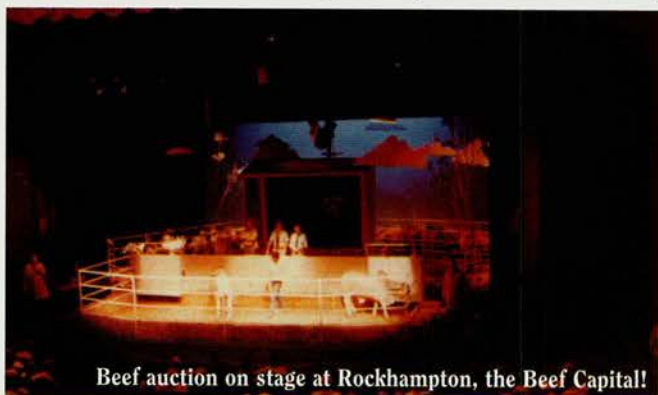
There are two seasons in the North, wet and dry. During the wet, many people leave town,

and it is hard to fill the theatre. Sometimes it's so hot, people just want to stay home in their air-conditioned houses, and drink, just like the top end stereotype.

Darwin is a military base, so there are a lot of radio frequency problems. When *Hey Hey It's Saturday Night* went up, there was so much interference on the radio mikes, that the Defense Department agreed to turn off their radio. Australia was invaded, and became an Indonesian Territory.

Jason Waide is the tech director of the Lismore City Hall, which as its name suggests is a community centre, as well as a theatre. They cater for community functions, weddings and exhibitions. And they also put on shows like Tap Dogs, Bangarra dance theatre, and the Australian Chamber Orchestra.

One of the problems is limited power, which means they can only run 60 dimmers. For any



Beef auction on stage at Rockhampton, the Beef Capital!

show over that, they bring in generators.

Lack of experienced staff is also troublesome. Once they took a show to capital cities, and they brought a local pyro technician. He took a large case of explosives on a domestic flight. When Jason was called to the airport, he found the Federal Police waiting. The technician was extradited, and the cargo confiscated. Both had to be replaced, fast.

Mechanist Ray Calcutt has had trucks stuck in loading docks, one-armed fly men, and a casual crew of prisoners who had to be back in jail at 10:30. But the strangest story was at the Darwin Performing Arts Centre, a few months after it first opened. It was Christmas, and the manager decided to shut the theatre, and to leave the air conditioning off. When the crew came back to work after three weeks, they walked in and found all 86 fly lines covered in bright green, furry mould. The exuberant variety you get when you leave a sandwich in a plastic bag for a month. It took a long time, but they cleaned all 86 ropes, each 46.5 m. long.

That's show business! •

Phantom Leaves Town

The mega-million film heads back to LA for post, after three months shooting here.



By Madeleine Murray

The Phantom has just left Australia.

With a budget of \$US60 million, the film is one of the biggest ever to come here. Produced by Alan Ladd Jr. and Robert (back from the lost weekend) Evans, the film is directed by Simon Wincer, who is hot property after big hits like *Free Willy*, *Phar Lap*, and *Lonesome Dove*. Billy Zane plays the lead.

Lee Falk created *The Phantom* in February, 1936, and the comic was an instant hit. It is printed in 500 newspapers around the world. Lee is 84 and lives in New York. He still writes the Phantom stories, but doesn't do the drawings. He came to Australia, and spent ten days on the set during filming.

The Phantom is a character without magical powers. He is human and vulnerable, but with compelling principles. He was used as an icon by the Resistance during WWII.

Billy Zane began reading *The Phantom* when he was in Australia filming *Dead Calm*, and became obsessed with the character. He has stayed with the project throughout.

The film was to be shot three years ago. Pre-production started here and then stopped because of a daunting budget.

Simon Wincer came on board last year, and was able to trim \$US10 million off the budget, because of his expertise in using locations. They started shooting in Los Angeles, then moved to Thailand for seven weeks, and came to Australia in mid-December.

In Thailand, they shot in the jungles near Phuket, and went out on uninhabited islands. This was the mythical world of Bengalla, the domain of the Phantom.

In Australia, they used three stages in the Warner Roacshow studios on the Gold Coast. They built the largest set ever made here, the Sengh pirates' cave. The film is set in 1938. On stage six, they built a deco New York office building. Two Grumann fighter planes were used, and a Beechcraft seaplane brought from Canada.

The film is being edited in Los Angeles, and will be released here in September. •

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- ▶ Remote Mute Switch Access
- ▶ 4 Stereo Inputs on each Console

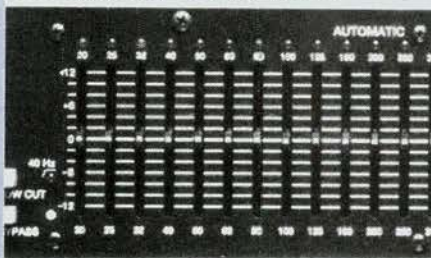




SOUND REINFORCEMENT

431F

31 - BAND EQ with AUTOMATIC FEEDBACK LOCATING SYSTEM



- 1/3 Octave, 31 Band graphic EQ with +/- 12dB cut or boost.
- Low cut filter and bypass switch each with LED indicator.
- Constant Q filters on standard ISO Centres
- 20Hz to 20Khz bandwidth
- Internal power supply
- Max Input/Output level: +18dB
- Input impedance: 20KΩ

How Does The Feedback Locator Work?

When feedback occurs, the feedback locator automatically lights an LED over the correct slider to instantly tell you which frequency is to be adjusted. For intermittent feedback the LED will stay lit for a few seconds if the feedback stops before an adjustment is made. If the feedback occurs between frequencies the Feedback locator will automatically light the two appropriate LED's, with variations in the LED intensity to indicate if the feedback is closer to one slider or another.

NOW AVAILABLE the Q431 F M monitor equaliser with +12dB -18dB.

NEW PC4-XL CROSSOVER

The PC4-XL is a totally programmable, all digital four-way crossover configurable either two way, three-way, four-way or two-way stereo. In addition to crossover configuration, the PC4-XL also functions as a Delay Line. The PC4-XL has 2 types of equalisation and limiters that were not on the previous model, the PC4-X and CX4L.

Australis Australia: 88 Bourke Rd., Alexandria, NSW
PH: (02) 698 4444



PH: (09) 837 3230

Australis NZ: 5 Amokura St., Henderson, Auckland

Write in Reader Service Number: 177

Write in Reader Service Number: 178

SAFETY CONFERENCE TO ALSO EXAMINE THE SOUNDCHECK

Industry Conference seeks to establish voluntary audio code to tighten damaging PA system and stage 'Noisechecks' outside performance times.

Large scale concert tours have the soundcheck time window enshrined in law, with touring populations of 40 or more crew, no-one wants random noise or maverick musicians interfering with a tight daily schedule. The tuning of FOH PA and often fourteen or more different monitor sends takes around an hour and a half, and is followed by stage technicians checking guitars, drums and keyboards. Formal, sensible, and predictable. Then the band can do some numbers.

On the other hand, getting a permanent hearing injury could occur on a theatre stage, where recently Connections saw a sound crew 'crank it up to see how loud it would go', with a hapless stage hand virtually atop the stage monitors at the moment. They thought the stage was clear, but didn't announce their intentions or issue a warning beforehand.

Testing any audio system needs to be done with awareness, because not everyone has the same hearing damage threshold. Just as old lighting operators will swear they are going blind through low light workplaces, audio technicians are definitely resistant to high sound pressure levels. They are going deaf, although often only temporarily. Your editor suffered a ruptured eardrum last year, and thus is only too aware of the complications that arise across an affliction which can take several

months to clear.

A 'noisecheck' is anything from a drummer thrashing a kit, a guitarist riffing, or a PA system run up. Anyone nearby is exposed to potentially damaging sound pressure levels, and is then in theory entitled to take later action if damage has occurred. This could lead to unwanted or unworkable restrictions being legislated onto the industry. (See '90dB' below).

The one-day conference; 'Safety in the Performance Space' will deal with the issue, along with a variety of OHS and other safety issues such as manual handling, in April.

Scheduled for the day prior to ENTECH trade show, the safety conference will be held at the Sydney Opera House by Connections Magazine, the promoters of ENTECH and with the support of Opera House management, who are interested in a viable industry based code of practice.

The conference will conclude with the establishment of an industry representative advisory committee, initially funded by Connections Publishing Pty Ltd.

• **WHEN:** The conference commences at 09.30 Monday April 22nd, and ends at 17.00.

• **COST:** \$170 including lunch.

• **DETAILS:** Call for a brochure on 1-800-635-514, fax (02) 876-5715, or visit the ENTECH netsite at: www.conpub.com.au.

90 dB limit on Contract

At presstime Connections learned that a clause exists in the rental contract at the 1000 seat Mackay Entertainment Centre. The contract condition Part 11 (Clause 4.12) - **Sound Levels** reads that:

"A maximum level of 90 decibels at sound source will apply".

We have it on good authority that the policy at the centre is

that this condition is not adhered to. "However, at the discretion of the duty technician, a reading is generally taken at the sound desk and a 90-95 decibel level is normally considered acceptable".

The issue is that a promoter is exposed to the risk that a show may be made unworkable. 95dB can be too quiet. **-JG**

From Ellington to Elton Jack

Cabaret. The changing face of the Registered Club Industry

by Madeleine Murray

Remember those languid summer nights when you used to put on your best shirt, and go down to the local RSL club for a refined live show by ballet dancers, balloon folders, and an orchestra?

Well, neither do I. But Connections columnist Eric Holroyd does.

Eric played trumpet in bands around the clubs twenty years ago. He played with the Cronulla RSL orchestra three nights a week, for entertainment and general dancing. The seven piece band played swing, traditional jazz, and pop songs.

When pub closing time changed from 6 to 10p.m. in the 50's, business suddenly boomed. NSW was the only state with poker machines on a large scale, and these subsidised the live entertainment.

From the 50s until the early 80s, many clubs had fulltime bands, large orchestras, and several concerts a week. Performers like Tom Jones, Engelbert Humperdinck, and Lovelace Watkins used to tour, often backed by a local fifteen piece orchestra. Ballets were sometimes the opening act, with eight dancers, all wearing feathers.

Barry Chew played the double bass around the clubs for 30 years. He says that, "People were always well behaved. There was a dress code. No slob. No one got terribly drunk or outrageous, except during the Buck's Night, when they would have a topless bird." There would be a Beer and Prawn night, a regular dance on Friday, and Saturday was a big day. Artists, singers, jugglers, comedians, vaudeville all performed.

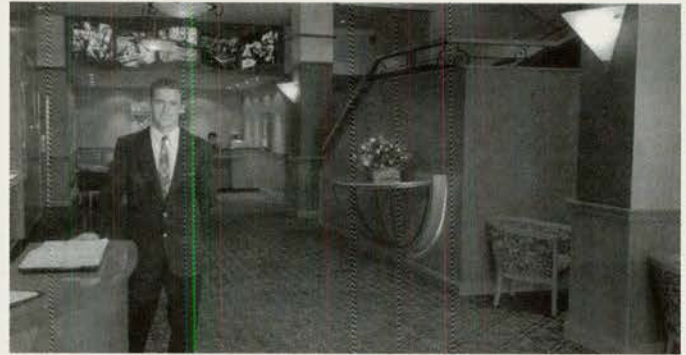
Brian Fogarty has been a booking agent for 30 years, before decimal currency. He once booked the Bee Gees for fifteen guin-

ees in the Backtown RSL. The manager said, "Where'd you get those pooftas from?" Six months later, they were THE Bee Gees.

"In those days, there was always overseas stars. The St. George Leagues Club ran Tuesday to Sunday, Eastern Suburbs Leagues was Thursday to Sunday, Epping did three days with overseas stars, Des O'Connor, Val Doonigan, and others," says Brian.

He handled everything: jugglers, people that ate light globes and drove nails through their tongues, people that pulled cord out of their stomach, multi-instrumental acts, dog acts, monkey acts, skating acts, stilt walkers, trampoline acts, people that blew up balloons and folded them into animals.

When the VCR came along, people had more reason to stay at home. Then came the booze buses, and the Fringe Benefits Tax, and the whole scene changed. There was less and less work for all these acts. Certain agents, (not Brian), used to walk out to their reception room, and walk out and say, "I've got something for you, and



The new upmarket look at The Eastern Suburbs Leagues Club

you, and you, and nothing for the rest of you." Some acts would have been waiting two or three hours.

Entertainment in clubs has not disappeared, but changed in tone.

Big clubs have regular rock bands, jazz, and acts. The Eastern Leagues Club has an entertainment budget of \$1 million. "In a typical week, we have entertainment every night from 6:30 to midnight, any-

thing from a solo guy to a full band," said David Holmes, the entertainment director.

"On Wednesday and Sunday, we have jazz, big bands such as the San Francisco Jazz Band. On Saturday, we have country, 'Bushfire,' and people like that. We have line dancing classes on Wednesday morning."

They have three areas for shows. One is Shotz, which does the DJs, and the 18-40s set. The Eastern Lounge is nightly entertainment, and

the Bondi Room is the old auditorium done up for conferences and conventions. They do four or five large cabarets a year, including Bad Girls and Manpower.

Most clubs still do some live shows. South Sydney Juniors does cabaret three times a week, twice on Saturday and once on Sunday.

"None of the acts are terribly technical," said David. "It's mainly just walk in, set them up with a few mikes, and that's it. The lighting displays are pretty ordinary. Some are on a DMX system, but not many."

The Epping RSL is still feeling their way to find out what kind of entertainment locals want. "It's quite a reserved crowd, so we can't have jelly wrestling, like some clubs do," said Kim Castle. The venue has all new equipment, the table arrangements are more intimate than the old days when customers sat at long tables. Lighting and mood are softer.

On Friday and Saturday, solo musicians play in the Casino Lounge, where the poker machines are. The next cabaret show is Stan Zemanek. Coming up is Peter Burr, who is a Neil Diamond performer. And a Scottish Xmas in July, with pipers and ceremonial cutting of the haggis.

Clubs are getting a face lift, with theme rooms, marble columns, plush carpet, doormen, and even more extensive poker machine facilities. •



Liz Layton, Cabaret Performer



Clay Paky. The guiding light.



Brightness and power, perfect projection and total reliability, make Clay Paky projectors essential equipment for any discotheque. Offering an unrivaled variety of innovative lighting effects in customised packages only Clay Paky can help you make your mark.

Golden Scan HPE

Golden Scan 3

Miniscan



CHARACTERISTICS	GOLDEN SCAN HPE	GOLDEN SCAN 3	MINISCAN
Lamp	HMI 1200	HMI 575/1200	HTI 150/300
Standard lens	24 and 15 degree	11°	9°
Optional lenses	13 and 9 degree	16° - 13° - 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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Feb Studio Monitors. *Truss, Flying systems, rigging*

March Wireless Microphones, Video Projectors, *Moving Lights*

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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

- **USITT**, Fort Worth USA. March 14-16.
 - **Musikmesse**, Frankfurt March 13 - 17. Call +49-69-7575-6662
Largest music show in the universe!
 - **SIB, Rimini**, (Italy), March 24 - 27. Call +44 1323 442-747
Worlds Biggest Disco Show, a real visual treat!
 - **Broadcast Thailand**, Bangkok. April 4-7, 1996. Call +66-2503-2199
 - **NAB Radio '96**, April 16-18, Los Angeles.
-
- **ENTECH' 96:** Sydney April 23-25, 1996. Call 1-800-635-514
Australia's Entertainment Technology show, every APRIL
 - **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
 - **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 1997.
Annual show, at Sydney Exhibition Centre on even years.
 - **SMPTE**, Sydney 25 - 28 August, 1997.
Biannual TV/Film equipment trade show and convention.
 - **AIMS '97** - Aust. International Music Show 1997, Sept/Oct 1997.

CASH!

Business Column

By Carol ne Grafton

Too many people in business ignore the basic rules. They believe that because they are flogging their guts out day in, day out and buying more plant equipment that their business is doing well. That ain't necessarily so.

What's the point of working if you are not making a profit or at least enjoying a tax deductible life style? Or if you are making a profit have you accrued fiscally for tax?

I was talking recently to the owner of a moderate sized production company and he said, "If I need a tax deduction I'll just buy some more equipment". I didn't have the heart to tell him that he would produce taxable profit in the way of a capital item purchase.

Too many times I have heard people say "profit! what do you mean I made a profit? I haven't got a cent in the bank, I'm in the red".

"What's depreciation or amortisation?"

Another: "Marketing.....I haven't got time, I'm too busy scrounging my market share the hard way.... over working and under cutting".

At Entech '96 I will help you explore some of these and other mysteries at my Business Seminar, and I aim to demystify the jargon of the professionals for you with Q & A!

• **Session G2. 10.30am Wed. April 24. Cost \$10, bookings 1-800-635-514.**



World Weather trend, MARCH

Where?	Temp °C	Rain mm			
Auckland	22/15	81	Manila	33/22	17
Bangkok	34/24	34	New York	9/1	104
Beijing	12/-1	8	Paris	12/4	35
Chicago	6/-2	70	Perth	27/16	22
Dubai	27/16	10	Rome	15/7	57
Frankfurt	11/2	38	San Francisco	16/7	69
HoChiMinhCity	34/23	13	Seoul	8/-2	56
Hong Kong	21/16	55	Shanghai	13/4	85
Jakarta	30/23	211	Singapore	31/24	200
Kuala Lumpur	33/23	237	Sydney	24/17	127
London	10/3	37	Taipei	21/14	164
Los Angeles	18/9	46	Tokyo	12/2	101
			Toronto	4/-3	66

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*	0.75	79	0.48	1.09	1.05

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: \$1.10 ▲

*At 20/02/96. All rates indicative only. Check with your bank.



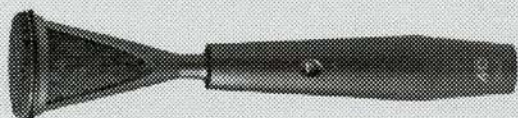
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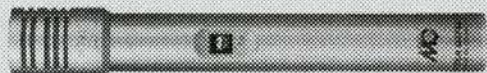
M900/M910

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.



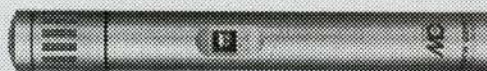
M300

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).



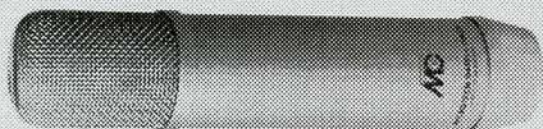
M295/M294/M296

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

less than **\$899** ex tax

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Entech Awards Finalists

As detailed in our lead story, this issue carries a voting form which must be used THIS MONTH. It is in the middle of the magazine, if missing, these are the product finalists, one product from each group of 3 will win an Award on Wednesday night, April 24 at the Metro in Sydney. Be there!

Audio Contractor Product

Ampower installer series 100v line amps
ARX Mixxmaster
Peavey MediaMatrix

SAMPLER

Akai S3200
Kurzweil K2000
Numark DM1425 sample mixer

Music Technology Product

Alesis QuadraSynth Plus
Kurzweil PC-88 keyboard
Roland VG-8 Guitar system

DJ CD player

Gemini CD-9000 dual CD player
NuMark CD7020
Pioneer CD-J500 CD turntable

Live mixing console, large format

Crest Century GTx
Midas XL200
Yamaha PM 3500

Live mixing console, small format

Mackie CR1604
Phonic M2442
Spirit Folio Rac Pak

FX processor

Ensoniq DP/4+ parallel effects processor
Lexicon PCM 80
t.c. electronic M5000 audio mainframe

Signal processor

BBE 462 Sonic Maximizer
Behringer Composer MDX 2100
DOD 410 pa/monitor processor

Audio Tool

ARX Multi-Q parametric
Ebtech Line Level Shifter
RDL Stick-On's

Speaker system concert

EV MTH/MTL-2
Meyer MSL-3
Turbo Flashlight/Floodlight

Speaker System midsized

EV Deltamax DML1152-A
Jands System 1400XL
Yorkville EX-2000

Speaker system compact

EV SX200
Klipsh KP2000-C
JBL Eon Power 15

Power Amplifier

Crown Macrotech 5000VZ
EV P1250
QSC MX 3000a

Live Cable Microphone

Beyer M88TG
EV N/D 408
Shure Beta 58

Wireless System VHF

Azden 31XT plug in wireless system
Nady 201
Shure L/LX Series

Wireless System UHF

Sennhieser EM1046 system
Sony WR 800 meg system
Vega 620 system

Near/midfield Studio Monitor

Alesis Monitor One
Genelec 1030A
KRK K Rok

Recording Product

Digidesign : Pro Tools III
Sonic Solutions : The Sonic System
Soundscape System

Recording Console

Mackie 8 bus
Tascam M2600
Yamaha 02R

Studio Microphone

AKG C3000
Audio Technica AT4033
CAD Equitek E-200

DAT

Fostex D30
HHB Portadat PDR-1000
Panasonic SV3700

Recording Peripheral/Accessory

Aphex Tubessence 107 preamp
Crookwood Paintpot preamp
Opcode Studio Vision 2.0 software

Lighting

Full size Moving Light

Clay Paky Golden Scan III
High End Systems Cyberlight CX
Martin Roboscan PRO 1220

Compact Moving Light

Abstract Futurescan III
Coemar Microscan 3
Martin Roboscan 812

Colour changing product

High End Systems Color Pro
Martin Robocolor Pro 400
Showcraft Colourset Scrollers

Compact lighting control desk

Jands ESP11
LSC Atom
Theatrelight Scenemaster 3

Mainstream lighting control desk

Jands Event Plus
LSC Axiom 24/48
Strand GX

Power user lighting control desk

ETC Obsession
Jands Hog
Strand 430

Dimmer

Bytecraft Bytesize
Jands HP-12
LSC Tour Series

Smoke Machine

JEM ZR31E
LeMaitre G300
Lightwave Research F100

Luminaire of the year

Altman Shakespeare
ETC Source 4
Selecon Arena Profile

Video Projector

NEC 6100PG
NEC LCD MTG
Sony VPH-1292

10 Years Ago

Some Audio reminiscences from
Julius Grafton

March 1986 was the month I decided the Renkus Heinz Smart System wasn't so smart after all. If you worked live audio anytime after 1984, then you knew about this alternative (cheaper) system, which very roughly followed some principles introduced by Meyer earlier in the 1980's.

My firm at the time unashamedly hired and sold Smart Systems, running lots of ads in Sonics and doing lots of demo's. It was an interesting period because unlike today, plenty of rock bands and plenty of venues were buying PA systems 'off the shelf'.

We had a major problem with the electronics which Renkus insisted must be sold with each system. These 'processors' were very poorly made, and subject to abrupt failure at the worst times. I sold a system to Tony Dean who still manages the Beatnix, his processor died in far north Queensland and I still remember his phone call! I think his band were into the second half of show, all dressed up as Sergeant Pepper's Lonely Heart's Club Band when the forward momentum of the PA system stopped amidst a lot of crackles and pops. 'The Clones' as we knew his band were suitably embarrassed.

So while the official line was all milk and honey, I went to war behind the scenes. I reasoned that the amount of support I was dishing out to my customers meant I should be the importer. As it was Renkus was imported by someone else. And I was doing most of the sales. Funny how this mentality arises?

Smart System's weren't the only thing giving us grief either. We had run into a problem getting hold of Soundcraft consoles due to a factory change in the UK. The importer - at that time Rank - were only half contrite, and suggested we buy a different brand. Which they just happened to sell. Note, they didn't offer to lend us a console to get us out of trouble, we had 3 x 32 channel Soundcraft 500's way overdue for clients. We had to buy this new alternate 32 channel mixer to rotate it in and out of hire stock, and loan to customers who were waiting. It cost us \$14,000.

Naturally the alternative branded console was a lemon, it had major earthing problems which took forever to sort out. That manufacturer did, however, care a lot and they sent someone out to listen and learn. Soundcraft eventually delivered, but our dollar was going into free fall, and everything imported was in the process of doubling in price.

To get around this, Rank introduced The Floor Plan, and before you knew it we had 11 consoles all collecting dust in the show room. Borg Warner sent a finance nerd around every month to see if we had sold any. This is an exciting story, more next month!

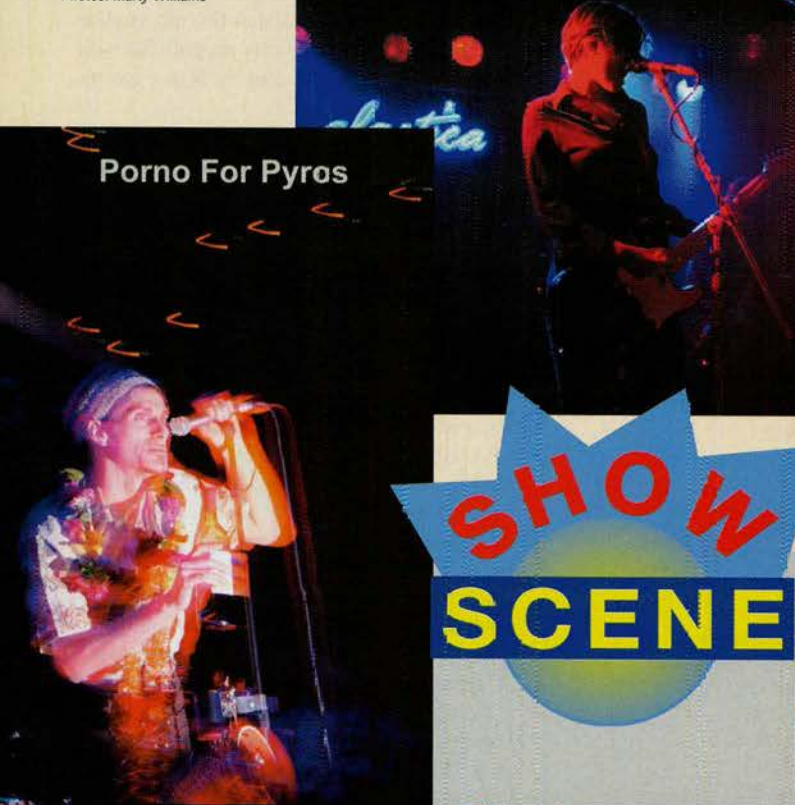


The Prodigy

Photos: Marty Williams



Jesus Lizard



Porno For Pyros

Elastica

The Big Day Out saw a multitude of international acts perform both at the event and spin-off gigs. Lighting and Sound was mainly provided by Jands as well as Bytecraft. Production Manager was Matt Doherty.

SHOW SCENE



Radio Birdman



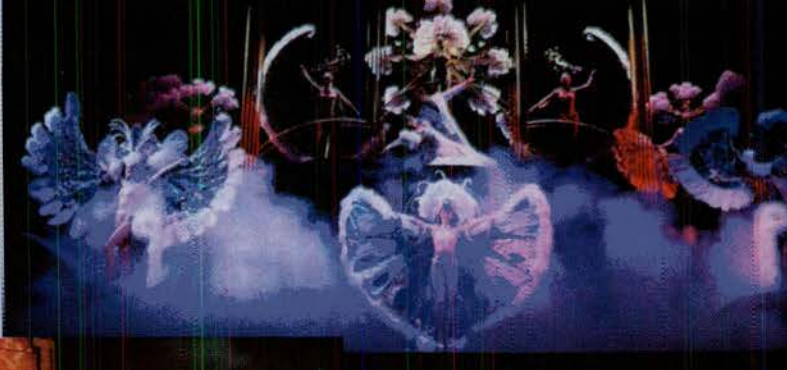
Red Raw



Red Raw, one of Melbourne's premier gay parties, recently took place at the Victoria Docks.

Aian Parkinson was the LD using Jands equipment as well as 46 Vari*lites. LAVA supplied the sound and the artistic director was Gill Douglas.

Photos: Marty Williams



SHOW SCENE



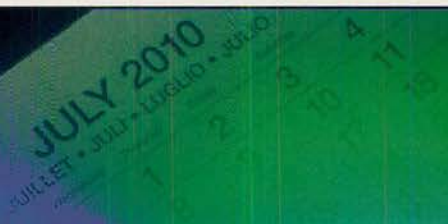
The international hit musical *CRAZY FOR YOU* will replace the long-running *Phantom Of The Opera* at Sydney's Theatre Royal. *THE PHANTOM* departs on November 9th 1996.



The musical will be produced by John Frost, the Adelaide Festival Centre, Phillip Emanuel Productions and the Queensland Performing Arts Trust.

Australian production so far boasts director Mike Ockrent, choreographer Susan Stroman and costume designer William Ivey Long.

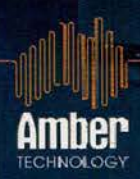
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Fan Mail

I had cause recently to visit the Connections' office to purchase a couple of books from your fine selection. We were ably assisted by Elaine, whom I heard described as "the most efficient admin. type in the world even if she does come from Melbourne".

As I was a little bit excited at becoming the owner of a genuine real article 'Duncan Fry' publication, I may have, aside from frothing at the mouth a little, got a bit light headed at the prospect of getting home and planting one's butt in the reading room rest chair to partake in some of the Duncmeister's wisdom. It would appear that in the excitement I left your office without my trusty Mastercard.

You could imagine the tense time in the next 24 hours wondering where the bloody hell it was (all right, I didn't even know I'd lost it) when Elaine kindly rang me to let me know the error of my ways and that she would make all well again by slipping it in the post to me.

Of course if in the time after I write this letter I find that the Connections office went whooooooieeee on my Mastercard, I'll find it a complete bummer, but as I doubt that it's the case, I would like to thank Elaine, for her courtesy.

• **Brian King, Kingswood, NSW**

Quiz Mail

Question: What do the following amplifiers have in common? See: "Connections", Feb '96, "Trader"

- ARX 1200, P. 72, col 2, item 2,
- Electrovoice 7600 P. 72, col 4, item 2,
- Harrison X1600 P73, col 2, item 2,
- Jands 510 P 73, col 3, item 2,
- Jands 920 P 73, col 3, item 4,
- Perreaux 9000B P74, col 4, item 3.

Answer : They are all; "The best amps ever made." Just ask the seller on (02) 799-7219. Is this a case of divided loyalties, or a foot in many camps?

• **Russell E. Williams, Wantirna South, Vic.**

Monitor Mail

I have read your "Studio Monitor Buyers Guide" published in the February 96 issue of Connections. I do agree in general with what you say in the editorial but I think the actual listing of the monitors under the three different categories is a disaster and will only serve as a misguidance for the reader rather than a helping guide. A few examples :

EAW MS 63 and MS 103 as nearfield monitors. These models have the same configuration as some of the monitors you list as Main Monitors.

Meyer 833 and 834 listed as nearfield and mid field monitor? Should belong to mid field. Out of the Main Monitors listed only 4 of the listed qualifies: ATC SCM200A and 300A, Genelec 1039A and JBL DMS-1. The others are definitely mid field. These are only the most obvious examples.

For your information Genelec manufactures a range of 12 different Active Monitoring Systems Products out of which I can only find three in the listing.

If you are interested in more detailed information about our products I will gladly send it to you.

If your Entech shootouts will be performed in a similar fashion to this misguidance, I am a bit worried. Please bear in mind that loudspeaker comparisons if of any value are very hard to perform and have been subject for many academic papers.

Last but not least thanks for sending me your magazine which gives me great pleasure reading.

• **Lars-Olof Janflod, International Sales Manager. Genelec, Finland.**

** We rely on Distributors correctly categorising their products, the Buyers Guide forms are sent to all known distributors each month, who then may list up to four models in each permissible category. The ENTECH shootout is wholly run and administered by ourselves and as such we will obviously police which models are compared to which. The groundrules will be published. If the shootout was defective then no-one would participate. -Editor.*

Dodds Yuk Mail

In answer to Mike Dodds' criticism of my December '95 article on adding a foldback split to an existing multicore, let me start by saying that everything Mr. Dodds said is 100% accurate. And 110% irrelevant. As I seem to be constantly repeating, my page, the P.A. page (not the A.V. page) is written for beginners looking for the simplest and most practical methods for getting things done. The first half of that article makes this crystal.

I have no delusions of Clair Brothers' technical staff reading my articles and exclaiming "So THAT'S how it's done!" The readers the page is aimed at do not need to connect their systems to O.B. vans every second gig. If they ever do, I concur that transformer isolating is the way to do it.

These systems are available for one-off hires from most of the larger hire companies. The implication is that the passive multicore systems I have utilised and made up for many other system owners for many years with total success, cannot work. They do.

Microphone loading? Even if it was as much as 3 db, easily compensated for on the modern console. Phantom power? Always, in my experience, supplied by the FOH console. 12 inch bits of ribbon cable causing crosstalk within a shielded metal stagebox? Expect 50-60 db below 0 per channel.

Compare that with live acoustic spill. Burndy connectors unsuitable? They're good enough for Jands Production Services. Speaking of JPS, yes, always passive splits between the FOH and monitor consoles. It's a pleasure being "wrong" in such company.

• **Michael Orland, Sydney.**

Mastering Mail

Paul Bryant wrote an article entitled "Compression is not a dirty word" (In late 1994). While I agree with all the points made re clipping, dynamic range etc. I have trouble with the advice to compress the master because the majority of customers use Mini or Midi systems.

This, to me, seems unfair on

the customers who care about music reproduction and spend a little more time and money to set up a good system, only to have it compromised by a sub-standard master.

I can see that the type of music has some bearing; if a group such as "Girlfriend" has compressed masters it would not matter as much as say, "The Black Sorrows".

Finally two other points that may be of interest. We have found that a number of discs are sub-standard - mainly the European pressings of "The Commitments" (OST) and Ace of Base's "Happy Nation" (which is also very compressed to my ears). Philips have confirmed this, but it is interesting to note that the Australian pressing of "The Commitments" give a better "eye pattern."

Also I find the high output level of CD players causes a lot of speaker damage when the amplifier is driven into clipping.

I trust the above points are of interest. I certainly found your magazine very interesting.

• **Stephen Taylor, Technical Consultant - Audio Products, Fisher & Paykel, N.Z.**

Big Man Mail

In regard to the article on pages 98 and 100 in February 1996 "Connections". I found the article extremely well written except for the short mention of myself on the bottom left hand side of page 100.

I take great offence to the "little boy" phrase. In the event of myself becoming little, I will inform you and will take no offence. BUT until such time I am BIG and am definitely a MAN.

If locals cannot handle the pace they should get out of the running.

This guy still has the mentality of a 1980's LD.

• **(Big Man) Jared Hawke, Premier Lighting.**

Letters Please! Send to: PO Box 439, Epping NSW 2121, Fax (02) 876-5715, or email to: julius@conpub.com.au

Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH

Roland's New V-Studio Set To Sweep Market

New \$3995 System to debut at ENTECH, 64 'virtual' tracks on 1Gb Jaz disk

Called the "V-STUDIO," Roland has introduced the new VS-880 Digital Studio Workstation. It costs \$3995 and promises to whip through the market in a big way.

The reason why is because it can incorporate an internal Jaz drive for 1Gb of transportable, storeable digital recording.

Essentially an eight-track (with eight virtual tracks per track) digital hard disk recorder/editor is combined with a 14-channel fully digital mixer for flexibility in both recording and mixing.

Two effects processors can be added using the onboard expansion slot. Finishing off this complete package, easy-access data storage, in the form of a removable one gigabyte Iomega Jaz drive or a fixed hard drive, can be built right in.

Recording

The VS-880 offers eight primary tracks with eight levels of virtual tracks. This affords a total of 64 tracks per song. Record on any of the eight tracks by simply plugging an instrument or microphone into the rear panel. At mix-down, any of the eight virtual tracks (per track) can be selected as the active, final track.

With the addition of the VS8F-1 Effect Expansion Board, signal processing is built in. Because the VS-880 provides eight virtual tracks per track, you can actually record eight different "takes" for each track.

If you're cutting the guitar solo on track five, you can record seven more takes and then, at mix-down, choose your favourite for final mastering. You can even compile the best parts from various takes using the convenient cut and paste edit functions. Simply copy them to an open track to create the best possible solo or musical track. In total you can accumulate up to 64 instantly accessible tracks, from which you can choose any eight

for final mix-down.

Mixing

Digital mixing is a key feature. With the VS-880 it is possible to configure a 14-channel, two-buss system for mix-down. EQ is also included and everything is performed in the digital domain. Also, since all mixing functions are performed digitally, all fader, pan and mixer parameters are accessible via MIDI control change messages.

As such, fully dynamic automation is possible using virtually any sequencer. The VS-880 also has Scene memory, location points and markers of its own.

Editing

Digital editing features like copy, move, exchange, insert, cut and erase are easily accomplished. This type of editing is not practical with tape based digital recorders, because they operate in a linear format.

Advanced editing functions like Scrub Preview, Time Compression and Time Stretch are also possible with the VS-880. Maintaining its user-friendliness, editing on the VS-880 can be performed by Beat/Measure and location points as well as by time, and the display reads accordingly. All editing is completely non-destructive. If you don't like what you've done with a particular edit, you can always return to the previous performance.

Storage

There are four selectable sampling rates offering variable recording quality. In standard recording mode and using the one gigabyte removable media, the VS-880 offers 500 total track minutes or 60 minutes of recording time per track. Recording, storage and backup is accomplished via the built-in Iomega Jaz drive which offers one gigabyte of storage per removable disk media.

This affords the familiarity and convenient media access associated with tape-based recorders, but



with all the benefits of digital hard disk recording. You can also use external storage for backup possibilities via the onboard SCSI port or audio DAT. Using SCSI, possible external storage media include hard drives, SyQuest and MO drives.

The VS-880 is equipped with MIDI in and out ports and it can be sync'd and controlled via MIDI Time Code (MTC) or MIDI Machine Control (MMC) using any compatible external sequencer. The VS-880 can serve as either the master or the slave to any MIDI device.

In addition to the SCSI port and MIDI in/out, there are eight inputs, a pair of Aux sends and a stereo pair of master outs. Also included are digital coaxial in/out, footswitch jack and headphone jack.

VS8F-1 Effect Expansion Board

The VS-880 has an expansion slot designed to accommodate the VS8F-1 Effect Expansion Board.

By adding the VS8F-1 Effect Expansion Board the VS-880 gains integrated access to two multi-effects processors.

Specialised effects like distortion/overdrive with speaker and amplifier emulations for guitar are also available. Some of the effects also incorporate Roland's proprietary three-dimensional sound processing technology, RSS.

Tracks can be recorded with effects or they can be applied during mix-down.

Prices for Australia:

- \$3995.00 basic unit, no drive.
- Effect expansion board \$695.00
- Iomega Jaz drive around \$300.00 (buy it anywhere). 1Gb Jaz disks less than \$200.00 each.
- More from Roland Australia, call 9982-8266.

WRITE IN 301 ON READER SERVICE CARD FOR INFO

DigiDesign Pro Tools Family Expands

IN BRIEF: Digidesign announce a new range of Pro Tools options. These includes **Pro Tools Powermix**, which allows Pro Tools software to run as a stand alone application with no Digidesign software. Used for 2-track recording and up to 16-tracks playback.

Also, **Pro Tools Project**, an 8

track system that offers project studio owners the power of Pro Tools at a scaled down price.

Also released is **Pro Control**, a modular control surface that adds a tactile mixing surface to Pro Tools systems. More later.

• **DigiDesign Australia**, call (03) 9817-6886.

Expressive Power

Multi-Effect
Processor

The Expressive DPS-V77 at a glance

A high speed 52 bit DSP, newly developed specially for the DPS-V77 gives powerful processing with greater accuracy.

The A/D converter uses 54 times over-sampling with 24 bit resolution.

The D/A converter uses an advanced pulse converter with 20 bit resolution.

The DPS-V77 uses an assignable structure for digital mixing of 2 main processing blocks each with 64 carefully developed algorithms.

Each block is equipped with an effect processor and an equaliser which can be freely assigned pre/post.

New morphing function enables programmable crossfades between programs.

Real Time control function of six parameters by MIDI and a Footpedal.

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GA3586 Write in Reader Service Number: 167

Canon Turns Up The Volume

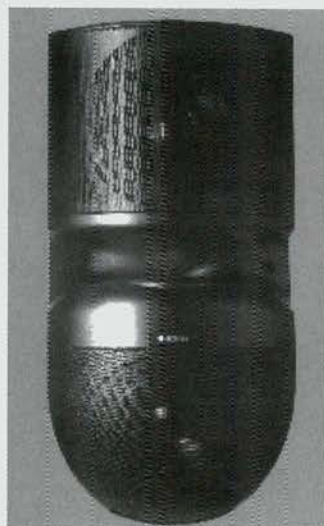
Canon have expanded their compact speaker range. The Canon V Series employs Wide Dispersion Sound which disperses high frequencies over a wide listening area, over 90° horizontally and up to 70° on the vertical plane.

The V Series can be linked together in array formations or mounted individually. For instance, two V Series speakers linked together on a wall provide 180 degrees dispersion.

The line up comprises-

- V-100, 75 watt compact WDL. A 2-way design featuring magnetic shielding, 130mm mid/bass driver, weight, 1.5 kg. Outdoor model available.

- The new V-200, 200 watt high output WDL system. The V-200 features a 3-way



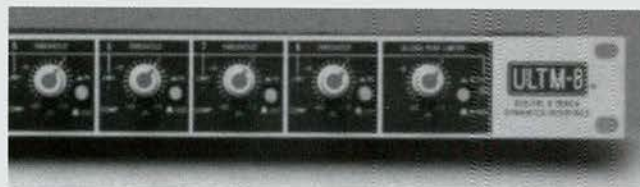
speaker, 2-way design. Sensitivity is at 90dB and a two stage overload protector system. 7kg each.

- V-SB100 subwoofer, designed to be coupled with any of the V-Series speakers.

Canon is distributed by Horwood, call (02) 585-1911.

Write in 304 on Reader Service Card

Australian Presence At Frankfurt Show



ARX Systems will be displaying a range of new machinery at the Frankfurt Music Messe, shoring up their presence in Europe. Music Messe is the largest show going.

Three new products will be released at the show;

- **ULTM-8** Digital 8 Track Dynamics Interface. Designed for use with 8 track digital recorders, the ULTM-8 (pictured) features 8 individual channels of compression plus a global peak limiter cover-

ing all channels

- **PowerPro II.** A loudspeaker processor for use with the ARX PowerMax range of SPL speakers. Now featuring XLR balanced input and output connectors and full LED indicators.

- **PhantomPlus.** A 4 channel 48 VDC Phantom Power Supply Unit, either rack mountable or used as a stand alone unit.

* Contact ARX Systems, on 03 9555 7859.



Klark Teknik DN800 X-Over



PA Systems need active crossovers, now Klark offer the DN800 with eight outputs. It can be configured four different ways:

Stereo 2 way, Stereo 3 way,

Stereo 4 way, or Quad 2 way.

In this manner it can be used alone for most stereo PA systems, or

used as a four way stage monitor network. Frequency selection is via plug in cards, which can also allow 'CD' horn equalisation.

12, 18 or 24dB slopes are available, and it has output limiters. Priced at \$3423, from Mark IV Audio (Aust). Call (02) 648-3455.

Write in 306 on Reader Service Card

Sony DPS-V77: 2 processing blocks



Sony's new DPS-V77 digital audio multi-effects processor incorporates Sony's experience with digital audio and combines it with their best loved effects from the DPS-F7, DPS-M7, DPS-R7 and DPS-D7 digital processors into one compact, high performance unit. The DPS-V77 also includes many new presets and an expanded range of flexible patching options.

A high speed 52 bit DSP, newly developed specially for the DPS-V77 gives more powerful processing with greater accuracy. The A/D converter uses 64 times oversampling with 24 bit resolution. The D/A converter uses an advanced pulse converter with 20 bit resolution. The digital and analogue circuits have separate power supplies to eliminate interference between them.

The DPS-V77 uses an assignable structure for digital mixing of 2 main processing blocks each with 64 carefully developed algorithms. Each block is equipped with an effect processor and an equaliser which can be freely assigned pre/post. The 2 main blocks can be linked together in a variety of series or parallel arrangements.

The Morphing function allows

programmable crossfades between programs. Transition time is programmable from 0.2 to 10 seconds. This effect sounds as if a crossfade is made between two effectors.

Real Time control function of six parameters by MIDI and a footpedal. Greater capabilities are provided via the real time control MIDI function which expands the number of parameters that can be assigned for a single program from four to six, based on external MIDI information and MIDI control change.

Thanks to two assignable control terminal systems, the user can connect a foot pedal, permitting modulation effects, wow, or other manual control.

198 Presets and 198 User memories are arranged in two banks each of 99 programs.

• Price: \$2920 inc. tax.

*Info from James Waldron, Product Manager for Professional Audio, SONY Australia. Phone: 02 878 9752

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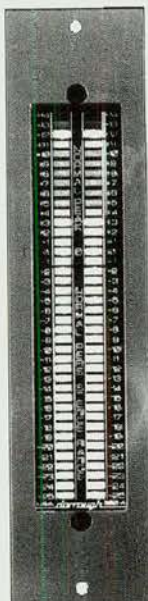
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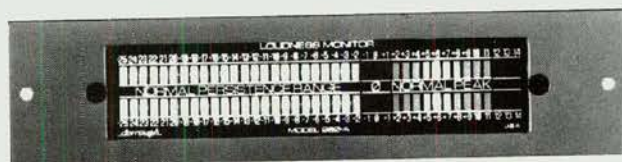
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DBX 1066 Comp/Lim/Gate

The dbx 1066 Stereo/Compressor/Limiter/Gate is designed to provide flexibility in broadcast, live sound or reinforcement applications. The 1066 allows the user to gate-out mic leakage and noise whilst controlling signal gain in either a mono or stereo mode.

The V2 voltage controlled amplifiers at the core of the unit supplies a wide dynamic range whilst maintaining low distortion and low noise.

For overall speaker protection, dbx's 'PeakStopPlus' prevents unwanted transients while minimising sine wave distortion. DBX say 'other' brands suffer from this.

The 1066's front panel offers Auto features, or Independent Attack

and Release functions.

• RRP \$1295, from Jands, (02) £15 3622.

WRITE IN 303 FOR INFO

Opcode MIDI I/Face

Opcode have released a MIDI interface for PC compatible systems that allows modular architecture for expansion.

The **MIDI Translator PC** allows multiple units to be chained together. A single MIDI translator PC gives the user a 2 In x 2 OUT, 32 channel MIDI interface that connects to a parallel port of a PC.



New Sony DAT

Sony has announced the release of what they call the Prime model in their DAT machine range. The PCM-2800 follows the release of the DTC-A8 and PCM-2600 Professional DAT.

They all have in common the same chassis, transport machinery and audio designs. As well, it includes Super Bit Mapping, 4 Di-

rect Drive Motor Transport, 3 sample rates and infra red remote.

The PCM-2800 has 4 heads allowing off tape monitoring, balanced analogue inputs and outputs with individual level trims and a parallel remote control interface.

• RRP \$4,099 plus tax.
Phone 02 878 9752.

WRITE IN 302 ON READER SERVICE CARD FOR INFO



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represents the ultimate in performance for its power rating and the best long-term value for your money. Nothing else comes close to equaling the sonic accuracy or proven reliability of Macro-Tech. But don't just take our word for it. Compare these amps head-to-head and spec-for-spec with any other amps out there and prove it for yourself.

For more Macro-Tech information call David Gable on;

1-800-810-768

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Q-Mix, 6 Headsets



The new Q-Mix HM-6 Headphone Matrix Amp lets six musicians create their own individual headphone mixes from up to five sources plus effects.

Every musician has their own idea of what a great headphone mix should sound like. An engineer in the control room has to pay attention to what's getting recorded, not to create and nurse headphone mixes.

Enter the Q-Mix HM-6 Headphone Matrix Amp.

The five sources are composed of one stereo mix plus 4 mono inputs driving six beefy, high-output headphone amps. There's also a separate 5-channel mixer inside the Q-Mix HM-6.

Connect its mono output to an effects toy and return the signal to Q-Mix's stereo return. Each of Q-Mix's channels has its own stereo effects return, all six performers can have as much or as little effects as they want.

The Q-Mix is also just as happy doing live monitor mixes too, and many live sound engineers report

more and more musos are using headphones these days. They figure 'in ear' monitors are OK, so why not just use headphones?

Other features include:

Balanced inputs.

Each headphone amp delivers 160 milliwatts per channel into a 60-ohm load.

Distortion is less than 0.07%, 20Hz-20kHz, 100m output.

And, the Q Max is said to work well with any set of headphones.

Priced at \$699, from Australian Audio Supplies on (043) 291 711.

WRITE IN 307 ON READER SERVICE CARD FOR INFO

PCM-80 Card

Lexicon have released the new Dual FX Card for the PCM-80 Digital Processor. It offers 25 new Algorithms, 250 new presets and more control over effects routing. Priced at \$395, from Studio Connections. Call (03) 9646-0544.



QSC Powerlite 4.0

QSC have introduced the largest power amplifier in their PowerLight series, and the most powerful amplifier in the QSC range.

The PowerLight 4.0 has Powerwave switching technology, and delivers 1400 watts per channel into 4 ohms or 2000 watts per channel into 2 ohms. These power ratings are yet to be confirmed, say QSC, but are beefy anyway.

The 3 rack space chassis weighs just 14kg, which is less than half the weight of anything that delivers anywhere near half the output power. Put another way, the power to weight ratio is four times better than any other amp your editor can think of on a Sunday at magazine deadline!

QSC say mains draw is less than 14 amps, but it is not clear if this is at 240v. If it is at 110v, (USA mains) then the draw here would

be more, we suspect. But ask them yourself at ENTECH!

Other features include detented gain controls, Neutrik 'combo' connectors for XLR or 6.5mm inputs, LED indicators that indicate signal level and amp status, and a stereo/parallel/bridge switch. A rear panel contact allows remote AC power control by placing the amps into a standby mode. Now THAT is a good idea!

There is no inrush current when using remote turnon, whereas try turning on a rack of big amps all at once some day. You usually throw the circuit breaker in the venue!

The 4.0 has a suggested selling price of \$4995 inc tax, which gives it a power-to-dollar ratio of 1:4 ... perhaps?

•Call AR Audio Engineering at their new HQ, on (02) 810-5300.

WRITE IN 308 ON READER SERVICE CARD FOR INFO

Yamaha PM3500 - Award Winning Console

The PM3500 and PM3500M consoles offer the strength and reliability of all Yamaha consoles, plus a long list of powerful new features and enhancements.

- Winner of the Mix Magazine 1995 TEC Award for Sound Reinforcement Console Technology (Outstanding Technical Achievement)
- FOH and monitor consoles available (stereo and mono input modules)
- Digitally controlled scenes capture input, aux masters and group mutes
- MIDI control functions, both in and out
- Programmable cue/solo mode - stops that annoying search for the active cue!
- Yamaha's flexible matrix output is further expanded



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CONSOLES

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...the right gear to bring your studio into the Digital domain.

WHAT A WAY TO START...

Designed for today's digital age, the **CAD Equitek E100** and **E200** studio microphones feature

incredible transparency resulting from their unique servo design.

Because CAD have been crafting microphones longer than just about anyone, through **economies of manufacturing** they are able to offer the Equitek Series at **astoundingly low prices.**

Check out the CAD Equitek Series of studio microphones at your nearest dealer, or call us on (043) 291 711 for more detailed information.



IT'S LIKE A TOP STUDIO DESIGNER HAS JUST FITTED OUT YOUR STUDIO...

The **HAYES 180** studio monitors represent a major breakthrough in speaker design. They bring an unprecedented professional sound stage into your studio.

Unique in appearance, we call this new design the **FRACTAL SPATIAL SYSTEM (FSS)**...achieving true spatial imaging without



any expensive electronic circuitry. Delivering a **smooth, transparent, non-fatiguing** response, the 180's are excellent for the studio professional who subjects his poor ears to hours of monitoring. Audition the Hayes 180's today & hear

all the sound you've never heard!



The heart of today's digital studio...the **MACKIE 8-BUS CONSOLES.**

Ultra-low noise...high headroom...sweet, musical mic preamps...parametric EQ...rugged construction. The Mackie 8-Bus has redefined studio recording forever. When combined with digital multitrack recorders or hard disk recording systems, a Mackie 8-Bus console can create major-label compact discs, motion picture soundtracks and network quality commercials.

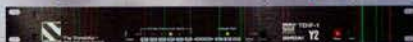
Quite simply, Mackie have eliminated the last barrier between you and your **creativity** by creating consoles that are capable of sound quality equal to, or better than that of \$100,000 consoles.

There are a maze of Hard Disk Recording systems on the market today. But how many offer **true connectivity** to your existing setup and interfaces? And how many are just so complex, they require a computer degree to operate?

SPECTRAL build 8 to 16 channel Digital Audio Workstations that run on the Windows platform. These systems are incredibly **powerful, yet affordable.** They can be used as a stand alone digital recording, mixing and editing system - or they can be easily integrated into your current system to give

Grab these rhythm tracks from your ADAT, **re-mix and mix** them down with the **automated mixer** on-board Spectral. Then lay down overdubs directly into the computer.

The overdubs can be edited into that perfect 'take' using Spectral's unique **track layering** system. Worried about sync? No problem. Spectral supports all timecode formats including **SMPTe, MIDI** and **VTC.**



you power over your audio you may have only dreamed of. Imagine transferring 8 tracks of audio from your ADAT or DA-88, editing, dump it back, **all in the DIGITAL DOMAIN.**

Whether you are looking for a stand-alone Digital Audio Workstation, or a system to integrate with your current setup, Spectral's **AUDIOPRISMA** and **AUDIOENGINE** Digital Audio Workstations offer more power, features and compatibility than any other for your dollar.

MACKIE.

Mackie Designs provide the perfect mixing interface for today's digital studios with their ultra high-quality, low-cost mixing consoles. The range includes the award winning **8-BUS SERIES**, available in 16, 24 & 32 channels; the new **SR24-4** and **SR32-4** 4-Bus live sound consoles; the mixer that started it all, the **CR-1604**; the **LM-3204** line mixer; and the new, improved **MS1202-VLZ.**

SPECTRAL

Spectral have developed Digital Audio Workstations that are totally fully featured, and yet designed to be used by people with limited computer experience. The simplicity and ease-of-operation of their PC-based **AUDIO PRISMA** system will ultimately bring the power of hard disk recording and editing into the hands of many studio engineers and producers. Spectral also manufacture hardware interface accessories such as the **AX-S**, a 2-channel A/D and D/A converter; the **SYNCKLOCK**, the perfect studio synchronisation solution; and the **TRANSLATOR**, a digital format converter which enables direct 8-channel digital audio transfers between ADAT, DA-88, Yamaha and Spectral Workstations.

HAYES

Hayes Loudspeakers make only one promise...that you will hear more from their speakers! The **HAYES 180** studio monitor has pioneered the **FRACTAL SPATIAL SYSTEM (FSS)** which brings a professional sound stage into your studio. There is a growing list of local and international engineers and producers recognising the benefits of the Hayes 180's...all the sound you've never heard!

CAD

Connat Audio Devices (CAD) are one of the oldest manufacturers of microphones in the USA. They are committed to crafting high-quality, transparent sounding, highly durable microphones. The **EQUITEK SERIES** includes the **E100** and **E200** studio condensers. Their unique combination of transparent reproduction of any sound source and high SPL capability make these some of the most versatile high quality microphones ever made. They are suited to a wide variety of applications including vocals, guitar amps, acoustic instruments, orchestras, and are perfect for sampling. CAD also manufacture the **100 CONTRACTOR SERIES** and for live applications, the **PROFESSIONAL SERIES.**

If you need more information on **MACKIE, SPECTRAL, HAYES** and **CAD** products, and the location of your nearest authorised dealer, contact...

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VIDEO INTERFACES

Do you REALLY understand what happens between your PC and your Data Projector?

The people who make video data projectors don't always understand how real world users actually use the things. It's accepted that you must align and setup a video projector accurately, which is a practiced skill. But the most common problem comes with the Interface.

Increasingly the video data projector, be it a 3 gun unit or a little Liquid Crystal Display (LCD) based unit, is used to project computer graphics. As our story in these pages last month will attest, the use of the PC or Mac in multimedia, multi-screen and just plain vanilla presentations is vast. The slide projector has a role too, but computer generated material is common. Aside from a VCR video, the most common thing feeding a video projector is a computer.

Your computer has a monitor which could be cooking model VGA 13" unit, through to my 22" Trinitron. Your computer has to output some kind of control signal the monitor can interpret. This is called Analogue Video, and it isn't intended to feed a video projector, which needs signal divided into Red, Green and Blue channels. This signal is known (funny enough) as RGB.

The video card can range in capability from a slow 16 colours / 320 pixel's x 200 lines (YUK!) to a 24 bit, super-accelerated thingummy with 16.7 million colours at up to 1,280 pixel's x 960 lines - definitely hi-res. Note though, that most data projectors can only handle 640 pixel's x 480 lines (VGA and MacII) which is by far the most common resolution anyway, or maybe up to 800 pixel's x 600 lines (Super VGA and up-market Macs) if you've spent a lot. Higher resolutions don't look good on a big screen because the elements (LCD's or projection tubes) producing the pix are quite small.

If your data projector connected directly to your video card via a suitable video cable cable, there are still two likely problems. One would be the length of that cable. Most data cards are designed to run signal no more than 2 metres, which is something like the usual distance between your desktop computer screen (monitor) and the PC itself. The other

(go to page 32)



Melbourne Gains Largest Exhibition Complex In The Land

Marty Williams reports

In the recent past there has been a proliferation throughout the country of large buildings designed to house exhibitions of varying sizes. Has the demand for exhibition space increased dramatically in each capital city?

It seems the addition of a new Centre boosts the market, Sydney retained its Showground when Darling Harbour opened. Yet both venues are now booked solid, such that an extra 50% in space would be utilised if built.

Melbourne has been very lucky to have had the Royal Exhibition Building, however the age of this building has made it very difficult to cater for clients' contemporary audio/visual needs. The old building lacks flexibility in not being able to divide up the space available, it does not have easy access from above or below to run cabling inconspicuously or to mount a satellite dish, apart from a variety of other things. The new building has provision for all these requirements, plus a lot more.

The A/V Supervisor is Warren Sorby, who has come into this position after five years at Auckland University where he was Senior A/V Technician in charge of fifty theatres. Moving

to Melbourne at the end of September '95 due to a posting his wife received, he successfully replied to an advertisement for the position.

In his role at the Melbourne Exhibition Centre he is in charge of the seven casual staff who make up the A/V crew. He reports to David Marmo, who is the head of Technical Services. His job is to liaise between the A/V department, the Director of Operations, Stephanie Kaesh, the Operations Manager, Jon Hunter and the Venue Services Manager, Catherine McMahon.

This whole process is started by the client being given a specification sheet to nominate their requirements when they have booked the space, which ranges from 3,000 sq m to the full 30,000 sq m.

To provide technical assistance Intercity Hire, the preferred supplier of hire equipment, have appointed Kim Lowes as the permanent on site company representative. There is no rule to say that only Intercity or the small amount of in-house equipment has to be used, but the Intercity offices and those of CLS are within easy walking distance of the building's loading dock.

(go to page 32)

EnTech 1996

THE Entertainment Technology Trade Show & Conference

THE EVENT

For you to **commit** your time to a trade event these days, you need to be sure it will stimulate, inform and inspire. With so many demands on your time, you need an iron clad **guarantee** of value.

ENTECH 1996 more than answers that challenge. It's a **large** trade show with more:

- 20 essential **seminars**,
- a **conference**,
- the **ENTECH Awards** dinner,
- social **events**,
- and exceptional **technical tours**.

To **maximise** the experience, the Interactive Theatre offers hands-on product comparisons, interactive auditions, a giant live internet AV experience, and plenty of **space**. It is also the lobby area for our Seminar Theatres and Demo area.

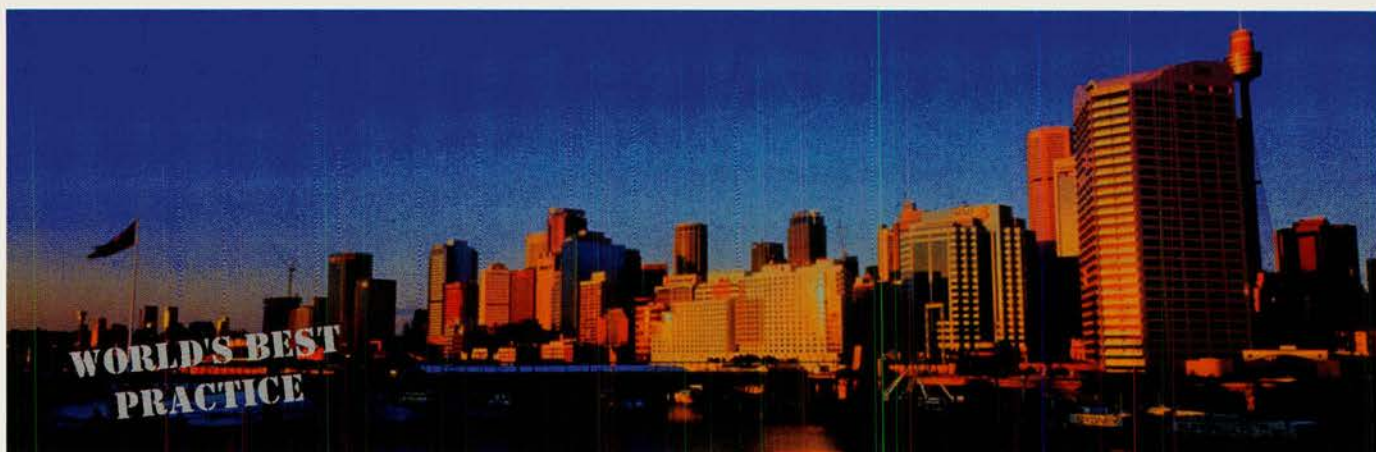
ENTECH is a state-of-the-art **business class** trade show, run to 'world's best practice'. The promoters draw upon the best aspects of major trade shows world wide, and naturally incorporate uniquely Australian elements. It's friendly!

There is **more** room to meet, with visitors lounge and 'green room' bar facilities. Seminars are held in large, self contained fully isolated theatre spaces on the trade show floor. You can register in advance, or just walk up!

Best of all, it **costs nothing** for trade to enter ENTECH and to experience the best on offer from more than 100 exhibitors, across 7,500 square metres of exhibition space.

Only ENTECH can draw together the diverse elements that make up Entertainment Technology and A.V. - and put them under one roof.

ENTECH is sensory integration!



EnTech 1996

**110+ EXHIBITORS plus more EVENTS,
and free entry to the TRADE SHOW!**

CONFERENCE:

Safety In the Performance space

This special one day conference, held at Sydney Opera House, precedes ENTECH, on **Monday April 22, 1996.**

The conference examines issues such as:

- National occupational safety and health legislation as it affects the performance industry;
- Current and proposed restrictions and limitations, work practices and work place safety;
- Likely trends, noise limits, insurance issues and more.

The conference is invaluable for administrators, department heads and business operators. As an ENTECH event it will draw together practitioners and industry professionals. Cost is \$170 for the full day, which includes lunch.

All industry groups have been invited to participate.

Bookings or more info:

Call 1-800-635-514 or fax (02) 876-5715.

SEMINAR PROGRAM. JUST \$10 EACH!

Lighting stream

Tues 12.00 midday MEET THE LD'S L1

Meet a selection of successful lighting designers, gauge techniques and ask them questions. Panel.

Tues 1.30pm LIGHTING CONTROL : WHAT'S MISSING ON MY NEW CONSOLE! L2

An open discussion on control with several leading lighting designers/board operators who ponder what the manufacturers actual think.....

Tues 3.00pm MECHS & MOTORS L3

Future directions in Staging and automation.

Tues 4.30 LIGHTING CAD L4

Leading practitioners discuss the way they use CAD and the developments they would like to see.

Wed 12.00 midday UV F/X L5

Today's high powered blacklights coupled with UV sensitive materials allow designers to achieve a number of cutting edge effects, glowing make-up effects, atmospheric effects and more.

Wed 1.30 pm

LUMINAIRE DESIGN & MANUFACTURE L6

Everyone wants luminaires that are cheap, efficient, accurate and don't burn gels! A designer discusses technology and compromises, and some predictions!

Wed 3.00pm SMOKE L7

Manufacturers and Work Cover people discuss the pros and cons of different machines available on the current market. Is smoke safe and wholesome?

Wed 4.30pm CONVERGENCE OF LIGHTING L8

Can lighting be categorised into either TV, Theatre or Rock'n'roll or are the boundaries diminishing? Lighting designers from these areas plan how they would light a given set. Features hands on LX with an actual set.

Open Stream

Tues 10.30am RIGGING (audio, lighting) G1

Pros and cons, risks, things you need to KNOW!

Wed 10.30am BUSINESS G2

Presented by *Caroline Grafton* of Connections, a session which deals with administration, money, organisation, dealing with your accountant, etc.

AV stream

Tues 1.45pm

Video: LCD, CRT and DLP Technologies V1

Learn the benefits of each of these technologies, how best to qualify which one will fulfil your needs. Also, where are each of these technologies headed over the next few years?

Tues 3.15pm. Video: Interfacing. V2

Learn how computer interfacing works, the issues involved, and solutions required to ensure image quality over the full range of scan frequencies, resolutions, amplification and switching.

Tues 4.45pm Slides vs Data V3

In which ways are direct-to-screen presentations changing and challenging the way presentations are made? Has the slide projector been relegated to the 'dinosaur' heap? What do resolution and colour have to say about this?

AUDIO stream

Tues 10.45am

Digital Audio: A pioneer's perspective A1

Bruce Jackson talks about a subject dear to his heart. Discover where it started and ponder where it is going! What is YOUR digital audio future?

Tues 12.15pm

Mic techniques for acoustic instruments. A2

How to best mike a piccolo? Studio and Live, we delve into the best techniques, mic types and likely results when confronted with that difficult scenario.

Wed 10.45am

Bruce Jackson, the Super Star PA Session A3
Hear how it was done by the Emmy award winning sound engineer for Elvis, Babara Striesand and Bruce Springsteen. Sound in the round, stereo imaging and lots of practical anecdotes.

Wed 12.15pm

Mastering, CDR, formats for archive. A4

Is CDR a mastering format? Come to think of it, is it the right format for long term archive? And what are your options for mastering anyway?

Wed 1.45pm Choosing studio monitors. What makes a good speaker? A5

Nowadays it's almost all nearfield and midfield, but we throw some curve balls when we gather the experts to define what they think you need.

Wed 3.15pm Digital recording levels. A6

What standard should we pursue? What is hot, cold and medium? Where do YOU mix?

Wed 4.45pm Gain before feedback. A7

The EQ, compression and microphone technique supersession. Got to amplify dialogue when the subjects care little for mike technique? Need to find the right compression setting? Settle down for an hour while we get your level!

SEMINAR DURATION 50 MINUTES EACH

ALL BOOKINGS OR MORE INFO: CALL 1-800-635-514



STUDIO MONITOR SHOOTOUT

IN OUR INTERACTIVE SEMINAR THEATRE FOYER

The Nearfield Monitor shootout allows **side-by-side** comparison of different units. 'Bookshelf' Nearfield monitors are a hot market sector, and are now widely used almost everywhere. An appraisal sheet will assist you in shortlisting or final selection. Shootout runs **continuously** during ENTECH. YOU get to compare different units from the Hot Spot!

SOCIAL EVENTS

RECEPTION: Drinks after opening day, 6.30pm at The PumpHouse. Free entry.

CLUB CRAWL: Join Amanda on a whirlwind technical tour of some contemporary clubs. \$25, April 23rd.

ENTECH AWARDS: Metro Theatre, Sydney April 24. Dinner \$65, view only \$18.

AND MUCH MORE!

LIGHTING SHOOTOUT

IN OUR INTERACTIVE SEMINAR THEATRE FOYER

ENTECH lets you evaluate competitive fixtures side-by-side. For 1996 we offer two categories; 650w profile spots - and mid-range Moving Lights. The units are all in working mode throughout the show. You appraise, we assist you with some logical POINTERS. It's a LARGE EVENT! Can you afford to miss it?

The Shootout runs **continuously** during ENTECH.

i ENTECH INFO: Call 1-800-635-514.
Fax (02) 876-5715.

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A large event!



THE Trade Show,
Sydney Exhibition Centre,
Darling Harbour.
Halls 4 and 5.

Tuesday April 23, 10am - 6pm.
Wednesday April 24, 10am - 6pm.
Thursday April 25, 10am - 6pm.

Interfaces

problem would be the inability to use your monitor at the same time, because it hasn't got anywhere to plug in!

So you need an Interface. This is a box with a set of cables and adaptors made by Extron Electronics, or Inline (both from the USA) or our own home grown Quest Electronics, a Sydney based firm. Plugged into your video output it sits close to your computer, boosts the signal and isolates them from the video card. Then you can run a nice long cable off to your video projector. How long? In theory all the way around the world and back again - given colour correction and many booster amplifiers. Generally the maximum distance is worked at 65m before you need to boost it with another box along the way.

Many new breed LCD projectors are setup to take Analogue Video direct. At first glance this may appear to be the way forward, but consider how the average person works. If the maximum distance from the projector to the computer is 2 metres, where does this leave you?

Quest have come up with a cornucopia of interfacing solutions based around their VG-PRO unit.

Joe Raine is known as something of a video guru, and he has some solutions and cables. They say they can fit you up to run three data projectors remote from your PC - along with your monitor too.

There are a lot of issues attached to Interfaces, one of them is the way a Mac looks for its monitor when booted up. Depending on just what the Mac finds, it may set its resolution to anything it is capable of, or even nothing at all, so steps are usually taken in the in-

of the combined equipment.

A Seminar at ENTECH 1996 trade show in April will deal with Interfaces. It will deal with understanding what is actually generated from the computer, resolution, bandwidth, and limitations of cables and connectors. Putting it all together is OK if it works, but an understanding of the process is important. After all, how do you describe a fault over the phone to someone in technical support if you don't understand?

An EXTRON interface



terface or cabling to force 640 x 480 (Mac II) or 800 x 600 mode to ensure real graphic projection.

Higher resolutions can usually only be projected by converting the video card's output to a lower resolution. Such 'scan converters' are very expensive and produce output that may appear unfocussed due to the fact that they are reducing the resolution of the input graphics. Thus the projected image can look pretty crummy unless you are aware of the capabilities and requirements

* Julius Grafton was assisted by Kevin Hammond and Joe Raine in writing this article. Thanks.

- **The Seminar:** V2, Video Interfacing. Tuesday April 23, 3.15pm. Cost: \$10. Duration: 50 minutes. Venue: ENTECH 1996, Halls 4 & 5, Sydney Exhibition Centre. Bookings: Call 1-800-635-514, or at ENTECH.
- **QUEST:** Call (02) 477-3596.

Melbourne Ex. Cent.

Normanby road Sth Melbourne provides quite a number of companies from the A/V industry, these are only two. Others include Com Copy, John Barry Group/Samuelson's and Total Peripherals.

Of great importance is that only three companies are allowed to install rigging in the Centre. They are CLS, Showtech and Cliftons.

There are four main dividing walls which take three hours each to erect as each panel that goes to make up the wall weighs approximately one tonne.

The five areas that are then formed can have the House P.A. configured via a patchbay in the control room of the level one Auditorium, so that dedicated announcements only go to the appropriate areas. (See following story, Neilson & Paging).

When the hall is used at its full size, the patch bay is re-configured so that sound covers the whole area from one source. The emergency evacuation announcements also run through this system.

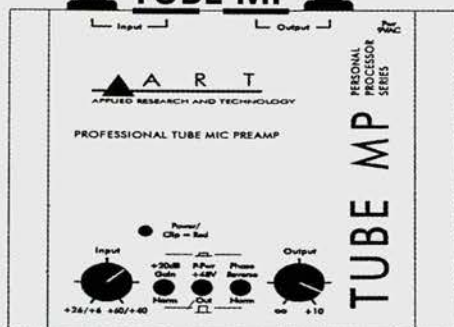
There are 600 floor pits in the main hall which provide single and three phase power, telephone connection, water, air and drainage.

This provision will be of benefit during such events as the Home Show when some exhibitors dis-

(continued page 34)



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Write in Reader Service Number: 164

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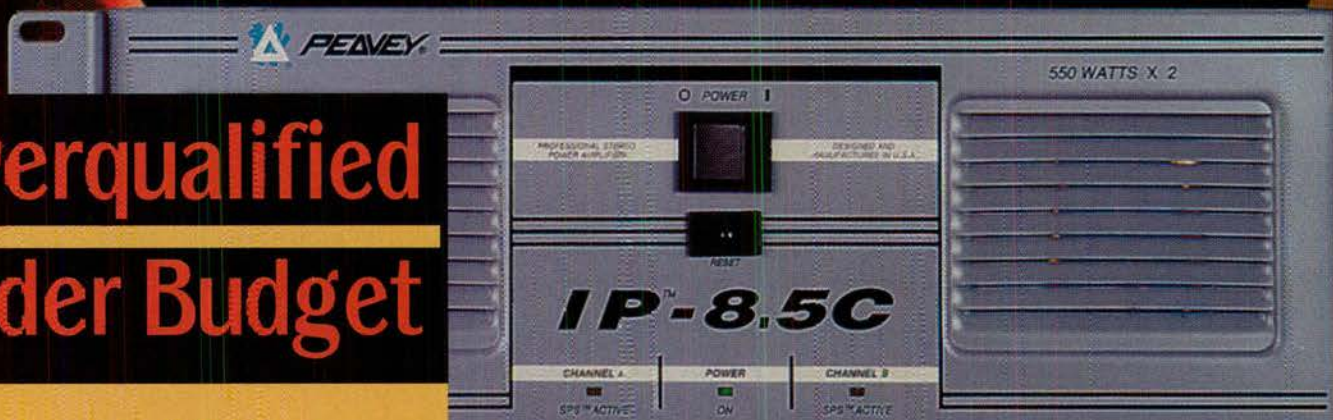
...two outrageous claims for a company to make about power amplifiers. The IP™ series of professional power amplifiers from AA has the extra headroom you need at a price you can't afford to pass up.

These amps meet the needs of today's contracting requirements. They offer exceptional reliability and impressive specs. The output power ratings of all three units is 2 ohms (per channel) and at 4 ohms (bridge).

Each unit has two speed fan cooling, rugged rack-mounted construction, and adequate patching capability. The front panel of each amplifier contains a rocker mains switch, a re-settable circuit breaker, an LED power indicator, and dual LED SPS™ (speaker protection system) activation indicators. The back panel of each amp has an input level control, dual 1/4" phone jack inputs, 5-way binding post outputs, and dual 1/4" phone jack outputs for each channel. Additionally, the back panel contains switches for stereo/bridge select and SPS defeat, and a barrier strip for the input connections.

The IP series...overachievers that get the job done under budget.

Write in Reader Service Number: 163



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Featuring the radical Trans-nove technology (TRANS conductance NEdal Voltage Amplifier), the Hafler P3000 blows away expensive esoteric amps, taking audio technology up to a whole new level of performance.

"...exceptional slow-rate response and transparency." EQ MAGAZINE, OCT 95. Power rating: 150 watts/channel @ 8 ohms, 200 watts/channel @ 4 ohms, 400 watts mono @ 8 ohms.

P-1500 WINNER OF THE RADIO WORLD 'COOL STUFF' AWARD, NATIONAL ASSOCIATION OF BROADCASTERS

"The best way to describe the sound is like some classic tube amps, with a more open low end." RADIO WORLD, APRIL 95. Creating a new standard for power amplifiers, the P-1500 is perfect for studio monitoring, touring sound and fixed installations. Power rating: 75 watts/channel @ 8 ohms, 85 watts @ 4 ohms, and 170 watts mono @ 8 ohms.

P-1000 NEW PROJECT STUDIO REFERENCE AMPLIFIER

From the Award Winning Technology from Hafler Professional engineering comes the new P-1000, in a compact single rack height! Continuing Hafler's heritage of sonic superiority, the new P-1000 is perfect for the project studio where transparent monitoring is demanded. Power rating: 50 watts/channel @ 8 ohms, 55 watts/channel @ 4 ohms, 110 watts mono @ 8 ohms.

P-7000 9303/9505 HIGH POWERED AMPLIFIERS

Featuring D.I.A.B.L.J. Technology which combines the linearity of Class A operation with the current headroom of a Class B system resulting in a significant advancement in the art of power amplifier design - call for more details.

AS USED BY "Dependable as always - clear and detailed with wonderful bass response,"

Wally Traugot (Capital Records), plus there's MCA Music Media, Ardent Studios, Wavetone Records, Ronnie Montrose, Waynar Tisdale, DMP Records...just to name a few!



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HAFLER PROFESSIONAL

AMPLIFIER DEALER.

Write in Reader Service Number: 132



Wally Traugot, Capital Records, Hollywood, CA.

Hafler

PROFESSIONAL

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Melbourne Exhibition Centre

play fully operational bath rooms.

The Auditorium on level one can seat 468, with the first four rows of seats being removable. There are three floor boxes located at the front of the room which provide connections for two video tie lines, RGB+Sync, three single phase power points, four mic inputs and the lecturn's AMX automation system.

In front of the raked section of seats there are two smaller floor boxes with two mic points, two single phase power points and two video tie lines. Both sets of connections appear at the patchbay in the control room.

The touch screen on the AMX provides the user interface which at the touch of one icon can dim the house lights, switch on the Barco 1500 LCD projector, start one of two VCR's, allow the sound to come on at a preset level and raise the curtains covering the projection screen. There is provision in this system for the selection of free to air TV channels via an icon on the touch screen.

When assembling the equipment racks Rutledge Engineering also made provision for a Pay TV feed to be fed into the system. For sound mixing purposes a Yamaha MX400 console which feeds into three ARX amplifiers, then to a Bose speaker system. The phone links which are provided throughout the building have to be nominated for use by the client when they fill out their specification sheet, so that the Venue Services Department can patch it into the PABX system and provide a number.

The only video link throughout the building comes from the control room in the form of two broadband lines used to supply information signage on twenty monitors strategi-



cally located throughout the building. These lines are normally run as one, but could be split to provide separate sets of information for two individual exhibitions or provide a feed between one of five self contained meeting rooms located on level one above the concourse entrances to the five sections of the main exhibition hall.

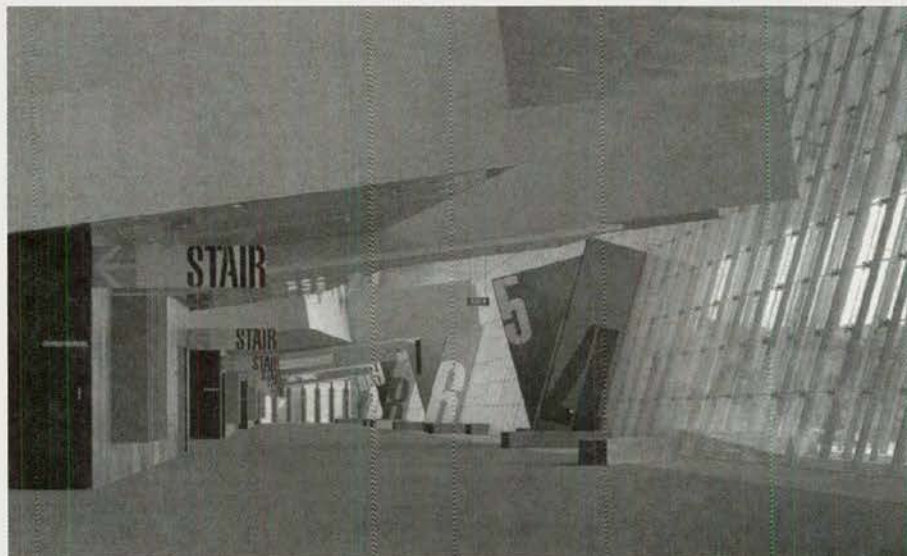
If any sound re-inforcement is needed in these rooms or the main hall it must be bought in specifically. The in-house hire stock is primarily for use in these meeting rooms, with any displays in the main hall utilising externally sourced equipment.

These five rooms each have their own kitchenettes to cater for cocktail parties or small corporate functions. There is one main kitchen to cater for larger functions in any of the main areas. Unlike the A/V equipment, the in-house catering must be used.

In addition to these five meeting rooms there are two other rooms which only have mains power and broadband video feed. One of these rooms can be divided in half and in this configuration the three rooms could hold approximately twenty people.

With bookings currently running between 60 and 70%, this new addition to the exhibi-

(continued over,



Sound Information from YAMAHA

by Chris Steller

Balanced? Unbalanced? What's All the Fuss?

With the boundaries constantly being blurred between professional and semi-professional equipment, small project studios replacing the large traditional recording studios, and technology advancing ever upward (?), the connection of different pieces of equipment into a system has become a very confusing task.

Unbalanced equipment doesn't quite strike fear into the hearts of audio professionals like it used to a few years ago, with the quality of semi-pro gear having improved incredibly over the last five years.

Many of the effects processors that are available now don't have balanced ins and outs, so costs can be kept lower if expensive XLR connectors can be avoided in production, and any saving is welcomed by the budget-conscious.

But where does that leave the user who has purchased a mixture of balanced and unbalanced equipment? How the hell do you wire up a patchbay to handle balanced and unbalanced signals? Call now for audio enlightenment, help on understanding the difference between balanced and unbalanced signals, and wiring up connectors that work!

**FOR A FREE FACTSHEET ON
THIS TOPIC PLEASE CALL
JULIE VASILIADES
AT YAMAHA ON 1800 806 413
OR 03 9699 2388**

Melbourne Exhibition Centre

tion facilities scene in this country may not look as glamorous on the outside as some of its northern cousins but it has been designed with space and flexibility primarily in mind. But I am going to miss some of the rustic nooks and crannies of the old Exhibition Buildings, the Motor Show won't be the same.

¶ **Melbourne Exhibition Centre hosts ENTECH in April 1997.**

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CENTRE AHEAD

The new centre is part of a revitalised precinct, with the Casino and the Polly Woodside maritime park.

It puts Melbourne ahead of Sydney, where a less flexible centre is less integrated - with the Sydney Casino some 1.5 kilometres around the bay.

A new era!

-Julius Grafton.



Lights, Action, Business! Business Theatre is booming- but what is it?

By Madeleine Murray

Bigger than Ben Hur is the latest buzzphrase.

Product launches, corporate conferences, executive meetings are getting more and more extravagant, with companies vying for the biggest and the best. Some productions are as elaborate as the Academy Awards. There was the Westfield Retail awards where Tom Jones sang. The Pacific Asia Travel Association program with Margaret Thatcher as the guest speaker. The lavish News Corp conference on Whitsunday Island, where Kate Cerebrano sang in front of 500 guests, including Prime Minister Keating and British Labor leader Tony Blair.

A whole business of producing these functions is evolving so fast that it doesn't even have a proper name yet. It used to be called AV, when they just did slide shows. As it became more complex, it was called Multimedia, Communications, or Vision. It is an industry growing with the

times. It uses the latest technology, and moves with corporate and social philosophies.

Business has changed during the past decade. The concepts of personal growth, self esteem, empowerment, communication are all part of corporate philosophy. Good results come from things like teamwork, focus, and goal setting, not from paranoid, insular greed. The same principles are used in work as in private life. Psychology has become an integral part of business and management techniques.

The line between disciplines has blurred. Mountaineers are giving motivational breakfast seminars to bankers.

They show slides of icy rock faces, and talk about the role of team building, visualisation, and communication in getting to the top. Wilderness adventure companies take groups of business people out on survival weekends, so that they can bond, and develop team skills. Books like

"Good results come from things like teamwork, focus, and goal setting, not from paranoid, insular greed."

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Write in Reader Service Number: 112

Seven Habits of Highly Successful People are best sellers.

Motivation and incentive are stressed. Big 'recognition events' are held to reward top sellers or achievers in a company. The top 500 sales people are flown to some exotic location and treated to a few days of holiday, partying, and lavish shows.

A big company needs to have a cohesive philosophy, long term strategies, and motivated employees. It is also important that people within a business get to meet

each other, instead of just talking on the phone, fax, or Internet. So different kinds of conferences and meetings are organised around the world for executives and managers to get together.

Presentation is also crucial. You would hardly launch a new product, or try to impress investors by handing round a little blurred purple mimeographed piece of paper. Information has to be presented with style, flair, and clarity.

Enter business theatre.

Audience Motivation

Corporate Overview by Madeleine Murray

I visited Audience Motivation (AM) to get a better handle on Business Theatre. They do almost everything, except sell kosher chicken. They design, produce, and stage recognition events, executive forums, conferences, investment meetings, award ceremonies, and product launches. That is, they provide the visuals, like slides, video, or film. They do the sound, music or voiceovers. They make the computer graphics, and then put the whole event together with staging, lighting, and sound. They also do multimedia work for museums, hotels, and Expo.

AM has 30 full time employees, doing a bewildering array of things. No wonder I was confused. There is a slide room where someone does layout and graphics. A rostrum camera, for high resolution stills. A screening room with 30 slide projectors. Some of the large format slides are 70mm, and produce vivid, highly saturated images. I saw some molten metal, sparks, and sweaty worker shots that were striking. In the next room, four men are working on computer graphics and animation.

Another building has an online editing suite, a recording studio, and a shooting stage. Someone is busy editing a 'positioning' video for a financial institution. He is cutting together seven minutes of voxpops from employees. The two AM buildings are about three blocks apart, with a pub in between, which seems very civilised.

The staging side is in a workshop in Alexandria. When I arrive, they are preparing part of a big 'recognition event.' Everything is programmed, cued, and run through one computer. The computer screen shows each cue: graphics, music, lights, slide, tape. A bank of twelve monitors comes on with the company logo, dissolving graphics, music, video and a voiceover introducing the host. After the speech by the host, the computer is cued, and it fades the lights, switches the screens to video, tells another computer to go to the next slide, rolls the Betacam machine, and cues the music.

The guys are all young, smart, and keen. One has just been to the States to check out the latest technology. Two boys are being trained. One man does nothing but maintain and repair equipment. And there is a lot of that. Computers everywhere, editing suites, lights, cables, PA systems. A video rack that costs \$100,000, a comprehensive audio system that they can use in any venue in the country. A huge black imported curtain which is filled with fibre optic lights.

Enthusiasm is rampant. Everyone seems to feel that they are doing exciting work for a good company. "It's all company philosophy," says Tim Olah, the staging manager. "David Beal, the owner, always hires the best technicians to go out and run the" *(continued over)*

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Audience Motivation

shows, his gear's really well maintained. He's always got the latest, state of the art equipment.

"We've all worked for a lot of people, but I think David is a bit above everybody else. It's just his insight, and his incredible imagination."

Recognition events are the most lavish. Each one has to be bigger and better than the last. AM has turned a marina into a Mediterranean village, with magicians, minstrels, aerial stunts, fireworks, and a pirate ship.

For IBM, they put on an Executive Forum in Beijing for senior Chinese government officials. The Chinese Government has allocated \$US29 billion to build an Information Technology infrastructure.

AM filmed around Australia for Expo using a cluster of six 35mm cameras to make a 360 degree picture. This was projected in a round auditorium, where the audience sat on a revolving platform.

"Twenty years ago at the Moulin Rouge in Paris, they had dancing girls on a stage which turned into a skating rink. Then an aquarium came up, with a dancer swimming with dolphins. One dolphin undid the dancer's bra. The aquarium disappeared, and two men rode horses onto the stage. It was a mediaeval scene, and they jostled." Ron Kovak, Melbourne

David Beal Managing Director

David Beal used to shoot for the big names around the world-Fairfax, Time Life, The Observer. "I was finding that I'd spend weeks shooting stuff, send them all back to New York, and never see them again," David said. "Or if I did see

them, I'd wonder why they picked the ones they did, or they'd crop them in some weird way. And the writing was on the wall for picture magazines in those days, because of television. I'd been to the States, and I'd seen this thing called multiscreen. That way you could have much more control. You used the pictures how you wanted, and you added music and words."

Dawn and David Beal started AM in 1972. She was a journalist, and now produces some of their videos. The AV work grew, and they needed the equipment to run the shows they were making. So they bought staging gear. Then they set up a video arm. Now they have a comprehensive setup, with facilities for every step of a production.

Last week Dawn went to Penang for a 'recognition event,' and brought her own editing suite. She took two cameramen who shot 'candid,' that is employees at work and play. Then they stayed up all night editing in the hotel room for a showing next day.

"We work on the basis that if



you have your own facility, you can play a bit more, and absorb some of the costs," David said. "Studio hire can cost you a fortune."

Companies have to cultivate incentive and commitment in their employees. "China is such a booming economy, particularly in technology, and there's absolutely no company loyalty," said David. "As soon as a person gets a certain amount of training, someone comes and poaches them. In places like Singapore, workers tend to wait until after they've got their annual bonus, and then leave. So a lot of companies see they have to push for loyalty, and one of the things is these incentive schemes and recognition events, rewarding employees that do well.

"Another big area is product launches, particularly in the Information Technology industry. Models used to change once a year,

now it's every six months, or less. It's more difficult to come up with a concept or a launch idea which is going to get people's interest. There's a continual pressure on companies to keep the cost down, but to be more innovative and creative each time. Finding that balance at times is difficult."

AM's work these days is largely 'total event management.' They do everything-book hotels, design invitations and menus, hire speakers, find venues, and more.

"A lot of Vision companies these days realise they have to get close to the boardroom,' because that's where the decisions are made," David said. "Then you have more opportunity, being involved early in the decision process. If you wait down the line until someone decides they want to have an event, or a video made, then you're exposed to all sorts of competition. You try and build relationships with companies so you're involved in that decision process. That's better business for you, and better business for them."

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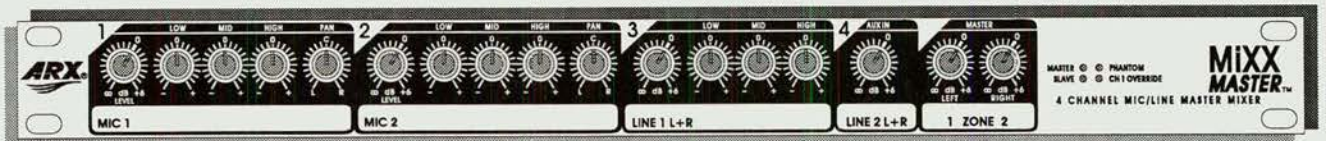
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Federation of Communication Users & Suppliers

Scouting around the industry in Sydney at least, it seems everyone is kicking off the year well, with freelancers especially busy. That's always a great indicator, and of course, our freelancers deserve to be looked after with a plentiful and varied supply of work to keep them motivated.

The role of freelancers is so important to our industry, one day you've got to pull together a team of 40 to get a mega-roadshow underway, then it's back to a smaller full-time team until the next one.

Think about it, how many freelance jobs would be contracted in a year? It would be fascinating to know the answer, but its probably enough to be frightened of the prospect of researching it to know that the figure would be high.

A fantastic resource of Staging, Production, Writing, Performance, Management, Design and Technical skills is available in Australia.

If you are working full-time or run a business, are you taking notice of all the letters, flyers, updates etc that are being sent to you? What about the people who call you, wanting to show you their reel, or just meet you to put a face to a name?

You know how difficult it is to cold call or muster up your marketing skills to bring in work that will keep you busy for a few weeks or months. These people are often looking at only a few days work from you. They are kept busy on the days without a booking; quoting, turning down confirmed work only to have the first booking cancelled, hunting up appointments, sending invoices, chasing cheques, keeping their gear maintained and staying positive!

Next time you hear from someone who sounds interesting, get them in and see if they can impress you. One of the advantages of working with freelancers is they bring fresh ideas to the project.

They're also aware that if they slacken off, they're out of a job. The industry is far too small to get away with a bad attitude.

Most freelance directors, designers, technical directors and writers like to be involved in the project development phase. They'll treat it as an "on spec" situation just like you do with your clients and when you get the job, the team's in place and ready.

The Federation of Communication Users and Suppliers values the contribution freelancers make to the industry. Their interests need to be protected, and often its just a matter of reminding employers to take their needs into consideration. Advance notice of cancellations, prompt payments, attention to meal breaks and catering, rotating crews, clear call sheets and respecting their professional input can build strong relationships which are always an advantage.

Please write to FOCUS if you have any difficulties as an employer or freelancer, often a letter from a third party can help. We also have access to a mediation service via the Arts Law Centre, for which there is a small cost. The Arts Law Centre is also working on a "contract pack" which is a range of standard contracts, especially appropriate for longer-term work.

FOCUS holds Blue Dog Club nights in Sydney and Melbourne, and soon to expand to Brisbane. These evenings are opportunities to network with other freelancers and decision makers from employing companies. The Committee is holding the Blue Dog Club in varying facilities so you can "have a sticky" at what's on offer around town, keep up to date with market rates and hopefully make the kind of contacts which will keep everyone working. So, come along and find out what we're about, and become a member!

(If I get the info through in time from the committee - we can announce the first 3 Blue Dog Club dates and venues for Sydney and Melbourne).

What do you think of the new logo for the Federation?

Apart from a few "pac-man" comments, it has been received enthusiastically by our members. Designed by Peter "Art" Lewry of Australian Business Theatre in Melbourne, the logo works as a strong black & white icon, or for special occasions as a two colour brand in royal blue and black.

Our acronym, FOCUS gets more appropriate every day, and is now comfortably on our lips. FOCUS members can use the logo on their stationery, but you must apply in writing to be granted permission and be given a bromide or disk.

The Membership subcommittee are beaver away, adding more companies to the list of discounts and services available with your membership cards. They are tar-

geting companies for new membership drives and don't forget, if you're a member and you nominate a person who becomes a member, you get incentive points which can be redeemed as further discounts on FOCUS activities.

The annual Producer's Festival will be held over one weekend during late August/early September, so that would be a terrific reason to keep earning incentive points. Members already get a discount, but it could cost you very little to attend if you "do your friends a favour" and get them to join.

Sharon Cartwright
Executive Director, FOCUS
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Rudolf Valentino rides again!

The longest running film in the world, and an organ which rises from the stage floor

by Madeleine Murray

The Majestic Theatre in Pomona, Queensland is not your average cinema. It was built in 1921, before talkies, and is now showing silent films again. So it is the only authentic operating silent movie house in the world.

The Son of the Sheik, made in 1926, starring Rudolf Valentino, has been running at the Majestic for nine years. When the film first opened years ago at the Wintergarden in Brisbane, it only lasted one week.

Ron and Mandy West own the Majestic. It all started ten years ago, when Ron had a print of *The Son of the Sheik* in his collection.

"We were running modern films at the Majestic, and a coach company asked us if we would run a silent film, because they wanted to do something a bit different," said Ron. "I had just gotten the organ going, and it sounded like a rather asthmatic harmonium.

Nevertheless, I thought what the hell, and we put this on, and they loved it!

"The word got around, and they asked would we do it for other coaches. We thought we'd give it a go, it'll probably last about a month or so. That was ten years ago, and we're still waiting for it to die. It just gets bigger and bigger. We now have about 15 features in the vault, plus a series of shorts. *The Son of the Sheik* is the mainstay, and keeps on running all the time. I play the Wurlitzer pipe organ myself for every performance, over 3500 so far."

Pomona is a little town 60km west of Noosa. People come in buses from as far north as Bundaberg, far south as Sydney, and as far west as Toowoomba.

Ron uses an old Master Brenograph for special optical effects. It projects images onto a curtain from hand painted mica



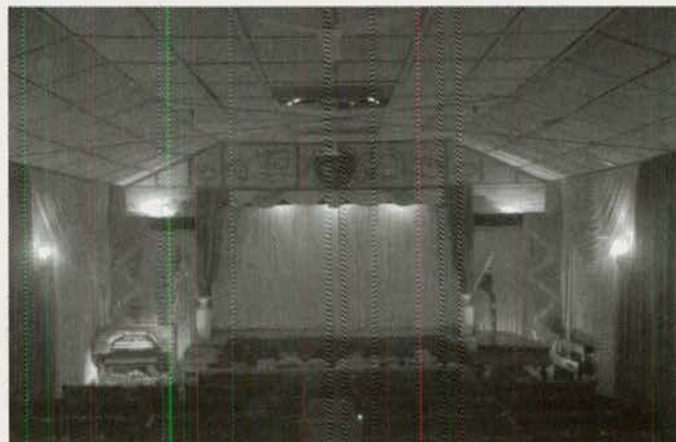
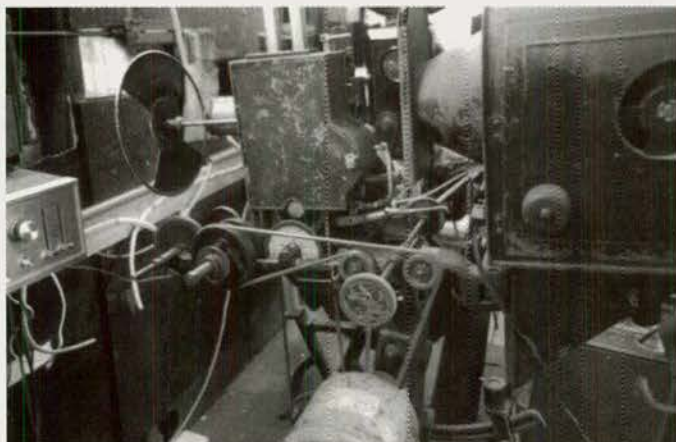
discs, driven by clockwork motors. He can produce falling flowers sheets of flame, bluebirds flying across the sky, garden flowers that change colour, and a Venetian gondola in shimmering, moonlit water.

To run 35mm film, he uses a restored 1918 Simplex front shutter, variable speed projector, manually operated. And for 16mm

he uses an Italian Fumeo, converted to 35, modified to run at 18 and 24 frames per second.

In his motion picture darkroom, Ron restores films and damaged prints. He is making a complete duplicate negative of *The Son of the Sheik*, which he will then tint and tone back to the original colours.

• Majestic Theatre, Pomona, Queensland. Tel: (074) 852330.



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Write in Reader Service No: 123

ACOUSTISEARCH FINISH LARGEST SCREEN

The Edge Cinema opens for business

With a slightly curved screen 24m high and 18m wide, 'The Edge' cinema at Katoomba is the largest in Australia.

This is not the only first for this cinema.

It's also the first time full multi channel digital sound has been used in a giant screen cinema. 16,000 Watts of audio from 6 discrete tracks derived from multi channel CD ROM, is delivered from electronically time aligned left rear, left, centre, right, right rear and upper centre, discrete speaker stacks.

Upper centre is used for those all important waterfalls, helicopter lift-offs, and anywhere there is a need for vertical sound movement. The audio is top quality due to the use of new sub bass technology achieving a very dry, non-resonant bass, and the very latest JBL technology in horn and compression drivers brings distortion

down by a factor of 3 to 4 times that of other compression drivers, says Acoustisearch. Third octave equalisers are cut only linear phase, and the crossovers are also phase linear.

Another first is the use of a new linear loop technology projector, 8 perf/70mm. The image being magnified 452 times, a stable projector is a must. The linear loop projector uses multiple register pins as an essential element to prevent image instability on the giant screen.

The lens was specially designed and is multi element. The 165mm diameter 305mm long unit consists of 13 carefully aligned individual elements.

The cinema also runs 35mm and 70mm traditional style cinema, as well as the giant screen 8



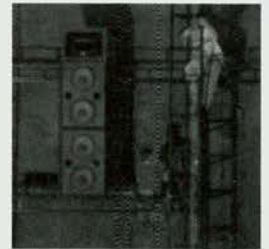
perforation 70mm.

The projectors, and all audio components are controlled from an ACCUSTISEARCH computer system.

ACOUSTISEARCH (Melbourne) designed the auditorium acoustics, and supplied, installed and commissioned all the audio, image and control equipment throughout the building including two foyer areas.

Project Manager Graham Thirkell said "The use of leading edge technology, and the manufacture by ACOUSTISEARCH of key elements of the system, contributed to the excellent performance, which many say is the best large screen cinema they have experienced worldwide."

Climbing The Frame



Driven by 18 Crest amps, the sound system is made up of four stacks of speakers which are hung behind the screen frame. The picture above shows riggers carefully climbing the six story high screen frame. The screen itself is one piece of fabric, 48.6m wide x 36m tall. One tear and the whole 210 kilo fabric screen is dead!

The speaker configuration included 24 x 380mm JBL drivers, 6 x compression drivers and horns, and 4 x Bag End sub bass devices. **•Acoustisearch, (03) 9568-4022.**



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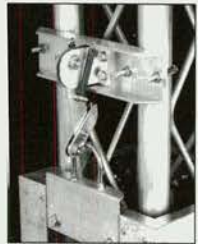
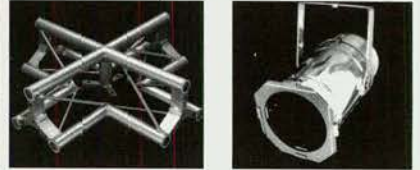
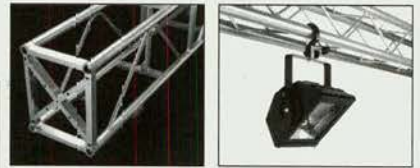
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Write in Reader Service number: 141

ARX sell a system for The "Yellow River Concert"

The Melbourne based PA manufacturer ARX is now Australia's most consistent pro audio exporter. In this story ARX Director Colin Park tells how they sold a very large system into China, and how it was then put to good use

As part of the Xian Xinghai Music Week held to celebrate the work of China's pioneering Musical giant Xian Xinghai (1905-45), the largest Concert to date in China was organised by the Guangzhou Municipal Government and China Central Television for the 29th of October 1995 at the Guangzhou Tianhe Stadium in Southern China.

One of his most stirring and exciting works is the "Yellow River Cantata", and it was this piece, conducted by China's famous Choral Conductor Yan Liangkun that opened the music week.

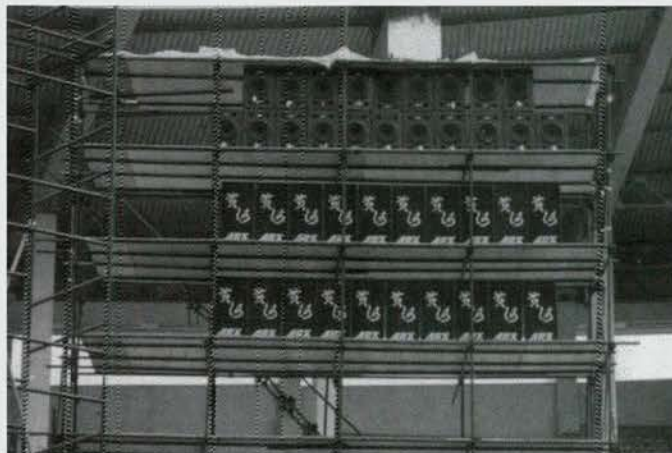
Cultural events in China are always of impressive proportions and this was no exception, involving a massed choir of 15,000 (that's right, 15,000!) workers, farmers, students and soldiers. A Symphony Orchestra of 500+ musicians, a Chinese Instrument Or-

chestra of 100+ musicians, a Stadium audience of 60,000 and via China Central Television a Broadcast Audience of an estimated 2 billion people in over 80 countries.

During the July 95 Pro Audio exhibition in Singapore, Kelvin Hui, marketing manager from Dah Chong Hong Ltd (DCH - the Hong Kong based Chinese ARX distributor) made mention of providing, possibly at short notice, the System for a major Concert event in China later in the year.

Mr Peng Ying Yu, chief engineer and Mr Peng Jian, engineer from Radio Guangzhou liaised with Kelvin Hui and engineers from DCH to design the System based on products from Tascam, Beyer, Canare, Tannoy and of course ARX, all distributed by DCH in China.

Negotiations regarding the sup-



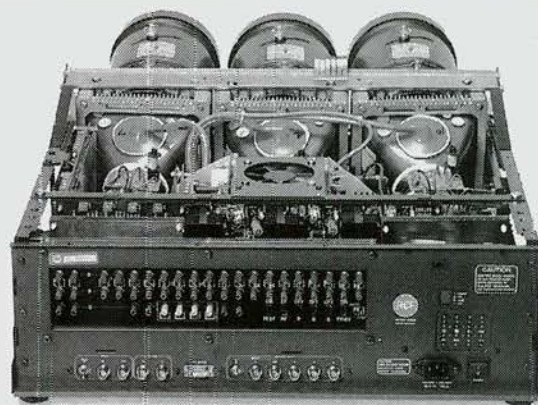
One side of the main speaker stacks, showing 20 ARX 922s and 20 Tannoy CPA 15s. A diplomatic and unusual pairing of loudspeakers!

ply and design of the System continued through late August and early September with the equipment list being finalised in the second week of September. With a delivery date at the latest of the

first week of October, this entailed manufacturing and shipping a 100,000 + Watt Stadium System in 3 weeks (!) as the entire System needed to be shipped to Hong Kong, consolidated, re-docu-

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mented and shipped via Rail to Guangzhou. The ARX component of the System comprised over 5 tonnes of Airfreight from Australia to Hong Kong, so no slow boats to China here!

As specified the System comprised:

- 12 Mic Beyer U700 Wireless Mic System used for the announcers and VIP Podium areas.
- 12 x Beyer MC-736 and 12 x Beyer MC-737 Mics used for miking the 16,000 piece choir.
- 2 x Beyer MC-742 for stereo miking the orchestra and choir for recording
- 10 x Beyer M-201s for miking Cello and Brass Instruments
- 16 x Beyer M-422s for String Section and High Woodwinds
- 3 x Tascam M-3500/32 and 1 x M-2600 8 Buss Consoles, chosen for their low noise, flexible interface to the DAT recorders for the upcoming CD and LaserDisc of the Concert and their multiple Aux outputs to feed the 6 Monitor Mixes to both Stages and the Choir.

• 4 x ARX EQ60 Graphic Equalisers, one for equalising the main system and 3 for the monitor systems

• 30 x ARX MaxiSplit Line Splitters for actively splitting the Audio Signal around the stadium and to drive the Power Amplifiers post Loudspeaker processors. The main Stadium Loudspeaker System comprised:

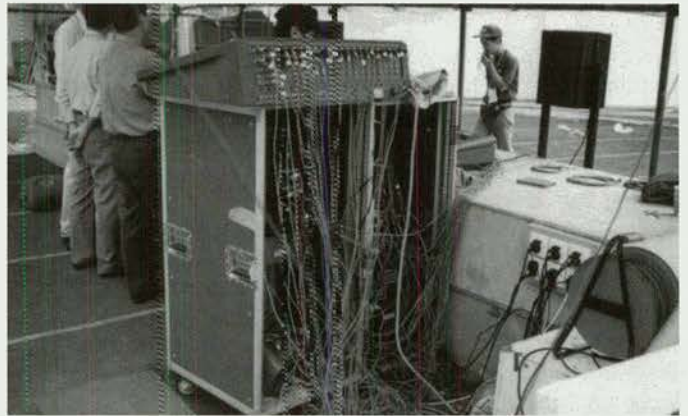
- 12 x ARX CU922 Loudspeaker Processors
- 48 x ARX 922 3way HI Q Loudspeakers
- 40 x Tannoy CPA 15 Loudspeakers

With all being driven by:

- 58 x ARX SX1500 Power Amplifiers
- 12 x ARX SX3000 Power Amplifiers.

The Monitor Systems comprised:

- 6 x ARX CU215 Loudspeaker Processors
- 30 x ARX 215 Active 2way Stage Monitors powered by
- 15 x ARX SX1500 Power Amplifiers
- 12 x ARX PowerMax 2 Stage



Extensive use of single cables - no multicores!

Monitors powered by 6 x ARX SX800 Power Amplifiers Cabled by over 10KM of Carare Audio Signal Cables and over 11KM of Loudspeaker Cable (locally supplied).

As this was the first event of its type and size that DCH, China Television and Guangzhou Radio Technical had been involved in support from suppliers was of great importance. Shoichiro Shihara from Tascam, Ulrich Fott from Beyer Dynamic and myself

from ARX were on hand for technical backup if required. After meeting up in Hong Kong on the Tuesday we travelled up to Guangzhou by Train early Wednesday morning.

Any System of this size has the potential to be an engineer's nightmare; however any initial doubts we may have had regarding the technical expertise of the local crew were quickly dispelled. On arriving at the Stadium we found a fully rigged, phase checked and

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China PA

analysed System overseen by Mr Peng from Guangzhou Radio.

Apart from the Microphone Multicores and 215 Monitor System, every Console, Processing Rack, Amp Rack and Loudspeaker Cabinet was wired with **individual** cables (see picture of FX & Amp racks) with not a Multi Pin, Speakon or EP Connector in sight! Some testimony to the thoroughness of the technical crew - on my calculations there were over 1,000 XLR plugs in the System, all correctly terminated!

Wednesday and Thursday were spent ensuring the System was grounded to reduce lighting generated noise, checking Shotgun Mic placement and initial rehearsals. Friday was put aside for a full technical rehearsal - however as is often the case with outdoor shows, the elements were against us. With torrential rain washing out any activities until the Saturday morning, Friday was spent instead shopping!

Saturday morning was spent checking for any water damage, luckily restricted to some soggy Mics and Cabling, and re-positioning the Mics and Monitor Loudspeakers.

Lack of time now dictated no full Technical rehearsal, so the first full rehearsal was in front of a ticketed audience of approx 40,000 people, complete with a Chinese Airforce Helicopter hovering low over the Stadium getting overhead shots to be edited into the Television Broadcast of Sunday night's show.

The main stage for the seated orchestra of 600 was approx 60

metres wide. With the scaffolding for the ARX 922's and Tannoy CPA 15 Loudspeakers around 25 metres further out from each side of the stage the distance between Left and Right towers was approx 110 Metres. From the other side of the stadium the Stereo Image was certainly the widest I've yet encountered!

The opening of the show was based around a very lifelike lightshow giving the effect of the waterfall at the source of the Yellow River flowing behind the 15,000 piece choir. The audio backing for this had been recorded by a team from Radio Guangzhou sent up river to bring the actual sounds back on DAT and was re-played through the System at a lifelike level peaking at 110dB+ in the VIP seating area on the opposite side of the stadium.

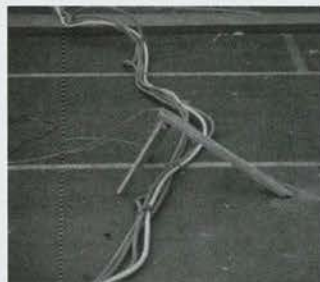
The performance of the Yellow River Cantata and other items followed and for two hours the Stadium was filled with the dynamics of soloists, massed Choir and Orchestras as a backdrop to the thousands of dancers performing on the Stadium floor.

Over the five days of Rehearsals and Concerts a new Technical and Performance level in China was established by those involved, proving that the embryonic Chinese Concert Production industry has the ability to produce events of a size rarely experienced elsewhere in the World. With an emerging market of 25% of the world's population, it's only a matter of time before events of this type become more commonplace.

**Colin Park is Managing Director of ARX Systems Pty Ltd.*

(Below) One member of the technical staff was fully occupied vacuuming out console faders, amplifier airfilters, etc for the duration of the rehearsals and shows.

(Bottom) One of two rack area's, showing ARX SX1500 amps, CU922 speaker processors and Maxisplit Line splitters.



Method employed to reduce problems like dimmer buzz - Audio cabling was specially air routed over AC Lighting cables!



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HIRE & PRODUCTION NEWS

Compiled by Madeleine Murray

■ **The Audio Dept.** now has the new Sony 800 MHz wireless microphone system for hire, for use in ENG, television, theatre, concert, or corporate. The Audio Dept. also has Sony 900MHz systems for hire as well as Shure VHF systems. The Audio Dept. on 03 9415 1868.

■ **Sound and Visual Innovators** almost got wet with the *Water Rats* launch. They supplied sound and video equipment for the party, held on the set at Goat Island. Two sound systems, a disco system, and eleven 28" Barco monitors were put aboard a barge at 6:30 in the morning on the weekend. Dave Griffiths and a SAVI mate arrived on Monday to set it up. Uh oh. The *Water Rats* crew were shooting, and the SAVI guys had to be totally silent. Not a sound as they hauled all the gear up two flights of creaky wooden stairs between the dock and the rooftop marquee. Quiet on the set please! SAVI on 02 417 4388.

■ **Concert Lighting Systems** has scored. They won the contract, along with two other companies, to provide rigging services at the new Exhibition Centre in Melbourne. They were flat out at the opening, with the Victoria stand, GMH, Iveco trucks, and more. Call 03 9646 8444.

■ **Bytcraft's ICON rig** was there at the BMW launch, and the opening of the Melbourne Exhibition Centre. Call Bytcraft on 02 550 3955.

■ **Norwest Productions** did something audio-style for Australia Wonderland, David Copperfield's press conference in Sydney, The Remy awards, Rover Australia at Ayers Rock, and Margaret Ulrich's corporate shows. I'm not sure what. I'm new here, so I called Norwest for more details about their work. The man at Norwest seemed annoyed at my ignorance, and just told me that, "Anyone in the industry knows what we do. The Editor is aware, *very aware* of what we do." Be afraid, be very afraid. Then call Norwest on 02 809 0244.

■ For 20 years, **R&K Lighting** have been supplying and operating the lighting for The Moomba Waterski show, including a follow spot on the skiers as they sweep down the Yarra at night. Howard and Sons from Sydney did the pyros, and Ross Carlson of Miracle was the sound engineer. R&K Lighting on 03 9720 7689.

■ **Entertainment Hire Services** at Campbelltown turned down Motley Crue, because they had other commitments. Just kidding. EHS are a small, local operation who do mainly community gigs. But what an interesting mix. They just did audio for the dedication of a park to Filipino people. They do a lot of amateur musical productions. In April, they'll be sounding *Burger Brain*, at the Youth theatre. During the run, they train kids from the local high schools in sound. EHS on 046 256 067.

■ **Advanced Audio** did the concert production for the twin stages at the 'New Years Revolution II' - at the Water Sports [no pun intended] Centre, on the Patterson River at Carrum, near Melbourne. Rose Tattoo, (who?) Cosmic Psychos and the Celibate Rifles were some of the acts. ARX on 03 9555 7859

■ **Liverpool Sound Hire** celebrated their 200th show recently, after just a year in business. Not bad for a company that only has one PA system, and doesn't mind admitting it. LSH want to thank everyone they've ever known who helped them along the way, especially Anything Audio, Electric Sunshine, PA People, Mark TV Audio, Total Concept Productions, and most of all Burgundy's Nightclub in the Sydney RSL. LSH on 02 822 4859. Free beers for everyone. Sauvignon Blanc for me!

■ **Darling Harbour Studios** have a new rehearsal room, which overlooks the Powerhouse Museum and Darling Harbour. DHS on 02 211 1474.

■ **Nova Hire** did a big New Year's Eve rock concert at Tara Valley in Yarram, outside Melbourne. Some of the acts were Ian Moss, CDB, and the Badloves. Peter McCarthy was the Production Manager, Danny Devine the System Engineer, and Paul Bailley the Monitor Engineer. Lighting Lab did the lights, and "they were vicious!" Nova Hire on 03 9555 4766

■ **Production Dungeon** in Brisbane has added more Jands/JBL System 1200 subs and AM amps to the inventory for hire and production. A new JBL based FOH system is being built and should be ready soon. PD on 041 965 0041.

.....and that's it, Julius will give me more room next month, so **SEND ME YOUR NEWS!** Fax (02) 876-5715 by 15th March.

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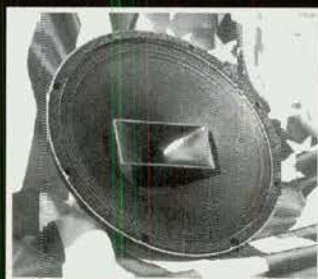
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Video Projector

- We asked Distributors to list FOUR representative models (only), in each of the three categories below. More info at right.
- The PRICE shown is RETAIL including sales tax, correct at 15/2/96.
(Connections takes all care but no responsibility for errors herein!)

Cathode Ray Tube - CRT

BARCO Trace Pacific. Contact Peter Della Tolla (03) 9646 5833

BV 701 HQ Video Projector. Video/HDTV. Light Output 725 lumens. Max Resolution 15/30-35 kHz, Bandwidth 20 mHz. \$19,656.

BD 801s Video/Data Projector. Video/HDTV/VGA/Mac/S-VGA/XGA. Light Output 900 lumens. Max Resolution 15-65 kHz, Bandwidth 75mHz. \$28,212.

ELECTROHOME (150 9001) Amber Technology P/L, contact Mike Sanders (03) 9699 1955/018 534 257

Marquee 8500 8" CRT Proj. 15kHz - 130kHz Horiz. Scan, 38Hz-180Hz Horiz. Scan, 38Hz-180Hz Vert. Scana, 225 ANSI Lumens, 71x68x81x43cm, 66kg nett wt. Options - Edge Blending, Image Shifting, Acon - Auto Converge. \$46,400.

ECP 2500 7" Entry Level CRT, 15kHz - 50kHz Horiz. Scan, 45Hz-120Hz Vert. Scan, 120 ANSI Lumens, 53x42.4x33x36cm, 47x6kg nett wt. Value, reliable, ACON Option (ECP2501) \$19,900.

ECP 3500 7" CRT Projector, 15kHz - 62kHz Horiz. Scan, 45Hz-120Hz Vert. Scan, 120 ANSI Lumens, 53 x 42.4 x 33 x 36cm, 47.6kg nett wt, ACON Option (ECP 3501). \$23,900.

ECP4500 7" CRT Projector. 15kHz - 90Hz Horiz. Scan, 45Hz-120Hz Vert. Scan, 120 ANSI Lumens, 53x42.4x33x36cm 47.6kg nett wt. Acon Option (ECP4501). \$32,900.



ECP by
Electrohome

RCF c/o Musitronics, contact Roger Kelly (07) 3822 3906

LS4001 Professional and home theatre, four TV standards. Remote Control, 4 x 3, 16x9 ratios set for Pay TV and Satellite. Hor. 15.75kHz, Vert. 60-50Hz, 600 Lumens 3 beam, 565x715x250mm. 35kg. \$10,682.

CS4200 Same as LS4001 Plus Data to Super VGA. All common computer standards plus others. Aimed at the main data users. Hor. 15-42kHz, Vert. 50-120Hz. 600 Lumens. D, M & weight as LS4001. \$18,000.

SELECO Seleco Australia Contact Ray Kennedy 1800 067 288

SVT 150M PAL/NTSC Colour system; Scart x 2 RGB, S VHS, & 9-Pin, TTL Inputs; On screen display; 680 Lumens brightness; Delta TAC4 bi-focal air cooled lenses; Teletext. \$8,850.

SVT 195CM 16x9 New Model. High brightness (900 Lumens); Delta TAC4 Lenses with High resolution picture tubes & video board; 1000 lines RGB resolution and 650 TV lines (video); S VHS system with 450 lines resolution. Aspect ratio 16x9 and 4x3 via remote. \$12,350.

SDG700 Data Graphics New Model. Multimedia System. PAL, SECAM, NTSC 4.43, NTSC 3.58 automatically switched. 3 CRT 7" liquid cooled, high brightness, high resolution. 850 lumens. Picture size: 60" - 300" diagonal. RGB input; 1500 x 1200 pixels, more than 800 TV lines with video signal. Dimensions: 620x305x820mm. Bandwidth 70 mHz, Scan frequency 155-74 kHz Autolock. 12 month warranty. \$25,050.



Seleco SVT150Q/150M

SONY Sony (02) 887 6666.

VPH1272QM 7" CRT data projector 15-93kHz fH, 38-150HzfV 145 ANSI Lumens. Dimension 620(w)x355(h)x817(d)mm. Weight 64kg. \$36,112.

VPH1252QM 7" CRT data projector. 15-61.5kHz fH, 35-150Hz fV, 145ANSI Lumens. Dimensions 620 (w) x 355 (h) x 817 (d)mm. Weight 63kg. \$23,912.

VPH1290 Graphics Projector 9" CRT optical coupled. 15-135kHz fH, 38-150Hz fV. 225 ANSI Lumens. Dimension 746(x) x 386(h)x1000(d). weight 96kg. \$54,900.

VPH1001QM Video Projector 7" CRT Video only. (PAL, NTSC, SECAM) Weight 30kg. Dimensions 532(x) x 288(h) x 597(d)mm. \$11220

LCD Projectors

ELECTROHOME (IS09001) Amber Technology P/L call Mike Sanders (03) 9699 1955/018 534 257

Showstar LCD Projector, 640x480 Res., 900 ANSI Lumens, 575W Metal Halide Lamp, 64x37x78cm Dim. 41kg nett wt. 'Very bright, great price/perf. ratio.' \$44,000.

Buyers Guide

• About: We HOPE we found every major importer of Video Projectors, but this being our first Video Buyers Guide, there may be others. Some distributors we contacted couldn't/wouldn't respond in time for our deadline. Anyway, if your firm imports Video Projectors and you missed out, please call Elaine and ask to be put onto the hitlist for next time. We also intend expanding our Buyers Guide categories soon to include cubes, retro, monitors, interfaces and more. So please get in touch with us, as participation in the Buyers Guide is free.

INFOCUS SYSTEMS Electroboard P/L
Call Warren Bolton (02) 437 4444

Litepro 580 LCD Video/Data Projector, Portable unit using metal halide, 300 lumens, zoom lens, 640x480 pixels, polysilicon 40cm LCDs x3, 100:1 Contrast ratio V = 72Hz, H 14-39kHz. \$14,950.

Litepro 570LS LCD Video/Data Projector with inbuilt Liteshow II Presentation Management System, 640x480 Pixels, 350 Lumens, Dual Halogen bulbs, 20.5cm x 27.9cm x 21cm. Weight 8kgs. Horiz = 42kHz, V=72Hz. \$14,200.

Litepro 760 LCD Projector 1024 x 768 Pixels 350 Lumens, Mac, PC, HP, Dec, Sun Compatibility 20.5cm x 27.9cm x 21cm 8kgs. V to 87Hz, H 24kHz to 70kHz. \$13,400.

Philips from Seleco Australia Call Ray Kennedy 1800 067 288

LC2000 Video LCD Interlaced Line Doubling. PAL/NTSC. Cable ready tuner with Teletext and closed captioning. Stereo 10 watt built-in audio. Pixels in display equivalent to 455 lines and 479 columns with none of the pixel grid of earlier LCD models. (Exclusive Distributor). \$12,900.

SHARP Sharp Electronics call Garry Wergs/Arthur Hodge (02) 831 9243.

XV370P 254cm (100") Compact LCD Projector, Single Panel, 100, 386 Pixels (Delta), Remote Control, 500 Lux, Table/Ceiling Mount, 3W Built In Speaker, Fixed Zoom, PAL, SECAM, NTSC. \$4,999.

XV350H 508cm (200") Video Projector, Three Panels, 112,320 Pixels x 3 (Delta) Remote Control, 800 Lux, Table/Ceiling Mount, 3W Built In Speaker, 1:1.6 Variable zoom. PAL, SECAM, NTSC. \$7,999.

XG3781E 381cm (150") Data Projector, Single Panel, 307,200 Pixels (Stripe), Remote Control, CGA, EGA, VESA, Quadra, VGA & Mac II Compatible, 600 Lux, Table Mount, 5W Built In Speaker, 1:1.3 Variable Zoom, Multi Power 110-240V, PAL, SECAM. \$10,999.

SG3850E 508cm (200") Data Projector, Three Panel, 309,120 Pixels (Stripe) Remote, CGA, EGA, VESA, Quad, VGA & Mac II Compat, 600 Lux, (at 102cm screen size) Table/Ceiling Mount, 3W Speaker, 1:1.6 Variable/Zoom, 200-240V, PAL, SECAM, NTSC. \$15,999.

Sharp XV-350H LCD



LIGHT VALVE Projectors

BARCO from Trace Pacific, call Peter Della Tolla (03) 9646 5833

BD 3100 LCD Light Valve Projector. Video/HDTV/VGA/Mac/S-VGA/XGA/ Graphics. Light Output 3,500 lumens. Max Resolution 1180 x 900 pixels, Max Pixel Clock >80 mHz. \$43,995.

BD 5000 LCD Light Valve Projector. Video/HDTV/VGA/Mac. Light Output 5,200 lumens. Max Resolution 756x556 pixels, Max Pixel Clock 33 mHz. \$55,213.



Barco BD5000 Light Valve Projector

ELECTROHOME from Amber Technology P/L call Mike Sanders (03) 9699 1955/C18 534 257

Showstar Light Valve Projector, 640 x 480 Res. 900 ANSI Lumens, 575W Metal Halide lamp, 64x37x78cm Dim. 41kg nett wt. Very bright. Great price/performance ratio. \$44,000.

HUGHES JVC from Hagemeyer, call Nick Fitzgerald (02) 750 3777

M315E Horizontal Freq. 15-90kHz. Vert. Freq. 45-120Hz. Res. (HxV) 1600 x 1200 Pixels. Video Res. 900 TV Lines. Light Source 1,500 Watt Xenon Lamp. Lumens 2000. Size (HxWxL) 52.5cm x 70cm x 135.5cm. Weight 162.8kg. \$110,000.

M315G Horiz. Freq. 15-90kHz. Vert. Freq. 45-120Hz. Res. 1600 x 1200 Pixels. Video Res. 1000 TV Lines. Light Source 1,500 Watt Xenon Lamp. Lumens 2,300. Size (HxWxL) 52.5cm x 70cm x 135.5cm. Weight 162.8kg. \$162,500.

M335G Horiz. Freq. 15-90kHz. Vert. Freq. 45-120Hz. Res. 1600 x 1200 Pixels. Video Res. 1000 TV Lines. Light Source 2,500 Watt Xenon Lamp. Lumens 3,500. Size (HxWxL) 52.5cm x 70cm x 135.5cm. Weight 170kg. \$209,000.

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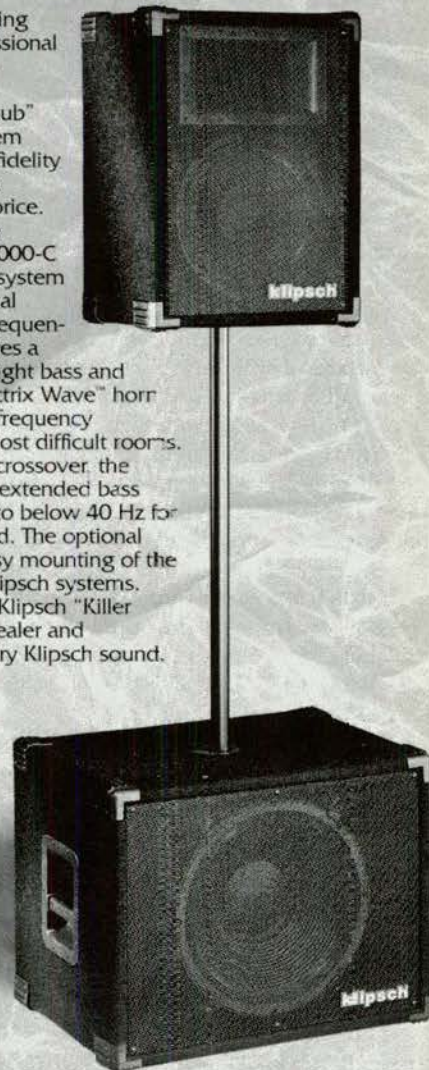
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Studio Monitor Shootout!

STUDIO MONITORS will SHOOTOUT at ENTECH in Sydney next month. In fact the category presented is Nearfield Monitors, and the comparison promises to be the most comprehensive yet offered at a trade show anywhere in the world.

Monitors will be grouped according to size and sensitivity, each group is in a 3m x 3m area separated by walls. A common audio program will be fed to all groups, and the monitors themselves will be identified by number.

Visitors can select pairs by number, standing in a clearly defined 'hot spot'. Appraisal information will be provided to assist, and the objective is to provide a defined listening and purchasing criteria.

The units will be gain matched as closely as possible, and fed signal from Crest amplifiers. Amplifier choice was made after ENTECH exhibitors bid to provide amplification, cabling and switchgear for the Shootout.

At presstime most major brands were represented, and negotiations were underway to define a mutually satisfying audio track.

The Shootout will run daily during ENTECH, Tuesday April 23 until Thursday April 25th, in the Interactive AV Zone behind Hall 4 at Darling Harbour in Sydney.

ENTECH is free to trade, and is open 10am until 6pm each day. It is the largest trade show of its kind south of the equator!

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SYDNEY: Woolly Mammoth say that once inside, the 'Woolly Vibe' starts to surround you. The control room doesn't leave you feeling claustrophobic, and at 7m x 7m, it also has what the Woolly people call; 'the biggest lounge in the world'. The sounds go onto 2 ADATs run by a BRC, and they have a Soundtracs 32/8 midi console. The main recording space is 7m x 6.5m, with more spaces attached.

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MONICA SELES LOBS IN TO ROCK OUT AT STUDIO 52

PR coup for Collingwood Music studio

In answer to the rumours that Monica Seles was seen hanging out in Collingwood's (Melbourne) Studio 52 mere hours after her victory in the Australian Open Final, it is true.

In what must be considered quite a coup, Studio 52 managed to engineer the collision of big time tennis and Melbourne independent rock. Imagine Paul and Trevor's surprise one morning when out of the blue Monica Seles' manager rings to arrange for Monica, a 'meet and greet' at Studio 52 following the final of the Open, win or lose.

The story behind this remarkable event shows not only the initiative that exists in Melbourne and Australia's independent music scene but also the power of its music.

A couple of years ago Melbourne band "Young Elders" released their debut EP entitled "Fly Monica Fly" through Collingwood's independent Studio 52, the title track of which was written for a friend in distress. About the same time, in a different world, Monica Seles received the injury that many said would put her out of the game for good. The stabbing by a crazy fan would leave emotional wounds far deeper than the physical puncture. In the months following the tragedy, Seles received from Australia a copy of "Fly Monica Fly".

It proved to be an inspiration for the recuperating Seles and helped her recovery and re-emergence on the world tennis circuit.

Her coach was to remark during the meeting of Studio 52 just how many times he'd heard that song, as she had used it as a motivational tool during practice throughout her comeback.

The rest is a matter of public record and with her newly acquired Australian Open title she rocked on down to Studio 52 to meet the Young Elders. While the event had initially been open slather for the press, a none too friendly conference following the Open win resulted in the Australian Press being left out in the cold with only Melbourne street mag In Press represented. US network ESPN were there to take exclusive video footage and did just that, cutting a full clip of the band performing in 52's newly refurbished Studio A.

The edited clip of the song in full, went to air 17 hours later across the US straight after the coverage of the Australian Open Women's Final. Celebrated tennis photo-journalist Michael Baz took lots of happy pics of Monica talking to the band and Paul and Trevor from Studio 52 as well as signing autographs on copies of the CD before being presented with her own "Fly Monica Fly" Studio 52 T/Shirt (signed by the band and Studio of course). Many of the photos will end up with publications like 'Sports Illustrated', 'Vanity Fair' and 'Billboard'.

At one point Monica entertained the gath-



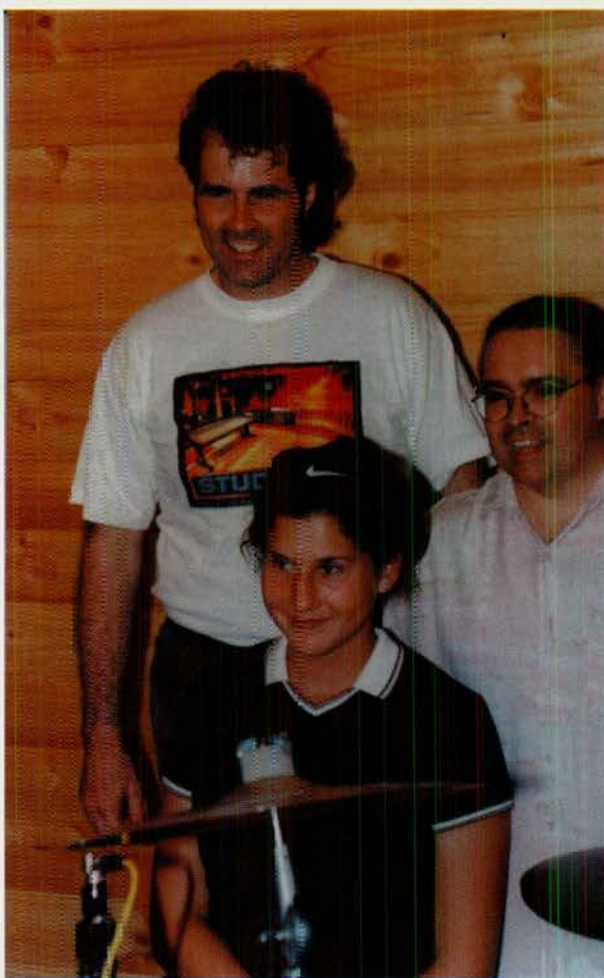
Studio 52's newly refurbished Studio A

ered throng with her drumming technique and if nothing else proved that her rhythm was much better directed at green, furry balls. No one seemed too concerned though, and the bubbly flowed, everyone talked, and all the while cameras whirred and flashed. The trophy cup made an appearance at one stage to a rousing cheer, but as is the case with all good things, thanks were exchanged, final autographs and photo opportunities taken and Monica and her entourage took their leave.

It was obvious by the grins on the faces of Paul, Trevor and the band that this amazing encounter had gone off without a hitch and would be the subject of much conversation later.

In realistic terms it has given Studio 52 and the Young Elders an opportunity that many dream of and few achieve. Their names will appear in magazines and newspapers around the world as well as the band's film clip airing before an American audience estimated at sixty million. While the presence of the Australian media would have meant more immediate exposure, the band and Studio 52 are ready to deal with whatever may arise from this unique cross cultural event.

•Studio 52 can be found at 23-25A Johnston Street, Collingwood 3066. Call 9417-7707.



Paul Higgins and Trevor Carter with Monica in the Studio.

Band 'Young Elders; pose below with Monica in Studio A at Studio 52.



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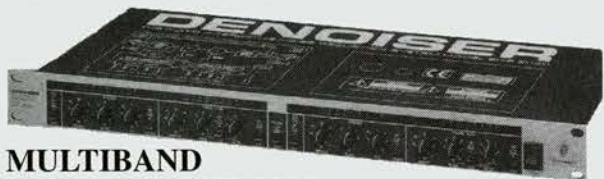
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Write in Reader Service Number: 166



From those cards and letters that just kept on rolling in it seems that more than a few readers like the idea of this column. Most were complimentary, the others can go jump, so it appears I'm set for lunch money for another month or two. (Thanks Julius).

I'd said at the outset that as far as computers go I'm a PC person and know zilch about Macs, although I did see a knockout notational music sequencer which did voice tracks too on the Mac from Opcode called "Overture". If ever the piggy bank gets enough in it or some kind benefactor wants to set me up with a Mac that's the one I'd want on it for making music tracks with or without vocals.

As I said before, the object of making tracks is to put them on a medium that you're able to distribute to others - either for general interest, rehearsal and demonstration purposes or to hopefully sell a million copies and make you rich. Naturally enough, there are many out there already trying to do just that so whatever tracks you come up with will need to have just that little something extra to grab the listener's attention.

Some musicians love working in the studio and are able to do their best work there. Others prefer recording whilst working live, where the feeling of well-being inspired by audience feedback (and quite often Southern Comfort) makes them feel better. We're not concerned here with the major recording studio setup where equipment size and cost isn't a major factor, but with the home - or even portable - studio where both things matter very much.

Now I'm a jazz musician and whilst playing at a large jazz festival at Sacramento (California) a couple of years back I spotted a guy taping the band from his front row seat at one of our performances. This is allowed at many US

jazz festivals and doesn't seem to detract from artists' CD and record sales immediately after the performance, with most such "tapers" only doing it for their own use.

Such was the case with this gentleman, and when I asked him if he'd be kind enough to send me a copy later he readily agreed. It duly turned up and I was staggered with the recording quality and overall sound. He was kind enough to include details of the gear he'd used, which turned out to be a Sony Professional Walkman, model WMD6C together with an ECN-909A microphone. Media was Tandy's Super Gold chrome tape and the copy he sent me was a third generation dub.

In other words, he'd edited down his original onto another tape then sent me a copy of that. It was quite amazing to hear such fidelity and I later passed on the model number info to a Sydney musician friend who duly bought the same machine but added to it a \$399 mic called ECN 959A. This has a 90 to 120 degree switch so can "hear" a wide spread of sound such as a large stage band or orchestra and I've heard some of his excellent results too. He's gone a stage further with the recording media by using Sony's "Metal Master" type 4 ceramic composition tape. At around \$21 for a C-90 these aren't cheap, but the results he's getting justify everything.

The WMD6C Pro Walkman is an analog tape recorder whilst the alternative system of DAT units use digital technology (DAT simply means Digital Audio Tape). I'm told that Sony have kept threatening to discontinue the analog Walkmen but "people just keep on wanting to buy them" so they're still available. The TCDD8 DAT recorder uses a different type of tape cassette and tape path system, having a full rotary head similar to a video recorder. Again, fidelity is

ERIC HOLROYD MAKING TRACKS

excellent, not surprising when you realise that the unit can record at up to 48kHz sampling rate (normal audio CD is 44.1) and the built in compression routines allow plenty of recording time per cassette, making it quite cost effective. A 60 minute tape costs around \$15.50 whilst a 120 is around \$25.00 so all that's nice and comparable. The unit itself bears a \$1399 suggested retail price and the same microphone ECM 959A at \$399 completes a very nice little recording setup which can be hooked up to the computer and synthesiser on a musician's desk or be carried out to the gig or whatever for "live" recording.

Whilst in Melbourne over Christmas I had a long conversation with long-time friend and super recording engineer Ron Halstead who uses the little DAT recorder at live jazz gigs around Melbourne. He praised it very highly and commented that the unit is capable of such very high quality that its only restriction is the amount of money you can afford to spend on a microphone. Ron reckons that the \$399 I mentioned is "great for the average user" but as a sound specialist he's super critical and uses a \$4000 mic himself. Horses for courses, as they say - and Ron does use that same mic with studio systems too.

Talking about studios, Sony's Pro Sound division handles those DAT recorders used in radio stations and recording studios too. The specs on these are fantastic (I'd love one of everything!) and their 8-channel PCM-800 handles 113 minutes of recording on Hi8 video tape at 44.1 or 48 KHz quality. This one is 372mm x 63mm x 220mm and is able to be "daisy chained" with up to 15 others to give perfectly synchronized digital recording of up to 128 channels. Variable speed playback, auto punch in/out, SMPTE/EBU time code chase synchronisation for movie and video producers, etc etc are available and controllable from an optional RM-D800 remote unit so this is really pro gear at around \$11,000.

Even more so is the PCM-7030 series at around \$17,000. This one's ideal for use in an integrated audio and video system or in an on-air situation and has more of everything.

Maybe neither of these units would be within reach of the mythical "average home user". Not at this stage anyway. But it's only a very few years that any sort of quality home recording was but a dream to the same user and look

what we can get now.

Minidisc offers very strong opposition to both analog and DAT tape as it too is available in a hand held and very portable Sony unit, the MZ-R3 Walkman. Bearing a suggested retail price of \$1199 and accepting the same \$399 ECM-959A microphone, this does a mighty job in sound recording using a little disc in a square housing 68mm x 70mm x 5mm. Two types of disc are available, the 74 minute one at \$23.99 and a 60 minute one at \$19.99. Again recording media costs are comparable.

The Walkman minidisc comes with those tiny "bud" earphones so you can record and listen to your playback anywhere and anytime, also having an Automatic Music Sensor system and Automatic Volume Limiting. Up to 4.5 hours of continuous recording are claimed from two AA alkaline batteries or there's an optional rechargeable pack available.

One of the major attributes of minidisc over tape or DAT is accessibility of the recorded data. Locating a track to play is as easy as it is on the home CD player, ie dial up "7" and it'll play track 7. A simple "move" feature allows you to instantly re-arrange all the tracks on your disc in whatever order you want. Very handy if you're making a "master" for your next CD and want to change the playlist order. You're also able to "divide" a track and copy bits of it to other places or media and can "combine" tracks for a fuller sound if you wish.

Not only that, as well as mic recording you can record direct to minidisc via Line In from another sound source - even a regular audio CD player. However, I'm not about to suggest that you copy your CDs this way to make a playlist of favourites or anything.

I still haven't made up my mind on which system I prefer as they all have attractive functions. I'm tending to lean towards minidisc at present as I can instantly find a track whereas on tape I have to fast forward or rewind to it. DAT tape has just that little bit higher sampling rate thought so I'm still confused.

I should say here that I'm not a paid employee of Sony (or anyone else for that matter) and have used all their gear as examples here because they seem to lead the field in all this, and they were very patient with my endless questions. They'll answer yours too if you call (02) 878-9712. •

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Sounds Fine Indeed

Another recording post production firm you may be unfamiliar with — Best FX is a professional recording facility working mainly in audio for the television and radio sector. Accordingly, the work is diverse: television documentaries, short films, animation, music recording. Album and CD mastering has also been done at the facility.

The company was initiated by Peter Best in the early half of 1992.

"Before starting Best Fx I worked for 10 years as an engineer for Street Remley studios (a well respected Adelaide studio). With continuing client support I was able to create an independent production facility. In doing so we were the first to introduce hard disk recording to Adelaide with the first Protools version on the market."

According to Mr Best, four years of growth has enabled Best Fx to expand, now employing a permanent staff of three including Studio Manager/engineer and Multimedia Co-ordinator Duncan Mc Adams; Composer, Arranger and Producer Sean Timms and Studio Co-ordinator Marie Edmonds and Peter Best.

"The future for Best Fx will be in the area of Multimedia platforms. Our downstairs area will be upgraded to a studio oriented towards this area, as well, we have recently acquired a Digital Video suite and a CD Rom suite for Multimedia productions." Call them: (08) 379 5466.

There are two main studios;

STUDIO A

Software : Protools v 3.1, Sound Designer II v 2.8, Toast (CD writer) v 2.5, Mezzo (Archiving) v 2, Lexicon Nuverb v 1.02

Hardware : Power Mac (32 Meg RAM), Digidesign 888 I/O interface - 16 track, CDQ 2000 Musician (ISDN interface), Mezzo 2 Archiver/storage, JBL 4430 Monitors. Digidesign TDM Expansion Chassis, Fostex 2tk (reel to reel), Soundcraft Spirit Studio 16-8-2, Sony DAR 7030.

STUDIO B

Software : Protools v 2.5, Mezzo 2 v 2, Logic Audio v 2.5

Hardware : Mac Quadra 950, Mezzo 2, Promix Console, Fostex D-10 DAT, Akai S3200 Sampler, Emulator IV, Ensoniq TS12, Korg SR Wavestation, Sony MDS101, JBL 4408A Monitors, Yamaha NS10, Sony TCD-D10 Pro DAT.

Making DAT Masters Sound Even Better!

By Daniel Cole

Set in semi-industrial Hindmarsh Neville Clark of DiscEdits has a neat set up. He provides what is termed a mastering service.

Once a recording project has been completed, it's another task to then make it sound correct, technically and aesthetically before it is sent to a CD plant for pressing. Tracks have to be ordered, levels have to be consistent and correct for industry standards, glitches or bugs removed, sounds or frequencies processed if necessary. This is the core activity of DiscEdits.

His clients are mostly Adelaide based ranging in styles from jazz to hard core trance, saying that "DiscEdits masters a major share of independent releases". There are some interstate clients too, but Mr Clark says he is "happy to keep the focus local for the moment". He continues, "When I started DiscEdits three years ago my intention was for a music mastering post audio facility with digital editing. Now my activities are split 50/50 between mastering and actual post audio/music production recording."

The trick question is what is mastering? Mastering has a few connotations, for instance, mastering in a CD plant involves creating a glass master for the CD run — different to the service that DiscEdits offers.

"In many recording facilities it is considered that digital mastering is just mixing the multitrack to DAT — there is more to it than that"

It is generally the case that a major mastering CD company would be cautious with a master that has not been mastered by specialist.

"We take the DAT master through processing, equalisation, balance and general processing to enhance what the producer is doing, to ensure that it is loud enough and sounds good on reference speakers, at high levels. It's a

finishing off process.

"We construct a master tape that is acceptable for any of the plants, with time-code and a generated track sheet with ID points on it."

Mr Clark says that processing is analogue, such as parametric EQs, master EQ, dynamic control and spatial enhancement.

"There is only one analog step from DAT to hard disk. Here material is removed, edited then digitally transferred back to DAT.

"There was a time when Adelaide material was lower in level — you had to turn the stereo up. Over the last 18 months there has been a continual drive to squeeze out as much level as possible out of a CD. The Cruel Sea's last CD is an example, it's very loud." he continues,


"We keep up with trends so when people press a master here they're not disadvantaged by lack of knowledge. It's a value adding process."

DiscEdits, phone (08) 340-1377.



Neville Clark of DiscEdits

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You **cannot** win a free QANTAS ticket to ENTECH unless this is the original form from Connections. It must be **MAILED** to us, and we must have it here no later than 5pm, Monday April 1st 1996. Ticket draw happens then. Will you win? **SYDNEY VOTERS CAN WIN TOO!** *If a winner or winners come from the Sydney area, we will award a free QANTAS ticket to any Aussie State Capital city, useable anytime within 6 months! (Subject to seat availability).*

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SIGNED: _____

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- Ampower installer series 100v line amps
- ARX Mixxmaster
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- Kurzweil K2000
- Numark DM1425 sample mixer

Music Technology Product

- Alesis QuadraSynth Plus
- Kurzweil PC-88 keyboard
- Roland VG-8 Guitar system

DJ CD player

- Gemini CD-9000 dual CD player
- NuMark CD7020
- Pioneer CD-J500 CD turntable

Live mixing console, large format

- Crest Century GTx
- Midas XL200
- Yamaha PM 3500

Live mixing console, small format

- Mackie CR1604
- Phonic M2442
- Spirit Folio Rac Pak

FX processor

- Ensoniq DP/4+ parallel effects processor
- Lexicon PCM 80
- t.c. electronic M5000 audio mainframe

Signal processor

- BBE 462 Sonic Maximizer
- Behringer Composer MDX 2100
- DOD 410 pa/monitor processor

Audio Tool

- ARX Multi-Q parametric
- Ebtech Line Level Shifter
- RDL Stick-On's

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- Meyer MSL-3
- Turbo Flashlight/Floodlight

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- Jands System 1400XL
- Yorkville EX-2000

Speaker system compact

- EV SX200
- Klipsh KP2000-C
- JBL Eon Power 15

Power Amplifier

- Crown Macrotech 5000VZ
- EV P1250
- QSC MX 3000a

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- EV N/D 408
- Shure Beta 58

Wireless System VHF

- Azden 31XT plug in wireless system
- Nady 201
- Shure L/LX Series

Wireless System UHF

- Sennhieser EM1046 system
- Sony WR 800 meg system
- Vega 620 system

Near/midfield Studio Monitor

- Alesis Monitor One
- Genelec 1030A
- KRK K Rok

Recording Product

- Digidesign : Pro Tools III
- Sonic Solutions : The Sonic System
- Soundscape System

Recording Console

- Mackie 8 bus
- Tascam M2600
- Yamaha 02R

Studio Microphone

- AKG C3000
- Audio Technica AT4033
- CAD Equitek E-200

DAT

- Fostex D30
- HHB Portadat PDR-1000
- Panasonic SV3700

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- Aphex Tubessence 107 preamp
- Crookwood Paintpot preamp
- Opccde Studio Vision 2.0 software

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Full size Moving Light

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- High End Systems Cyberlight CX
- Martin Roboscan PRO 1220

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- Abstract Futurescan III
- Coemar Microscan 3
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- Martin Robocolor Pro 400
- Showcraft Colourset Scrollers

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- LSC Atom
- Theatrelight Scenemaster 3

Mainstream lighting control desk

- Jands Event Plus
- LSC Axiom 24/48
- Strand GX

Power user lighting control desk

- ETC Obsession
- Jands Hog
- Strand 430

Dimmer

- Bytecraft Bytesize
- Jands HP-12
- LSC Tour Series

Smoke Machine

- JEM ZR31E
- LeMaitre G300
- Lightwave Research F100

Luminaire of the year

- Altman Shakespeare
- ETC Source 4
- Selecon Arena Profile

Video Projector

- NEC 6100PG
- NEC LCD MTG
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THE ROGER BARRATT LIGHTING SCHOLARSHIP

In accordance with the wishes of the late Roger Barratt, the previous ENTECH Award Winning LD, a fund has been established to provide a training scholarship for one young aspiring LD each year. This year marks the start of this program, which will grow and expand with the support of the industry.

- The program for 1996 provides the successful applicant with:
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 - London secondment at conclusion of local secondment;
 - expenses paid including return Qantas air travel to London, provided by ENTECH and Stage & Screen Travel.

This Scholarship will suit an extremely committed individual younger than 27 years of age. It is open to any Permanent Australian Resident. It will be overseen by industry people determined to fulfil the wishes of Roger Barratt, a great Australian LD who championed the concept of youth training.

TO APPLY:

In the first instance write. Your application must satisfy the following criteria to be considered:

1. You are a Permanent Australian Resident born after 1968.
2. You include two written references who can attest to your previous commitment towards your lighting career.
3. You include one recent photograph, passport size or greater.
4. Send your CV or Resume, up to date.
5. Include a cover letter stating exactly why and how you feel further training can assist you.
6. You must indicate your availability to undertake this program, anticipated to commence around June this year (1996), and run for about 3 months duration, ending in London.
7. Although not crucial, we anticipate you will go some of the way towards meeting your living costs during the program. The program is NOT an employment substitute, it is intended to give an enthusiastic individual exposure to different work environments, shows, and experiences. Your air ticket to London is a return ticket.

HURRY. APPLICATIONS CLOSE ON APRIL 1st 1996.

Successful applicant advised prior to ENTECH. No calls please.

Applications by last mail Monday April 1st to:

*Roger Barratt Scholarship,
c/o Connections Publishing,
PO Box 439,
EPPING, NSW 2121.*

(or hand deliver to Level 2, 41 Rawson Street, Epping NSW)

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PEOPLE who are Technicians, Engineers, who Work in Service, Supply and Behind the Scenes in Entertainment.

INSTITUTIONS means Production & AV Companies, Studios, Venues, Suppliers and any PLACE or FIRM in and behind the business!

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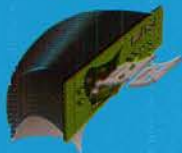
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HOWARD JONES WORKBENCH

THE OLD ELECTROLYTIC CAPACITOR TRICK

A recent workbench repair turned out to be one of those nasties which turn up every so often. The unit involved was a Sony PCM-701 encoder/decoder. I've written previously about the PCM-501, the older brother to the 701. Both units are designed to take an analogue input signal, digitise it and then format it in a way suitable for recording on video tape.

The idea is that you hook up the 501/701 to, say, a VHS machine and you can then store and recall digital audio from video tape. This method was effective up to a point: more importantly, it was the only way of doing this in the early days. Now, DAT does the same job more easily and with greater reliability.

This particular unit was normally connected to a digital editor/workstation - whilst the client no longer used it for archiving material, he did have a large library of previously archived recordings which his clients frequently required to have restored and freshly edited. At the time this unit failed it was thought to be the only one in the country and there was a lot of work coming up which required the 701 to be in working order (natch).

Because PCM-701s was never sold directly in Australia, we found that we didn't have a service manual in our technical library. No worries - our client had been given a folder of info when he originally bought all the gear and this included circuit diagrams. As it turned out, these circuits were A4 photocopies of photocopies of what were something like double A3 sized originals. And, of course, the circuit diagrams only related to the original Sony circuits - there were no details of the circuit mods made by the workstation manufacturer. Hi-ho.

The fault was that the unit was basically dead. There was no front panel display at all and it wouldn't process any audio. It seemed obvious that there was a failure somewhere in the power supply so I sat down with some hope of a straightforward repair ahead. I toggled each of the buttons on the front panel: nothing lit up but I could hear a relay click when I hit one of the

switches. So, not completely dead!

Removing the top panel reminded why working on these units is such a thrill: designed as consumer rather than professional devices, they are veritable wiring jungles. This one had lots of circuit boards stuffed into it with lots and lots of wires joining them all together. Mostly these wires were hard soldered rather than being on pluggable connectors.

Well, there were not one but two power supply circuits. One was mounted horizontally and was easy to get around. The other was mounted vertically on the back panel and was impossible to get at, even to take voltage measurements. However, the volts have to go somewhere, so it becomes a question of tracing the power supply rails and measuring them at the other end. The analogue circuit board was large, occupying the entire right hand side of the unit. Checking around the op amps and converter ICs on this board showed that all the voltages you would expect to see were, in fact, present. Similarly, checking on the power supply board I could get at revealed that all rails coming from the transformer/rectifiers appeared to be normal. This problem was starting to looker a little deeper than first appeared.

One technique to use in these situations is to sit and stare for a while, so I did this: pulling at wires, looking for burnt components, figuring out the circuit layout. Eventually, I noticed that two corners of the audio board were broken off. The unit had evidently been dropped and the PCB had sheared off where it was secured by two mounting screws. Unfortunately, it turned out that this was one instance where damage like this had not caused any broken or shorted tracks. The owner couldn't believe that the unit had been dropped and I couldn't believe that I wasn't going to get away with a simple fix.

A transistor shown as Q817 on the mudmap had the emitter connected to R852. The output from this resistor went to Q803 but was also connected to the reset input of IC601. The reset is an active low

(continued over)

BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
New South Wales			
Airmotion Guy Dickerson (02) 550 6576 24 Track Analogue			
Rancid	Band	Bruce Reider	Demos
Blue Million Miles	Band	Greig Beck	Album
White Noise Prodn.	Brenton White	Guy Dickerson	Jingles
Lisa Shipley	Colin Watson	Jim Bonnefond	Album
Otto Orchestra	Tony Goiman	Johnny McPhail	Album Mix
Back Sliders	Band	Guy Dickerson	Live Album Mix
Bush Traks Ruth Miller (066) 891 290 24 Track Recording & Multimedia			
Pagan Love Cult	N.Pike/D.Highet	Dave Highet	CD-ROM
Spiffmasters	Tonkin/Major/Highet	Dave Highet	Album
Flame Tree	Band/Dave	Dave Highet	Album
Charling Cross Studio David Sykes (02)387 8362 - 24 Trk Neve			
Little Hornets	M.White/C.Beck	Martin White	EP Tracking & Mixing
Dettol	Mat. Maddox	Peter Jones	EP Mixing
Ammonia	Greg Wales	Greg Wales	EP Tracking & Mixing
Burning Orphans	Dave Trump	Dave Trump	Tracking & Mixing
Plunge	Craig Portells	Peter Jones	Tracking & Mixing
Deisel/Wilson	Peter Jones	Peter Jones	Special Project
Crystal Clear Studios (02) 684 1152 David Tozer 24 Tk Digital ADAT System & BRC 32 Ch Console			
Christ Art Museum	Band/Dave	Dave Tozer	EP Pre-Prod.
Strange Company	Dave Tozer	Dave Tozer	Demos
Kryptic	Dave Tozer	Dave Tozer	EP
The Persuaders	Band/Dave	Dave Tozer	Demos
XWHY	Dave Tozer	Dave Tozer	Mixing Tracks
Jimmy Zepher & Silver Beat	Dave Tozer	Dave Tozer	Demos
Damien Gerard Studios Contact Marshall (02) 660-8776 2 x 32' 24 Trk			
Nick Smith	Gulliven Smith	Jamie Carter	Demos
Driftwood	Jamie Carter	Jamie Carter	Album Tracks
The Gadflies	Band	Russ Pilling	Album Tracks
Ashtray Boy	Band	Marshall Cullen	Album Tracks
James T & The Volunteers	Band	Russ Pilling	Demos
Steve Lucas	Steve Lucas	Russ Pilling	Demos
Eclipse Music Studios Jodie Sharp (02) 264 7734 Mitsub: 32 Trk Digi/Studer 24 Trk An (Studio A)SSL Suite			
Paynote	Paul Mc Kercher	Paul Mc Kercher	Demo/Mix/Trkg
Renegade Funk Train	Band	Ramesh Sathiah	Mixing
Neil Murray		Colin Simpkins	Mixing
Idiot Box Comp.	Rogers/Launay	Nick Launay	Mix. Album
Nick Freedman	N. Mainsbridge	N. Mainsbridge	Demo
The Cruel Sea	Band	Brett Stanton	Mixing/Trkg.
Festival Studios Catherine Knapman (02) 660 4022 2 x Analogue Multi-Tracks or Digital Multi-Track			
Tumbleweed	Paul Mc Kercher	Paul Mc Kercher	Album
Ian Moss	Don Walker	Thomas/Lovell	Album Tracks
Hullabaloo Music Glenn Heaton (02) 9906 2933 24 Tk. Analogue/8T Digital/Pro-Tools			
Hullabaloo	Andrew Marsh	Heaton	Konica TVC
Pixie	Pixie/Heaton	Glenn Heaton	Single
Kylie Adams	Wayne Daniels	Langford	Demos
Strum Jungle	Hullabaloo	Heaton	Album Pre-Prod
Hullabaloo	Hullabaloo	Heaton	ABC TV Themes
JMF Studios Fran Esther (02) 790 4097 24 Trk/Dig. Mast.			
Mesaline	Band	Willie Sweet	Demo
Field	Band	Willie Sweet	CD
Over The Edge	Band	Ralph Esther	CD
Pilgrim	Band	Ralph Esther	Demo
Main Street Studio Rob Specogna 042 834 515 16 Trk			
Nod Scene	Rob/Band	Rob Specogna	CD Album
Mick Ferguson	Mick Ferguson	Rob Specogna	CD Album
Gairden Cooke	Rob Specogna	Rob Specogna	CD Album
Rimana	Rob Specogna	Rob Specogna	CD Album
Jason Stephenson	R. Specogna	Rob Specogna	Demo
Four Kinsmen	Grant	Rob Specogna	Sound Effects
Megaphon Studios Guy Dickerson (02) 550 6576 24 Trk & 48 Trk Analog.			
Blue Bottle Kiss	Jack Endino	Jack Endino	Album
Silver Chair	Jack Endino	Jack Endino	
Leonardos Bride	Justin Stanley	Keith Cooper	Album
Chris Abrahams/Melanie Oxley	Chris/Melanie	Guy Dickerson	EP
Russell Crowe	Charles Fisher	Jim Bonnefond	Album
Idiot Box (Various)	Nick Launay	Nick/J.Blackwell	Film
Paradise Studios Lien Chew(02) 357 1599 48 Track A'log, Custom Mixer			
Elena Chenin	Greg White	Greg White	Doc. S/Track
Headshop	Band	Lien Chew	Demo
Gilgamesh	Dave Trump	Dave Trump	Mixing EP
Gina Jeffreys	Garth Porter	Ted Howard	Tracking Alb.
Col Nolan	Dave Siedel	Lien Chew	Album
Pathways Studio (02) 212 3101 Frank Kerestedshjan 24 Trk 2" Anal. & CD Mast.			
Cardy Cats	Frank K.	Frank K.	17 Songs CD
Allen Dargin	Mark Callaghan	Frank K.	CD
Paul Bryant Mastering Paul Bryant 02.748 6055 Mastering Suite			
Gashammer	Greg Clark	Paul Bryant	CD Album
Clelia Adams	Colin Simkins	Paul Bryant	CD Album
Astral Taxi	Jeff Cripps	Paul Bryant	CD Album
Dhatoka	Grant Luke	Paul Bryant	CD Mini Album
Robert Goode	Marcus Nassner	Paul Bryant	CD Album
Daniel Holloway	Allen Castleton	Paul Bryant	CD Album
Q Recording (02) 212 4851 Gordon Sullivan 24 Trk Studio, 02R, DA-88			
Glide	Band	Wayne Connolly	Album
Hipnosis Horns	Band	Gordon Sullivan	Demo



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Workbench (continued)

and when I checked this line, sure enough, it was being held low. This explained why the front panel was dead, since IC601 was the control chip for the fluorescent display. Tracing backwards from Q817, most voltages seemed to be correct, but I was distracted by the circuit layout. At a glance, it looked like you had two pairs of diodes connected anode to anode with no possibility of anything sensible happening.

The solution is to redraw the diagram as a straightforward half wave bridge rectifier circuit but with a negative output rather than a positive one. This then makes the ground rail the active voltage supply feeding the collector of Q822 and the emitter of Q817.

Considered like this, it seemed obvious that I should see a fairly smooth DC voltage at the negative end of C815. What I was, in fact, getting was a horrible periodic waveform, flat on top for a bit, then collapsing away towards the maximum negative voltage. At last, I was getting somewhere. C815 was

quickly chopped out, together with Q817 for good measure. When I powered it up again, everything worked again - for about 60 seconds.

This second failure was much like the first, with the trouble traced to the circuitry around Q817. This time Q822 had failed, so this part was changed together with every electrolytic capacitor in the surrounding area.

When it comes to electros, take no enemies, I always say.

When I finally got this beast running reliably, everything looked fine. The front panel displays were all okay and audio was happily coursing through its veins.

So what was the final slap in the face? After 10 minutes, the D-A converter failed.

But the client was happy - he only needed the circuits upstream of the converter to work to get him out of gaol. Sometimes, even Murphy can be kind....

**Howard runs Studio Solutions in Sydney. Call him on (02) 9906-4363.*

BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
Love Craft	Mark Thomas	Mark/R.Muecke	Album
Powder Finger	Band	Tim Whitten	Single
Flaming Barstools	David Price	Price/Muecke	Album
Sons of Mozart	Band	Richard Muecke	Album
Rathouse Recording Studio	Mark Macedone	018 270 731 16 Track to Dat Masters	
Knucklehead	S.Barone/Mark	Mark Macedone	2nd CD
Griffith Video World	Mark Macedone	Mark Macedone	Jingle
R. & R. Recordings	Robert Zimola	(02) 672 4494 16 Track 1' Format	
CJJM	Mike Kerin	Robert Zimola	Album
Nu-Skin		Rob Zimola	Corp. Communications
John Doe		Maurice Mariasson	Re-Mix
Rockinghorse Studio	Samantha Currie	(066) 88 4131 48 Track Anal./24 Track Anal.	
Donna Blackburn	Donna	Greg Courtney	Album
Hit & Run	Billy Thorpe	Mazzone/Thorpe	Demos
Hi Home I'm Honey	Band		Album
Cartoon	Cartoon	Keith Williams	Album
Wayward	Band		EP
Matt Robinson	Matt	Leigh Ivin	Album
Skylab Studios	(02) 310 4774 24 Track Digital		
Caribbean Soul	Errol Renaud	David Russell	Album
Bone People	Band	Nonda	Album
Mamma Jamma	Gary Kee	Gary Kee	Single
Carmen	Tito	David Russell	Album
Shelley	Shelley	Peter Thomas	Single
David Andor	David Andor	David Russell	Album
Sound Level	Joe Breen	(02) 9552 3200 16 Track Digital Tascam DA88	
Skins	Joe Breen	Joe Breen	Live to DAT Demo
Gina Jeffreys	Rod McCormack	Greg	Live to DAT Demo
Mother Hubbard	Joe Breen	Joe Breen	Demo 16 Trk
Wayne Goodman	John Bee	John Bee	Demo 16 Trk
Dianne Sciberras	Paul Dunn	Paul Dunn	Demo
Soundwarp Audio Services	(02) 9905 7144 Meredith Brooks	Mastering/Post Production	
Altar Ego	Terry Funnell	Meredith Brooks	CD Mast.Album
Jaded Vision	Sally Paish	Meredith Brooks	CD Single



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ARTIST	PRODUCER	ENGINEER	PROJECT
Greg Champion	Greg Champion	Meredith Brooks	CD Album
Wayne Johnson	Wayne Johnson	Meredith Brooks	CD Album
Hugette	Steve Raman	Meredith Brooks	CD Single
Ken Sparkes/Var.	Kerrie Hayes	Meredith Brooks	Cricket Promo's
Studio Arts Productions	(042) 849128 Ed Lee. Independent Recording Studio		
Custodians		Ed Lee	Demo
Mercedes		Ed Lee	Demo
Yen	Ed Lee	Ed Lee	Pre-Prodn.CD
Erica's Jive	Band/Ed	Ed Lee	CD
Mathew Sylvian	Mathew/Ed	Ed Lee	CD Complete
Broadcast	Band/Ed	Ed Lee	CD
Trackdown Geoff Watson	02.550 6890 The All New A1 Digital 2-32 Track automated total recall facility!!		
McFeast Program	ABC Television	Michelle Barry	Songs for Show
Samuel	Yoram Gross	Leon Horrocks	Audio Post Pro
Oceania	Jumper Films	Tim Ryan	Doc. Series
Ian Purdie	Ian Purdie	Steve Cummings	Mixing Album
Tracking Station Kylie McKenzie	(02) 281 8899 24 Tk. Commercial Facility		
Don Spencer	Don/T.Murray	Chris Brooks	Single
D.Spencer/T.Murray	Don/Terry	Chris Brooks	Album
Mind State	Charles Sukkar	Anthony McKerzie	EP
Troy Horse Michael Levis	(02) 557 3129 48 Track Analogue Studio		
Midget	Paul McKersher	Paul McKersher	EP
Hay Charger	Gibson/Kelly	Colin Wright	EP
Mama Bird	Will Sweet	Will Sweet	EP
Sultana Mahamad	Band	Liberty	EP
Silver Beet	Lia Kemp	Colin Wright	EP
Woolly Mammoth Mik Sanning	(02) 557 2721 16 Trk. Digital W/Midi		
Dig Ifedioranma	Dig Ifedioranma	Peter Ring	Album
Hummer	Hummer	Jorden	EP/Demos
Urban Guerillas	Band/K.Stewart	Nik Sanning	Album
Mockingbird	Band/M.Paisley	Brett Sullivan	Album
Frozen Doberman	Band	Nik Sanning	Album Demos
Spun Jungle	Band	Nik Sanning	Demos
Queensland			
Burbank Productions John Ryan	(07) 324 54314 16 Track		
Tina Martyn	John Ryan	John Ryan	EP
Dusty Fraser	Dusty/Ryan	John Ryan	EP
Bernadette Gill	Bob Hall	John Ryan	Single
Blackdog	Band	John Ryan	Demos
Tanya Self	B.Radford	John Ryan	Demos
Altered States	Band	John Ryan	Demos
Digital Paradise Ian Peters	(07) 5527 0722 32 Trk. Dig. Rec.Studios		
Manpower Ausmalia	Sharon	Ian Peters	World Tour Master Tape

ARTIST	PRODUCER	ENGINEER	PROJECT
Mic Bryers	Ian/Mic	Ian Peters	Demo Tracks
West Hollywood Prodns.	Gary Bignall	Ian Peters	TV Comm.
David Birmingham	David	Ian Peters	Demo Tracks
Bojo Prodns.	Evan Webster	Ian Peters	Show-Jupiters Casino
Hayden Wood	Mike Wade	Ian Peters	Album Project
Grevillea Recording Studios Malcolm Jacobson	(07) 3262 8422 24 Trk. Analog/16 Digital/CD Mastering		
Steven Kinney	Steven	Mal.Jacobson	Single
One 23	One 23	Mal.Jacobson	CD Mastering
Neil Wickham	Neil Wickham	Mal.Jacobson	Demos
G.Arthur/V.Genova	Mal.Jacobson	Mal.Jacobson	CD
Glamalot	Toadshow	Bruce Jacobson	Loc.Rsc. & Lyric Theatre
Outlaw Recording & Recdrds.	070 576 742 or 018 772 380	Jerry Reinisch	Adat 16 Track
Court Jesters	Carinda Christie	Uncle Jerry	Demo
Public Emotions	J.Reinisch	Uncle Jerry	Album
Prodigious Audio (07) 557 11400	Richard or Marty. Hard Disk & Dig. Tape, Pro Mix Dig. Console		
Warcry	Mark Munro	Mark	4 Track EP
Baby Jay	Mark Munro	Mark	Demo
Grooveilicious	Mark Munro	Mark	Dance Remix
The Fugitives	Richard/Sean/Mat	Richard	6 Track EP
Hoover	Richard/Band	Richard	Demo
Suite 16 Audio Productions Murray Lyons	(07) 3369 3733 24 Tk. Analogue/Digital		
Mark Allan	Garry Smith	Dave Richards	Album
Kristie	Garry Smith	Dave Champion	Album
Greg Hind	Garry Smith	Dave Richards	Album
Sangria	Dave Richards	Dave Richards	Album
Studio 19 Allan Castleton (077) 757 375 16 Track & Midi			
Adrienne Burgess	A.Castleton	A.Castleton	Demos
The Drowners	Ben Tuite	A.Castleton	Songwriters Demo
Alexia Gray	Gray/Castleton	A.Castleton	Cass.Single
Soft Touch	Phillip Jones	A.Castleton	Over Dubs
Sunshine Studios Leon Prescott	(07) 844 6844 36 Channel	Neve	
Chopper Division	Magoo	Magoo	EP
Sean Sennett	Leon Prescott	Leon Prescott	Album
Jody Phillis	Robert Moore	Mark McElligott	Album Mix
Battered Fish	Magoo	Magoo	Album



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ARTIST	PRODUCER	ENGINEER	PROJECT
Vandersound Studios Eric Vandersande (075) 468100			
Soliloquay	Eric		Demo
Jodi Myuna	Eric	Jodi	Demo
Simon Milos	Eric	Simon	Demo
Paul Goss	Eric	Paul	Demo
Cameron Hess	Eric	Cameron	Demo
South Australia			
Bayfield Sound Studio Nigel Sweeting (08) 223 7211			
Tjakiri	Band/A. Bayfield	Andrew Bayfield	Soundtrack
Puppet Head	Greg Vincent	Andrew Bayfield	CD
Dyasing	Band/N. Sweeting	Nigel Sweeting	CD
Gangagiri	Band/N. Sweeting	Nigel Sweeting	CD
Disk-Edits Neville Clark (08) 340 1377 Digital Editing & Mastering			
Adel Chamber Singers	Crossin	N. Clark	Album-Master
The Undecided	P. Kolometsiv	N. Clark	EP - Master
Fuse	Nick Love	N. Clark	Album - Master
Crisp	R. Stanley	N. Clark	EP - Master
Fruit	T. Nesci	N. Clark	Album Editing/Master
DJ Angus/Various	Angus/Central Stn	N. Clark	12" Masters
Mixmaster Productions Mick Wordley (018) 822 986 24 Track 2"			
Peter Combe	P. Combe	Mick Wordley	Album Mix
Force Field	Band/Mick	Mick Wordley	Mix
Stolen Waters	Band/Steve	Steve Fieldhouse	Album Tracking
Numbskulls	D. Matt/Band	Dave Matt	Album
Loaded Zilla	Band/Mick	Mick/Evan James	Mix
Victoria			
Big Beat Studios (03) 99898 5815 John Toth 16 Trk. Analog. 1", 32 Trk. Auto Session 8 Hard Disk			
JFK	John "Shadow" Toth		CD
Amanda	John/Amanda		R&B CD
C'est Ca Audio-Visual Services Moira McCourt (03) 419 1506 Auto 24 Trk.			
Gillian	Siiri Metsar	Siiri Metsar	Girl Zone EP
Pat McKernan	Pat	Siiri	Album CD
Eleanor Taynor	Eleanor	Siiri	CD EP
John Maddin	John	Siiri	Marimboe Instruct. Tape
G.I.R.L.	Siiri Metsar	Siiri	Girl Zone Comp CD
Sasspirilli	Siiri Metsar	Siiri	Girl Zone Comp C D
Fortissimo (03)9699 5811 Melita Jagic/Adam Quaife 2" 24 Trk. Auto. Harrison Cons. 40 Ch.			
Discordia	Band	M. Thomas/T. Cohen	EP Rec. & Mix
Reil Diamond	Reil Diamond	Quaife/Jagic/Parsons	6 Tracks Rec./Mix
Frenzel Rhomb	Band	T. Johnston	Album Tracking
Fear of Falling	Adam Quaife	A. Quaife	2 Tracks
Gotham Audio Tom Kehoe (03) 987 99400 SSL Console/Sony 48 Track Digital			
Auto Haze	Laurence Maddy	Laurence Maddy	Mixing
John Farnham	Ross Fraser	Doug Brady	Album
RB-X (Australia) Bevan Quelhurst (03) 9429 6199 24/48 Track Rec./SSL Cons.			
Desert Mouth	Band	Mark McDougall	Rec. Single
Survival Kit	Band	Mark McDougall	Rec. Album
Greg Champion	Greg	Mark McDougall	Album Tracks
Angel Fire	Angel Fire	Matt Voigt	Demos
Bib Productions	Mike Brady	Doug Brady	Jingles
Chris Copping	Chris Copping	Melita Jagic	Jingles
Sing Sing Kaj Dahlstrom (03) 9428 4622 SSL, Neve 24/48 Trk. Dig. & An.			
Header	Chris Dickie	Chris Dickie	Album
Automatic	Nick Laurnay	Nick Laurnay	EP
Things of Stone & Wood	Simon Holmes	Thomas Blaxland	Album
Dave Graney	Tony Cohen	Tony Cohen	Mixing Live Album

ARTIST	PRODUCER	ENGINEER	PROJECT
Bad Loves		Doug Roberts	Mixing Live Show
Rebeccas Empire	Shane O'Mara	Laurence Maddy	Album Mix
Studio 52 Paul Higgins (03) 9417 7707 Studio A - 32 Trk. Studio B Adat			
Headcleaner	Trevor Carter	Trevor Carter	Nu-Music 12/Demos
Indian	Trevor Carter	Trevor Carter	2nd Album Trkg.
Presence	Trevor Carter	Trevor Carter	Remix of Alb. Rec. at SAE
Mahogany	Band	Simon Segal	Album Tracks
Wendy Powles	Trevor Carter	Trevor Carter	Album Tracks
Quarter to Nine	Band	Rowan Jarl	Demos
Wombat Road Studio (051) 454204 Barry Clissold 24 Trk. Plus full Midi Facilities			
Kris Hansen	K. Hansen	Barrie Clissold	Demo Tracks
Mixed Nuts	Band/Clissold	Barrie Clissold	Demo Tracks
Vahzaw	Band	Barrie Clissold	Demo Tape
Jocks Full of Jelly	Band	Barrie Clissold	Album (EP)
Repugnance	Band	Barrie Clissold	Demo Tape
A Tractor Prodn.	B. Baker	Barrie Clissold	Jingles
Northern Territory			
CAAMA Music (089) 523 744 Richard Michalief 24 Track/Midi			
Warumpi	Mark Ovenden	David Lumdsdale	Comeback Album
Kakadu Studios Ken Hutton 089 411344 24 Track, Mobile, Digital Mastering			
Paul Francis	Ken Hutton	Ken Hutton	Covers Album
Urshula Yovitch	Ken Hutton	Ken Hutton	Original Album
Bleswick Community	Ken Hutton	Ken Hutton	Aboriginal Trad.
Thayak	Ken Hutton	Ken Hutton	Torres Strait Reggae
Papier Cage	Ken/Band	Ken/C. Simpson	Demo
Peter Siritotis	Ken Hutton	Ken Hutton	Greek Songs
Western Australia			
Bonsai Recording Studio Tom Thorpe (09) 349 6029 24 Track			
PMFM Morn. Crew	Tom Thorpe	Tom Thorpe	Jingles
Kay-Redman	Tom Thorpe	Tom Thorpe	Jingles
Project X	Tom Thorpe	Tom Thorpe	Demo
Planet Sound Studios Contact John Villani & Denise Preston (09) 382 2211 48 & 32 Trk. Digital/24 Trk. Analog.			
Hank Marvin	Hank Marvin	Les Williams	Concert Mix-Down
Power Shift	Band	J. Villani/L. Williams	Album Mix Down
Thomas Regan	Thomas Regan	Les Williams	Demo (Film)
Mother Star	John Villani	John Villani	EP
Neil McCann	Neil/J. Villani	John Villani	Album
17th Doll	Kevin Peek	John Villani	Demo
Poons Head Rob Grant (09) 339 4791			
Spank	Rob Grant/Band	Rob Grant	Album
Danny Farrow	R. Grant/Danny	Rob Grant	Demos
Troppo Sound Mick Connolly 091. 922 394. 24 Trk. Dolby S Dat Master			
Thunder Mutts	Band	James Edwards	Froth - Album
Kuckles	Band	Brett Lyons	Corrugation Road
Witzend Recording Studio Alan Dawson (09) 3311818 16 Track			
Money Makers	Band/Alan	Alan Dawson	Demo
Mardi Picassos	Band/Alan	Alan Dawson	Album
Not to Serious	Band	Alan Dawson	Demo
Emulsion	Band/Alan	Alan Dawson	Album



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Write in Reader Service Number: 100

Wireless Microphone Buyers Guide

- We asked Distributors to list FOUR representative models (only), in each of the categories below.
- The PRICE shown is RETAIL including sales tax, correct at 15/2/96. (Connections takes all care but no responsibility for errors herein!)

VHF systems

AUDIO LTD. Audio Sound Centre. Geoff Grist (02) 9901 4455
MX/TX200 Mini system. Choice of two channels. 9v Battery. \$4880.

COMTEK Audio Sound Centre Geoff Grist (02) 9901 4455
M72/MRC82 Camera companion kit. Ideal camera/mixer link. \$2135.

H182/MRC82 Hand held transmitter. Portable receiver, 1500' range. 50 hours batt. Life off 3 'AA' batts. \$2435.

AZDEN CMC Music. Pat Bonham (02) 9905 2511
31XT Plug-in transmitter with diversity receiver. Converts any dynamic microphone to wireless. 10 frequencies available. \$799.

31HT Hand held system as above. 10 Frequencies available. \$799

31LT Lavalier system with diversity receiver. 10 Frequencies available. \$699.

CHIAYO Audio Telex Commu-

nications Don McConnell (02) 647 1411

DR505A System Diversity 1/2RU Receiver featuring tone squelch circuitry, and removable rear antennas. Available with a choice of guitar pack, lapel pack and hand-held transmitters. 10 stock frequencies available many more on request. \$877-\$1367.

DR318A System Diversity 1RU Receiver in rugged metal chassis with removable antennas. Available with a choice of guitar pack, lapel pack and hand-held transmitters. 8 stock frequencies available. Many more on request. \$909-\$1189.

R318 System Non diversity 1RU receiver with tone squelch circuitry and a removable rear antenna. Available with a choice of guitar pack, lapel pack and hand-held transmitters. 8 stock frequencies available. Many more on request. \$666-\$1156.

ELECTRO VOICE Mark IV Audio Fran Peskops (02) 648 3455
R-1 Non diversity radio system offering hand held with an N/D

157 capsule, Lavalier, guitar and headset. Non rackmount receiver, line level out. Available in six frequencies. RH 1 (Handheld)-\$850, RL 1 (Lavalier)-\$650, RC 1 (Guitar) \$615, RF 1 (Headset)-\$749. R-2 Diversity version on R-1. Utilising same transmitters as R-1 system. Rack mount kit is available. Available in six frequencies. RH-2 (Handheld)-\$999, RL 2 (Lavalier)-\$815, RC 2 (Guitar)-\$799, RF 2 (Headset)-\$949, RMR2 Rackmount Kit-\$80.

MS 2500 Diversity. Single rack mount receiver with removable antennas. Display on front panel for both Audio, RF and Antenna indication. Balanced XLR and 6.5 jack. Transmitters and receivers available separately. Hand held has N/D757 capsule. Omni, Cardioid, Headset and Guitar options available for belt-pack. Rack Mount remote antenna kit and splitter available. Available in up to 20 concurrently working freq. MR 2500 (diversity receiver)-\$913, MT 2500 (Handheld Tx)-\$886, MB

2500 (Belt Pack Tx)-\$599.

GEMINI Disco World Archie Kamakaris (03) 9735 0588

VH-180M Hand held mic system. Includes transmitter carry case and power supply and aeri-als. Available in 8 channels. Non diversity. \$599.

VH-190M Hand held mic system includes transmitter, carry case, power supply and aeri-als. Available in 8 Ch. Dual Antennas, accurate up to 300ft. True diversity. \$839.

VH-220M Dual channel true diversity mic. Hand held system, includes 2 hand held mics, dual channel transmitter, carry case and power supply. Available in 8 Channels. \$1229.

RM-600M Hand held mic system inc. mic, transmitter, carry case, power supply. 19' Rack mount, non diversity. \$659.

LECTROSONICS Audio Sound Centre Geoff Grist (02) 9901 4455

DR175 Diversity, rack mount. Four to 1UR, digital code system prevents harsh noise when

transmitter turned off. \$2,400.
CR187 Portable. Versatile. ENG systems, internal 9v battery or ext. 12v. No antenna on transmitter pack. \$3,300.

NADY SYSTEMS INC. Production Audio Services P/L Graeme Stevenson (03) 9415 1585

101XL Entry level non-diversity, available in hand held, lavalier, guitar and headset. Seven frequencies available, includes aerial. H/H \$625-LT \$595.

201XL Entry level true diversity, available in hand held, lavalier, gtr and headset. Seven frequencies available, includes aerial. H/H \$895 - LT \$849.

DUET Dual channel system, two complete channels on one receiver. Available in dual hand held, dual lavalier, dual guitar or combination. Includes aeri-als. Seven frequencies available. H/H \$1095 - LT \$1025.

RW-1 True diversity, 1RU rack mountable. Available in hand held, lavalier, guitar and headset. Includes aeri-als. Ten frequencies available. H/H \$1125 - LT \$1095.



The Nady 101XL and Nady 201XL VHF systems are available in three Transmitter formats - Handheld, Instrument and Lavalier. One Nady 101XL or Nady 201XL VHF Wireless Receiver with AC Power Supply and one Nady Wireless Transmitter on the same channel comprise a system. Every Nady Wireless System includes our patented companding circuitry for the maximum dynamic range and highest quality audio available, and new transmitter circuitry for 16-20 hours battery life-the best in the business.



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 Melbourne: 6-8 Elizabeth St., Richmond, VIC. 3121 Ph: (03) 9415 1585 Fax: (03) 9415 1595

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Wireless Microphone Buyers Guide

VHF systems (cont)

SAMPSON SYSTEMS Electric Factory Ray Kimber (03) 9 480 5988

VLXTD System Patent-Pending high speed microprocessor True Diversity™ circuitry. Balanced XLR output and 1/4" Output for added flexibility. Extended 18-hour battery life. \$999.

Stage 33 dbx Noise reduction ensures quiet performance and superb audio quality. Available with today's most popular hand-held, lavalier and headset mics. 17-hour extended battery life. \$899.

Concert Series III High speed microprocessor true diversity circuitry. dbx noise free performance and exceptional audio quality. Solid metal, professional 19" rackmount receiver with balanced and unbalanced outputs. From \$1399.

VLX System Reliable non-diversity circuitry for exceptional RF performance. Detachable 3-pin connector supplied with every lavalier and headset mic. Extended 18-hour battery life. From \$549.

REDBACK Altronic Distributors P/L Jason Heskett. (09) 328 2199

Non-Diversity Mic Receiver This compact unit is ideal for applications where the microphone transmitter is in close proximity (i.e. line of sight up to 50m in ideal conditions). Simple to operate, the unit will connect to any amplifier with an auxiliary input (line level). Includes antenna. Freq available 202.4MHz or 203MHz. \$379.

Diversity Mic Receivers Features stylish looks and high performance. Desk or rack mounted. Unique noise reduction system automatically compensates for high level sound input to avoid distortion. Front mounted mic volume control. In-built 240V AC power supply with provision for 12V DC input. Auxiliary audio input socket for line level source. Freqs available 202.4MHz, 203.7MHz or 216.25MHz. \$649.

SHURE Jands Electronics P/L Tim Hollinworth (02) 516 3622

T Series Provides prof performance at an entry level price. Diversity and single antenna versions available. 4 Freq. available from stock. The Guitarist: Body-pack instrument system. The Presenter: Body-pack lavalier system with WL93 miniature cond. mic. The Vocal Artist: Handheld system either BG3.0 or SM58 Capsule. The Headset: Headworn mic for vocalists or aerobics instructors. From \$651.64 to \$815.57

LX Series 4 Handheld, 3 lavalier 2 instrument and 2 headworn transmitter options. Over 30 frequencies available. Half rack width receiver. Battery Fuel Gauge. Lavalier with WL93 or handheld with Beta58. From \$1348.36-\$1635.25

SC Series Similar to LX Series, but additionally has switchable frequency and tone key squelch. Lavalier with WL84 or handheld with Beta87. From \$2045.08-\$1635.25

TELEX (USA) Audio Telex Communications Don McConnell (02) 647 1411

FMR150 System Diversity 3 channel selectable 1/2RU receiver with tone-squelch circuitry. Available with belt-pack or hand-held transmitters. True S/N ratio of 104db. Definitely the Rolls Royce of VHF Wireless. Wide range of frequencies available. From \$1977.

FMR70 System Diversity 1/2 RU receiver with removable antennas. Available with belt-pack or hand-held transmitters. Wide range of frequencies available. From \$1282-\$1851.

ENG4 System 4 Channel selectable portable wireless receiver suitable for mounting on a video camera. Available with a choice of belt-pack or hand-held transmitters. Operates from 4 x AA batteries. From \$3947.

VEGA Mark IV Audio Francesca Peskops (02) 648 3455

Single rack mount receiver, removable antennas, integrated power supply. LED display on front panel for both Audio, RF and Antenna indication. Balanced XLR and 6.5 jack. Transmitters and receivers available separately. Hand Held transmitter has the option of N/D 757, Vega K4 or EV BK-1 capsules. Omni, Cardioid, Headset and Guitar options available. Rack Mount remote antenna kit and Antenna multi coupler available. Available in up to 40 concurrently working frequencies. R-22 Receiver - \$1995, T-24 Hand Held (757 capsule)-\$1680, T-28 (BK-1 capsule)-\$1680, T-29 (Vega K4 capsule)-\$1680, T-25 Beltpack - \$1200.

VX Battery powered non diversity receiver for camera mount use. Utilises Dynex 111. T-24 Hand Held (757 capsule)-\$1680, T-28 (BK-1 capsule)-\$1680, T-29 (Vega K4 capsule)-\$1680, T-25 Beltpack - \$1200.

UHF SYSTEMS

AUDIO LTD. Audio Sound Centre Geoff Grist (02) 9901 4455
DXU2000/TX2000 Mini diversity system. Choice of 2 Channels on board. 9V Battery. \$7,500.

LECTROSONICS Audio Sound Centre Geoff Grist (02) 9901 4455

UCR190 Portable system with body pack or H plug on transmitter or hand held. Small, rugged. Ideal camera mounting. \$4,750.

UCR195/M195/H195 Portable system. Hi power with pilot tone locking and great range. \$5,795.

CHIAYO Audio Telex Communications Don McConnell (02) 647 1411

SR303U8 System 16 Channel PLL synthesised 1RU receiver with tone squelch circuitry. Channels are selectable on the receiver and hand-held or belt-pack transmitters. Frequencies available in the 800MHz band, and soon the 900MHz band. Truly a world-class system. From \$1904-\$2458.

NADY SYSTEMS INC. Production Audio Services P/L. Graeme Stevenson (03) 9415 1585

301 Entry level UHF true diversity. Switchable on four frequencies. Available in hand held, lavalier, guitar and headset. Includes aerials. H/H \$1795 - LT \$1695.

RW-3 True diversity. 1RU rack mountable, switchable on four frequencies. Available in hand held, lavalier, guitar and headset. Includes aerials. H/H & LT \$2165.

950 Top of the line true diversity. 1RU rack mountable, switchable on 10 frequencies. Available as hand held, lavalier, guitar or headset. H/H & LT \$5895

SONY Sony Australia Ltd. Rod Sammut (02) 887 6666

WRT-820A. Wireless microphone body pack transmitter.



Telex UHF System

(800MHz UHF). All synthesized transmission (104 channels). 8 Hour battery life (2 AA cells). LCD Channel readout/selection. \$1683.

WRT-867A Wireless microphone hand held transmitter. 800 mHz UHF) All synthesized transmission (104 channels). High quality dynamic capsule. 4 Hour battery life. (1AA Cell) LCD Channel Readout/Selection. \$3172.

WRR-810A Portable non diversity receiver (800 mHz UHF) Compact light weight unit. LCD Channel Readout/Selection. 6 Hour battery life (2AA cells). Audio monitoring jack. \$1952.

WRR840A Dual diversity wireless microphone receiver (800 mHz UHF). 19 inch rack mount unit. LCD channel readout. Selectable output level (-20dB, -40dB, -60dB). Built in mixer function. \$4428.

TELEX (USA) Audio Telex Communications Don McConnell (02) 647 1411

FMR450 System Diversity 1/2 RU receiver. Available with belt-pack or hand-held transmitters. Up to 50 systems can be operated simultaneously. Perfect for theatre, touring or any other high-end applications. From \$3183-\$4048.

VEGA Mark IV Audio Francesca Peskops (02) 648 3455

SU 620 Synthesized UHF system with over 1700 frequency combinations. Single rack mount receiver with removable antennas on BNC and integrated power supply on IEC connector. LED display on front panel for both Audio, RF and Antenna

indication. Output on balanced XLR and 6.5 jack. System utilises Dynex 111. System is also compatible with other 600 series crystal based transmitters. R-622 diversity receiver - \$2675, T-625B bodypack transmitter - \$1395, T-678BP miniature bodypack transmitter (theatre) - \$2795.

Pro Series Radio System Half rack crystal locked diversity radio system with both AC and DC powering available on receiver. Receiver can be fitted with up to four frequencies to allow switching between transmitters. Removable antennas on BNC and integrated power supply on IEC connector. LED display on front panel for both Audio, RF and Antenna indication. Output on balanced XLR and 6.5 jack. System utilises Dynex 111. R-622/AC receiver - \$11078, T-667H Bodypack - \$3690, T-687 (SM87) Hand Held Transmitter - \$4607, T-689 (N/D 857) Hand Held Transmitter - \$4607, M-728 eight way antenna multi-coupler - \$9539.

• About: We HOPE we found every major importer of Wireless. There may be others. Some distributors we contacted couldn't/wouldn't respond in time for our deadline. Participation in the Buyers Guide is free. A complete calendar for the monthly Buyers Guide appears on our Business Page in this issue.



Redback VHF system

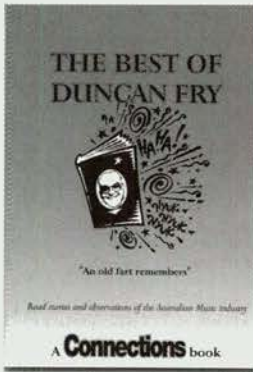
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Our popular columnist Duncan Fry chronicles his road stories, including many never before published! Dunk writes about life at the gig, after the gig, and nowhere near the gig- it is sometimes a chronicle of the world through Duncan's eyes. Usually very funny and often worse! **A fart remembers: \$15.00**



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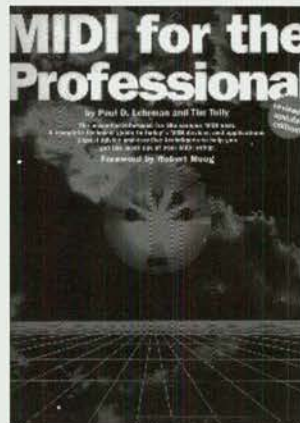
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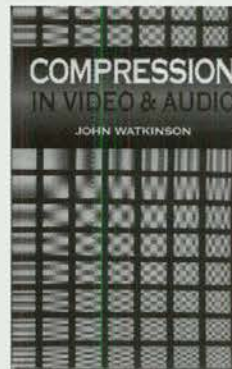
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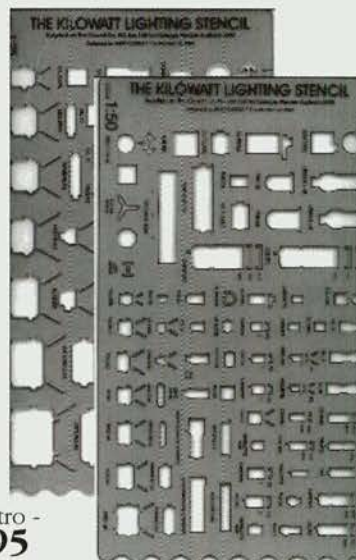


MIDI for the Professional is an essential reference for the serious MIDI user. Full of illustrations, and plenty of handy tips, this is a 'plain language' book which is useful for anyone working with MIDI. Large format, 255p. **\$35**



John Watkinson, 1995. Compression in video & audio recognises the wide applications of compression by testing the subject from first principles without assuming any particular background for the reader. Theory is balanced, with no unnecessary maths! 176p. **\$76**

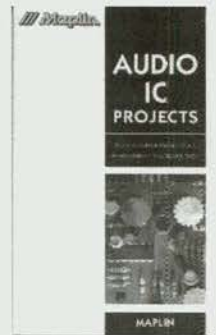
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Jands Electronics Pty Ltd
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Experience is required in the setting-up, operation and co-ordination of high level corporate special events.

Excellent remuneration will be paid with top working conditions available for the right people.

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Total Concept Productions
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MICROPHONE HIRE : Shure 57 & 58, Beyer M88, PZM, D.I. boxes; \$5 per day with stand & lead. Radio Mics: Hand-held, Head-set or Lapel; \$40 per day. Shotgun Mics \$30 per day. B.S. Sound Reinforcement (03) 9531 1403 or 015 328 049

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AKG D112 Mic. \$250. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

Alesis Adat 8 Track. \$3500. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

Alesis MEQ230 Graphic. As new.

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Alesis Micro Enhancer. As new - in box. \$179. Sunburst Music (02) 665 9088

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Aphex Type B exciter. \$300. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

ARP Omni-2 Keyboard. \$399. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

ARX EQ60 Stereo 30 Band 1/3 octave Graphic Equaliser. Excellent Condition. \$1200. CC'S LIGHT &

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ARX System 8 x 118 Subs W/Processors 8 x 912 Cabs. \$16,000. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

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Astroragy Disco Light. \$500. Neil Smith Cannon Sound Systems (02) 550 3828 or 1800 804 994.

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40 channel mixing console
suit live or studio environment

Features include:

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Duncan Fry

Metal For Melbourne

A Tale From The Old Days. But: Has Anything Changed?

The gig was called Metal for Melbourne - a celebration of Heavy Metal music from eight bands who would have won prizes as Spinal Tap clones, but in this case they weren't intending to be funny! I made sure I packed my ear plugs for this one! What is it with metal bands? A bigger bunch of prima donnas would be hard to find.

There were eight bands on, and none of them had anybody to mix, so I was it. That was OK - I'll do most things to earn a dollar unless it involves chickens and axle grease - but when we set up the gig up in the afternoon each band came up to me and said "We've got to have a soundcheck." Soundcheck my arse. They each just wanted an opportunity to rehearse and prance around in front of the other bands to show how good they thought they were. I wasn't having a bar of it.

"Why do you need a soundcheck?" I asked.

"Oh, we've just got to, that's all."

I tried to be tactful "Look, there just won't be time. If you all have a sound check you'll end up starting the show three hours late."

"What, no soundcheck? Shit what are we going to do?"

"Don't worry," I said "It'll be good and loud from the first note, and everything will be OK. Right?"

"Oh no, no soundcheck, oh shit..." and they would all shrug their shoulders, sigh heavily and peat at each other, implying I was the worst bastard left unhung. One of the guitarists called me up onto the stage, and gestured at his Marshall quad box. "You've only got one microphone on it" he said, pointing at the single 57 aimed at one of the upper speakers. "Yes, that's right, one microphone," I agreed. "But I need two microphones so it will be in stereo!" he said. Talk about a little knowledge being a dangerous thing.

"So if I put four mics on it you'd have quad sound, is that right," I asked, but my sarcasm went 'Whoosh' straight over his head. His eyes lit up. "Geez mate, do you reckon you could? Shit, that would sound unreal, eh!"

Smiling to myself I put another mic on the same speaker, and just curled the lead up backstage.

I learned a lot about drummers at this show. Drummers cop a fair amount of unwarranted humour at their expense from many people in the music industry, but all I can say is that in the case of these eight bands it was completely justified. They all had the obligatory double kit, with a forest of cymbals and rows of toms; except for one drummer who came over and apologised to me for only having a single kick drum! As he shuffled off hanging his head in shame, the rest of the band sidled up and told me that they were going to get rid of him next week and get a drummer with a real kit!

However, watching all these guys set up, I noticed that it didn't matter how many drums they all had, during a song they would only play one kick drum and the snare. The only time they ever hit any of the other drums was as a flourish and roll and the end of each song. Why? Because if they rolled around the toms during a song they would come back in at least half a beat behind!

The show was to be introduced by a huge guy dressed up as a heavy metal Viking. Big fur jacket, pants and boots, horns sticking out everywhere, plus a couple of sets of chromed exhaust extractors sprouting from his armpits. He was also loaded for action with firecrackers up his sleeves. The plan was simple. He would stand behind the curtains, and wait to be introduced over the PA.

Then I would pull the curtains open and he would stand there, back lit with arms upraised, and set off the crackers to get the show rolling. It was a good dramatic concept, as concepts go. And naturally it all went horribly wrong!

Anyway, showtime came, and he got himself all set up in position behind the curtains, ready to go. The house lights went down. "And now, ladies and gentlemen..." went the announcer in his best mid Pacific baritone - "Welcome to...Metal...for...Melbourne!" The heavy metal

Viking whispered to me. "OK mate, open the curtains now!"

So, I yanked on the rope and the curtains swirled and opened. Unfortunately, one of the horns on his head or one of the extractors got caught in the curtains and he started to get dragged across the stage, yelling "Hey - shit - hey - shit!"

As he started to topple over, he threw his arms in the air to try to regain his balance. This set off the firecrackers up his sleeves, shooting sparks on to his beard and fur, which immediately started to smoulder. "Hey - shit - I'm on fire" he yelled, waving his arms around and thumping himself to stop the sparks from spreading, which only had the effect of setting off more firecrackers in his face as he did so.

"Hey - shit" he kept yelling as he whirled around on stage, crashing into the drumkit of the first band who were set up on stage waiting to start! God knows what it looked like to the audience. Silhouetted against the light, leaping around with bits of drum kit tangled up in his hardware, and sparks flying out of his sleeves, he must have looked like an electric Attila the Hun with his fingers stuck in a power socket!

Finally he disentangled himself from the curtains and the drumkit, and staggered off backstage, still yelling out "Shit - shit". The audience stood there like stunned mullets, not knowing what was going on, and then one by one they started clapping and cheering until the whole place was in uproar, yelling and stamping their feet and calling out "More - more!"

We put the drumkit back together, and after a minute or so he came back on stage, beard dripping with water. He thrust an arm in the air, gave the 3 fingered clenched fist salute, grabbed a mic and yelled "METAAAAAL!"

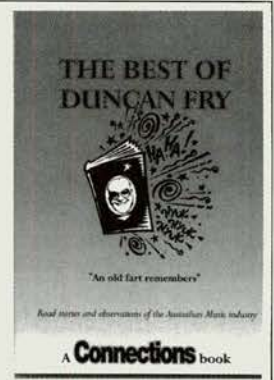
The audience responded with a cheer, the band ground into action - the show had started.

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CLUBBLAND & DJ NEWS

Edited by DJ Balderstillmore



The Big Spin

DJ championship hits Sydney ENTECH

by Madeleine Murray

Hold onto your synapses.

The DJ competition is on again in April. The winner gets to go to Rimini, Italy, which has gotta be cool.

Kieran Way (pictured above right) won the Australian finals in 1993. He has been DJing for ten years. He was ecstatic when he won. "I practised a lot before the actual competition. I think I won because I tried something new. I used four turntables and a sampler, and that was the first time anyone had actually done that in a contest. It's pretty confusing at times."

Kieran's winning piece was six minutes long, and he used about 25 tracks.

"The championships are a really good thing," says Brentan Llewellyn, aka Torquemada of Central Station Records. "There's a lot of bedroom DJs. Some of the best DJs in Sydney are the ones that don't get work. They practise in their bedroom day and night, they might be on the dole, and just

practising their mixing all day. They're just superb, they're slick as shit basically. They don't get any work, because they don't know the right people.

"It's a good chance for these kids to come out, and get up in front of a thousand people. If they do a good job, even if they don't win, they'll get some work out of it. If you win or get through to a final, you're starting to get a reputation already. If you win, you'll definitely get work."

"Winning was a dream come true," Kieran said. "I'd been entering the DMC comp since '89, and it took three years of solid, hard training to win the comp in '92. I found out in those three years that to win, you not only have to have a good routine, but you have to be original and stand out from the others."

"In '92, I didn't quite pull it off because of the enormous pressure on me. But the following year, I did really well at the eliminations, and made it to the World Finals

An educational facility is born

Drew Muirhead presents: Dadada dum

by Madeleine Murray

Attracted by the half-page colour ad in 3D World, I rang up the majestically named *dmc Lighting and Sound Academy*.

The school runs four different courses. A three month course teaches laser, lighting, sound and DJ. It runs one night a week, and costs \$1000. A DJ course in mixing, bar structure, and playing records together also runs one night a week for three months, and costs \$1000.

There is a shorter, cheaper DJ course, and a music composer course.

Drew Muirhead, the name be-

hind the school told me, "We've got the world's latest equipment. We're known in Australia for being the leader in the technology, and that's what we're trying to teach people, to understand the sort of machinery that we own. Most of it's imported from the States, London or Germany so there's nothing Australian made."

"It's all Italy or Sweden where the lights come from. So we just picked all the best products in the world, and we just run all those in our hire and sales department."

I saw a break in the traffic, and asked him how long the school had been going.

He said, "I taught DJing for five years. I was the first DJ tutor in Australia. I had a business called Disco Mix Factory on Oxford Street, which was a studio, hiring, and DJ'ing tuition. Now I own a business called *dmc Lighting and Sound* which is a big production company.

"Basically all the money I've made out of DJ'ing, I've put into equipment. This company's been going for five years, I own a record company that's been going for ten. It's called Dis and Dat, we have a deal with Polygram. So we're involved in all facets of the industry. We're actually market leaders in Australia, we're a multi million dollar business."

So, how long has the school been going?

"He has some good DJs teaching there," Brenton of Central Station Records said, "Jumping Jack, and Brian A.S.K., who's probably one of the best hip hop DJs in Sydney."

dmc academy can be reached on: (02) 319-7177.

against the top seven competitors. The routine went smoothly, apart from some technical problems which I had with the sequencer on my keyboard, and I just had to improvise and scratch my way out of the problem. But the judges were impressed and my personal highlight was when Tanya Prince, the founder of DMC came and shook my hand.

"In '92, it was my first time overseas. In '93, I was more confident. It was great. I got to meet a lot of top DJs from around the world. There was a big party, and an awards night, called International Dance Music Awards. We had VIP passes to that. We met all the celebrities. It was great to be there."

The DJ competition Grand Final is in Sydney at ENTECH, on April 25 (Anzac Day). Entry forms for the State Heats are available from local Central Station stores or DMC records.



Techno phreak

by Madeleine Murray

Peter Elmalogou wasn't always a techno DJ. He went to Scots college on a music scholarship, and played cello in the Sydney Youth Orchestra, and the SES Orchestra. His father is a cellist in the Sydney Symphony Orchestra. So what is guy like this doing playing with turntables and scratching records?

I met Biz e down in the throbbing labyrinthine depths of Central Station records, where his shop Harc wax sells cutting edge import records with evocative category titles like trance, acid, ambient, trip hop, and jungle. About six serious customers were checking out the records in the small shop when I arrived.

"When I was thirteen, I watched the Academy Awards and heard Herbie Hancock doing *Rockers*," Biz e said. "A DJ in the background was scratching, he had a record player and a mixer. He had a turntable, with a slip mat between the platter and the record, which reduced the friction when he scratched. I was amazed, I'd never seen anything like it before. The sound from the turntable came through the mixing desk, and the DJ cut the signal rhythmically to produce music."

In the 70's, Grand Master Flash, a Jamaican DJ in the Bronx, used to have big black parties with a turntable and records. The sound source was funky drummer break music, which James Brown started. They used a turntable with pitch control.

Biz e explained that speed of the record is measured in bpm, that is beats per minute. Classical music is measured the same way, like allegro is 120 bpm. If two tracks have different bpm, you can speed one track up, and slow the other down, using pitch control. When they are both the same, you could blend them together through a mixer. Most dance records are in common time, that is 4/4, with eight bar phrasing. So it is possible to layer them, and know when a course or break is coming.

Biz e has been DJing since he was thirteen.

He uses the Technics SL 1200 turntable, which has been on the market for over 15 years. "They haven't upgraded it any way," he said. "It's such a good unit, it's quartz driven so it's a very accurate turntable. The speed doesn't vary at all, it's constant, and you have pitch control. You have plus 8 per cent and minus 8 per cent, and the pitch control's spot on. So if you take it up 2 per cent, it will move up exactly. The needle is multi-directional so you can play it backwards or forwards, for cueing or scratching. The needles cost between \$50 to \$200, and come from Stanton in the US."

"I use a 2 track mixer, Numark or Vestax. Basically they're 2 track mixing desks with a fader between the two. Each track's got an independent fader volume, and there's also a fader in between, so you can blend between the two tracks. And on the top of each track you've got a phono/tape switch to change your input source. I use that for cutting."

"On each channel is a 3 band EQ, so you get bass, mid, and treble. The bass and the top are shelf EQ, and the middle is a sweep. You use them in real time to get dynamics. That's what you have to play with, the mixer functions and your large collection of records. When you're beat mixing, you can mix two records, and keep them perfectly in sync, using the pitch control."

Biz e is intense and passionate about his music. Mixing music led to an interest in producing it himself, and he has his own midi studio. He has some analogue gear, which he loves for its warmth and unique sound. Most of it is vintage, over ten years old, and the sound quality has come into fashion again. A lot of contemporary keyboards are made to imitate the retro qualities.

He has a Roland TR 909 drum machine, a Roland TR 808 drum machine, a Roland TB 303 bass line which he uses for acid music, and a Roland SH 101 monophonic synthesiser.

(continued over)

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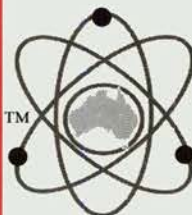
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Biz e

He also has a Moog Source synthesiser, a Mini Moog, a Prophet 5 synthesiser, and a Korg Monopoly.

His newer gear includes a Kurzweil K2000 sampler, and a Yamaha ProMix 01, a 16 channel automated mixing desk. By moving between analogue and digital, he can regenerate without losing quality.

Biz e has an independent record label called pH Recording and distributes music through Kudos (UK). They press to vinyl in England, as there's no pressing plant left in Australia.

"Techno's about producing fresh, different and exciting new sound," Biz e said. "It's the only genre that really is moving forward. Techno took the studio and used it as a creative tool. It uses the mixing desk as an instrument, as part of the music. In the next few years this movement is going to permeate the whole electronic industry."

Watch out.

- **Hardwax** is in Central Station Records, 46 Oxford Street, Darlinghurst. Tel: (02) 361-5159 xtn 4.

CLUB PROFILE

Komodos Nightclub

Spillaines Nightclub in Brisbane has been reinvented into a hot new night spot known as Komodos.

Woods Bagot Pty Ltd were commissioned to redesign the clubs image working along side Peter McKenzie of Laser Pty Ltd who controlled the audio and lighting design, while Night-life Music Video conjoined the video aspect.

The area where the old bar existed now contains the dance floor, surrounded by white curved wall panelling and perspex. Secreted into the walls is the stuff that makes for dance. Lighting, effects, video monitors and speakers are predominantly contained within the walls and dance floor, with several Martin 518s and effects overhead. The towering curved white wall acts as a cyc for gobo projections. The

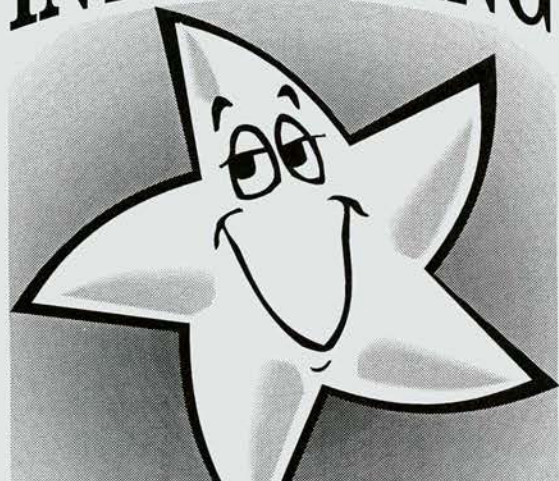
ceiling also has a large S-shape carved into it in which is rigged most of the static effects such as Pin-spots, UVs, Sparklers etc. The whole look provides crisp, clean lines in contrast with the full length bar and comfort zone.

Here you'll find majestic earth colours of reds and maroons with startling contrasts of blues and greens.

Lighting and video are controlled by the DJ. A 516 dimmer/controller linked to a Martin 3032 PC package and separate PC for video control are mounted into a purpose built wall unit allowing for a very neat DJ booth.

Interior Design inside nightclubs is becoming more important as punters grow choosy. Good design needs to last several years without big maintenance. Komodos looks good!

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Audio Specifications

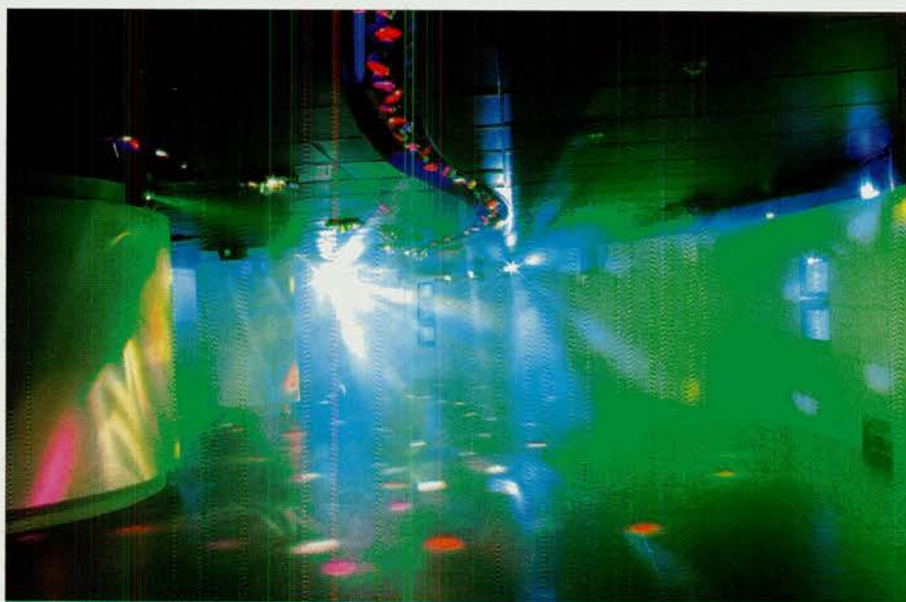
4 x EV RV200 Mid/Top and 2 x Sub speaker boxes; 1 x Phonic DX88 DJ mixer; 1 x Phonic PCL3200 compressor/limiter; 2 x Yamaha 31 band graphic EQs; 1 x Shure radio mic and receiver; 2 x Australian Monitor amps; 1 x JBL x-over; 2 x SL1200 turntables; 2 x Pioneer CDJ500 CD players; plus various amps and speakers for DJ monitoring and background speakers.

Lighting Specifications

4 x Sparkler effects; 3 x 8" mirror balls and motors; In the Martin effects area there are 2 x Magic Moons, 2 x Spinners, 2 x Sweepers and 4 x Starfish; 13 x UV tubes; 80 x Pinstots; 1 x JEM MKIII fogger; 4 x Geni strobes with 1 x Geni 4way controller; 8 x Martin PFO518s, 4 x PRO400s controlled via a Martin 3032 PC package on a 486 EX100 PC.

Video Specifications:

1 x Nightlife Music Video VJ system; 6 x 34cm monitors; 2 x 48cm monitors.



THE DESIGN, WHO DID WHAT

Lighting & Audio - by Laser Pty Ltd - Contact Peter McKenzie - Phone (07) 3236 2333

Video - by Nightlife Music Video - Contact Richard Flindell - Phone (07) 367 1045

Decor/Interior - Woods Bagot Pty Ltd

EXTRAS

Door charge - None (yo)

Theme nights - None (a pleasant change)

Entertainment - Pure DJ

Situation - Komodos Nightclub - Carlton Crest Hotel, King George Square, Brisbane QLD.

Owner - Carlton Crest **Manager** - Mark Ganga

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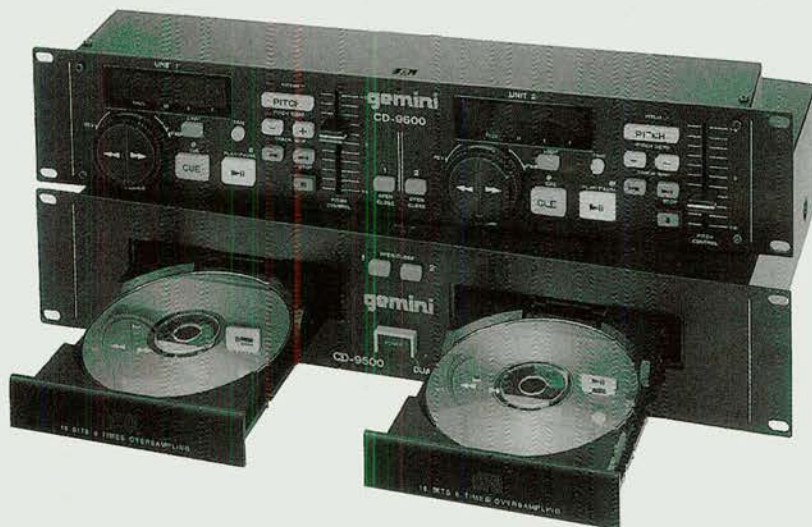
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AUDIO SECTION		CD-9500 SPECIFICATIONS			
Quantization	16-bit linear/channel, 3 beam error	Time Display	Track elapsed & remain, total track remain	Disc Type	Standard compact discs (12cm & 8cm)
Oversampling Rate	8 times	Variable Pitch	+/- 8% slider w/resume switch	Type	Dual mechanism compact disc player with wired remote
Sampling Frequency	44.1 KHz at normal pitch	Pitch Bend	+/-8% max	Installation	19" rack mountable player unit: 2u 19" remote control unit: 2u
Total Harmonic Distortion	Less than 0.09%	Instant Start	Within .03 sec	Dimensions	Player unit: 19" (494mm)Wx3 1/2" (91mm)Hx10 (260mm) D Remote unit: 19" (434mm)Wx3 1/2" (91mm)Hx3 1/2" (91mm)D
Signal to Noise Ratio	104 dB	Track Selection	1-99 tracks	Weight	Player unit 11lbs./5kg Remote unit: 3lbs./1.3kg
Dynamic Range	98 dB	Power Supply	AC 115/230 volts, 50/60Hz		
Channel Separation	90 dB (1 KHz)				
Output Level	2.0 V				

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LIGHTNING

MONTHLY

March 1996

Edited by Catriona Forcer

BRACE YOURSELF, LOAD THE GUN

It's a 'shootout', they say, as the vendors worry

By Peter Morgan

At first glance the prospect of a 'Zoomspot Shootout' at ENTECH is perhaps a little bland, but in actual fact it promises to be a highlight of the three day tradeshow.

The idea of a side-by-side comparison isn't new, in fact Karl G. Ruling reports that several years ago the LEI tradeshow tried to do an ellipsoidal 'shootout', but the vendors got so involved that the science of definitions almost overwhelmed the event. "In the end we turned them all on for a while and that was it", he says.

ENTECH is blessed with a spacious interactive AV zone, which is a name the organisers have attached to the foyer area for the Seminar Theatres they are building behind the second hall trade exhibition floor. Because the attendance of quality trade visitors isn't taken for granted, extra 'peripheral' events are essential at a trade show to produce enough compelling reasons for a variety of trade visitors to consider the show essential.

The 'shootout' will in fact be a continual comparison, where competitive fixtures are run alongside each other for the duration of the show. Criteria by which to appraise the units will be provided, the units will project onto a cyc at a decent throw.

Rules have been established to ensure a fair showing. The zoomspot must be a production or near production unit. If not yet released, the organisers have to be satisfied the unit is nearly in production.

It must not be modified or enhanced in any way. The lamp is to be a calibrated lamp with lumen output published by the manufacturer. If it is a short life 'studio' lamp, a placard to this effect will be shown.

Power from one phase of the supply will be run with an equal length main cable feeding each unit. This will overcome any mains variation, as the actual mains itself can and will vary during the day, so all units will be commonly affected.

The desirable outcome is that after appraisal, visitors gain an appreciation of the issues involved in buying a 650 watt zoomspot. The actual terminology 'shootout' is a bit of hype - doubtless invented by Julius Grafton, who at his advanced age (40 next year) should know better. Rather, we on the coalface would prefer this thing be known as 'comparison', because there won't actually be a judgement or result published, rather you yourself will form a view.

Roger Barratt Lighting Scholarship Established

Fund will second a young LD at home and in London

In accordance with the wishes of the late Roger Barratt, the previous ENTECH Award Winning LD, a fund has been established by his partner Andrew Morgan to provide a training scholarship for one young aspiring LD each year. This year marks the start of this program, which it is hoped will grow and expand with the support of the industry.

The program for 1996 will provide a successful applicant with:



- secondment to major NSW theatre and production companies;
- London secondment at conclusion of local secondment;
- expenses paid including return

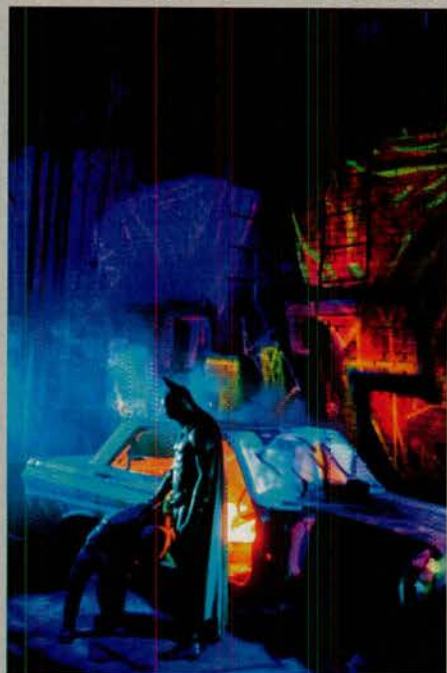
Qantas air travel to London, provided by ENTECH and Stage & Screen Travel.

The Scholarship will suit an extremely committed individual, younger than 27 years of age. It is open to any Australian capable of holding a passport. It will be overseen by industry people determined to fulfil the wishes of Roger Barratt, a great Australian LD who championed the concept of youth training.

Andrew Morgan is in the process of formalising the structure of the Scholarship into a Foundation which will then accept donations from the industry towards the yearly ongoing costs of the Scholarship.

The first Roger Barratt Lighting Scholarship trainee will be selected from aspirants who apply before last mail on April 1st. The initial program will provide approximately three months secondment starting around June this year. The successful applicant will be advised prior to ENTECH, and named at the ENTECH AWARDS on Wednesday April 24th at Sydney's Metro Theatre.

continued on page 83



UV F/X

Today's high powered blacklights coupled with UV sensitive materials allow designers to achieve a number of cutting edge effects: glowing make up effects, atmospheric effects and more. Find out how it's done at the UV F/X seminar (L5) to be held at Entech, Wednesday April 24 at midday.

The seminar will be given by Richard Green, President & Founder of Wildfire Inc. Los Angeles.

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Details: Call 1-800-635-514.



staging the Big Day Out

Cat Forcer takes a look at the new stages

The most notable aspect to this year's Big Day Out were the two domed stages. Their roofs came from an English company called Serious Structures whilst the staging and scaffolding are all local. Four of the roofs (they bunny hopped in pairs around the country) were hired by Downunder Touring Concert Stages, otherwise known as DUT, who were contracted for The Big Day Out.

"This year, more than any other year, we've made an attempt to maintain consistency with each city," said Matt Doherty, Production Manager. "In years gone by we've tried to use local people for the main stages and sometimes that didn't work too well because of the specific requirements of overseas bands. This year we set it up so it would run the same in every city - basically it was a tour.

"The touring rig came from Jands and consisted of an S4 system for the sound. We transported two trucks worth of S4, two FOH systems and two monitor systems with the same crew. Obviously the timetable between Adelaide and Perth was tricky as there was only one day between the cities so we duplicated a sound system out of Jands to leave earlier."

Two complete lighting systems for the two stages were also from Jands with an Icon system coming from Bytecraft. The only other 'intelligent' lighting was some Golden Scans on Stage 2. In Perth a local lighting company was used.

"They're slowly getting up to speed and are getting better each year," added Matt. "This year we got away with using all pre-rig truss which made our up time and down time a lot quicker. One of the slight disadvantages of the dome roofs is that they are fairly limited when it comes to lighting in the roof. You cannot just hang the lights in the roof and then move the roof up and down, you have to use the roof in the strict sense of the word and put motors in to hang the grid. With the standard flat roof you can use the roof saving a lot of money on rigging and a lot of time on rigging points. But with the pre-rig our load outs were down to an hour and a half and with the load in the guys were done by 1pm."

The main advantage to the



Photos: Mary Williams

roofs was obviously the weather and this was particularly useful in Auckland where freak rainfalls threatened the show.

"We had constant torrential rain for four hours but the stages were bone dry, we didn't even have to cover the front line," said Matt. "If we'd had a flat roof system the show would have been rained-out without a doubt.

"If you look at a normal flat roof system you see an awful lot behind it. Unless it's a totally still day and your backdrops and legs are totally in, you see all the back stage and people working. With the dome roofs all you see are the band and it's totally black behind them. You can make it like theatre so from a light-

ing and aesthetic point of view they look great."

With the lighting, Matt said that they don't put any ideas to the overseas acts preferring not to use a pre-designed 'festival rig'.

"For example this year *Porno For Pyros* and *Rage Against The Machine* were the only two bands who would be playing in anything like darkness on Stage 1," explained Matt. "I contacted both of their LDs months before and got them to talk together to work out a common plot they're both happy with. Several years ago we thought about designing a 'festival plot' but it doesn't really work as the nature of BDO is a little different from other festivals. We're trying to produce each of the

bands shows, not just throwing the bands on and off.

"We go to great lengths to achieve this. For example the *Porno For Pyros* set had a special backdrop and flown set pieces as well as bud lighting in the roof. Nick Cave had his totally red drapes for backdrops and his show was totally produced. The promoters don't cut back on budget.

The *Porno For Pyros* set pieces were plywood cut outs of indigenous art and their backdrop was made in Australia by Aboriginal art-

continued on next page





The Big Day Out



ists. That artwork and backdrop never made it to New Zealand and so the band had a Maori equivalent made over there which apparently looked great.

Norman Copeman, of Norman Copeman Productions, was the Construction Manager for the Big Day Out and he had this to say:

"The two domed main stages suit The Big Day Out's needs because of the amount of time we spend on the stages. The installation of the show might be only six

hours the day before but on the day we can be on the stage from 7am until we bump out at 3am the following day. Weatherwise they have been perfect for us because they completely seal the working parts of the stage. Then we put up a 9 x 15 hocker between the two of them at the back and that was used for the band change overs and staging area.

"We found that we could put up the stages in thirty hours because there's not so much scaffolding in the structure as we don't have to fly a roof, we only had to fly the PA. So the installation's a lot quicker. We found that in certain states we could also turn the lights on a lot earlier because the stage was darkened."



Norman said that this was one of the best managed tours he had ever worked on and that the advance party took care of any problems so that by the time the production turned up everything was very smooth.

F.A.L. for AE Australia

AE Australia have added F.A.L. to their range of products on offer. Ae have exclusive distribution rights for the entire F.A.L. range.

F.A.L. have been absent from Australian shores for a few years and have now bounced back with a large range of lighting products. The flagship of F.A.L. are the Proscan 2, Roulettes and centrepieces such as the Nebula and Octopus.

All the F.A.L. intelligent scanners feature modular construction to make servicing

easier.

F.A.L. Sales Director Mauro Zoppini will be on the F.A.L. Australia stand O28 at Entech sharing space with Ae Australia's other manufacturers - UL Lighting from Russia, Light Emcien and Light Puter.

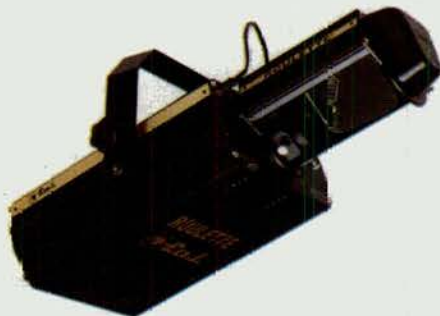
F.A.L. will be featuring at Entech the Proscans, Italscans, Roulettes, colour changers, various effects and centre pieces and will be launching some new surprises.

The F.A.L. Roulette, pictured left, has an EMI 575W lamp, 9 dichroic colours + white, 7 bidirectional rotating gobos, mixable with 7 fixed gobos, strobe effect 1-7 flashes per second, digital DMX512, RS232/423. Price \$3685 ex tax.

The Nebula DMX512 controllable centerpiece contains a vast number of memorised sequence and light games.

F.A.L. can be seen at 629 Parramatta Road, Leichhardt, NSW 2040. For a free catalogue write to:

AE Australia, PO Box 1013, Leichhardt NSW 2040. Phone (02) 568 2100 or fax (02) 568 2300.



The Roulette scanner

Roger Barratt Lighting Scholarship Established

(continued from page 81)

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1. You are a Permanent Resident of Australia, born after 1968.
2. You include two written references who can attest to your previous commitment towards your lighting career.
3. You include one recent photograph, passport size or greater.
4. Send your CV or Resume, up to date.
5. Include a cover letter stating exactly why and how you feel further training can assist you.
6. You must indicate your availability to undertake this program, anticipated to commence around June this year (1996), and run for about 3 months duration, ending in London.
7. Although not crucial we anticipate you will go some of the way towards meeting your living costs during the program. The program is NOT an employment substitute, it is intended to give an enthusiastic individual exposure to different work environments, shows, and experiences. Your air ticket to London is a return ticket.

HURRY. APPLICATIONS CLOSE ON APRIL 1st 1996.

The successful applicant will be advised prior to ENTECH (April 23-25). No calls please. Applications by last mail Monday April 1st to:

Roger Barratt Scholarship,
c/o Connections Publishing,
PO Box 439,
EPPING, NSW 2121.

(or hand deliver to Level 2, 41 Rawson Street, Epping NSW)

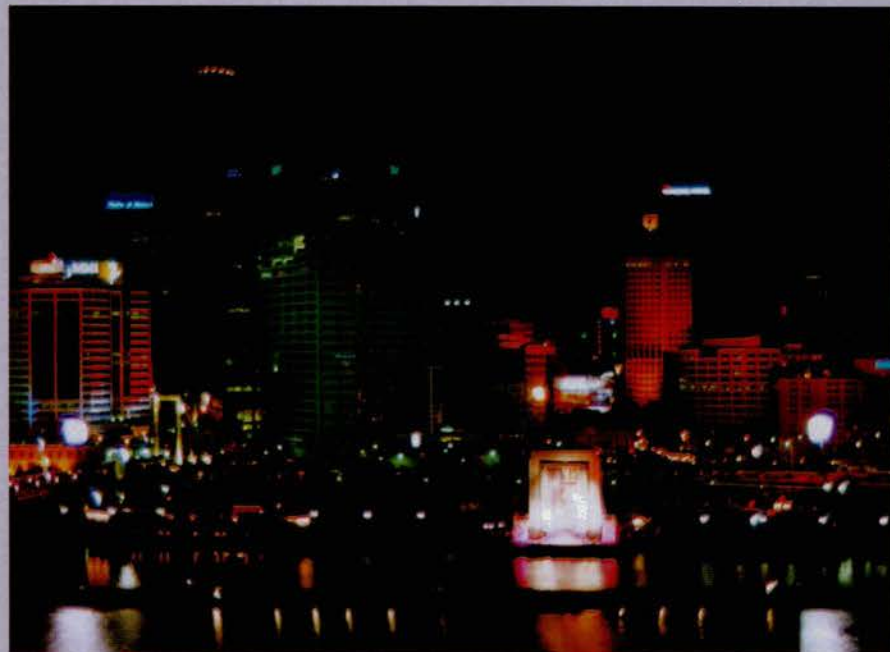
3 Return Qantas Air Tickets to Entech to be Won!

It's simple, just vote for an Entech award - but you must do so in March. Only voting forms from this magazine are acceptable, no copies.

* If you live in Sydney anyway, don't worry. You can choose to fly to any other major city in Australia.



AUSTRALIA DAY at DARLING HARBOUR



The Australia Day Spectacular is the culmination of the Australia Day celebrations held annually at Sydney's Darling Harbour. This year police estimate that 350,000 people attended the event and a live to air broadcast of the Spectacular was viewed in England.

Lighting design was by Alan Stone who had the task of illuminating all the buildings on the Eastern Promenade of Darling Harbour and several of the prominent buildings in the background. Single head Searchlights were placed on the roofs of the illuminated buildings as well as on the foreshore whilst 4 head Searchlights were placed on pontoons moored

in Cockle Bay.

A 27 metre high x 18 metre wide Cyc constructed from building crane truss and clad in white Terra-Firma was lit mainly in green and red with Cyberlights adding highlight colour and gobo movement. A 75ft x 50ft Australian flag motored up the front of the truss during the concluding national anthem lit by a 5Kw Pollux Fresnel in open white.

This structure was on the edge of the eastern foreshore of Cockle Bay with a 400 ton barge moored in the

foreground which staged a 150 voice choir. The choir were lit by 5Kw Bambino Fresnels gelled in lavender.

The city skyline was lit by a combination of Musco Trucks, HMI Fresnels and HMI Cine Pars as well as Cyberlight reinforcement. Thirty lighting crew were involved in the operation of the Spectacular with the total area covered with light at 6 square kilometres.

The event was set to music and the illuminated city skyline added a vivid background to the fireworks which were fired from pontoons on Cockle Bay and from the roofs of 15 city buildings. The unification of light, sound, fireworks and 350,000 people made the event a memorable occasion.

Other lighting equipment included Intellabeams and HOG consoles, all supplied by Premier.

Producer: *Accolade Communications*
Event Director: *Andrew Walsh*
Assistant Director: *John Thomson*
Lighting Design/Direction: *Alan Stone*
Lighting Supplier: *Premier Lighting*
Generators: *Viking Generators*
Audio & Communication: *PA People*
Set Design & Construction: *Big City*
Fireworks: *Syd Howard*

Alan Stone, NSW Production Manager for Premier Lighting, will answer your questions at the MEET THE

LDs seminar at Entech. Alan has extensive experience as a lighting designer specialising in corporate events. He has also worked as LD for the Baby Animals and Hunters & Collectors.

• The seminar will be held at 12.00 midday, Tuesday April 23rd. Cost is \$10.



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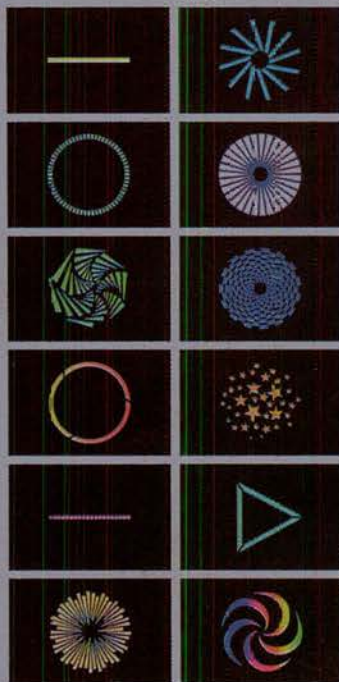


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LSC Electronic Seminars for Entech

During the period of Entech, LSC Electronics will be running a series of seminars designed to give Axiom owners, users and potential owners a greater working knowledge of the Axiom, especially in regards to moving light control. In addition to the Axiom seminars, a distributed DMX512 and a trussing seminar will also be run.

These seminars are not designed to compete with the published Entech seminars, and LSC have chosen times and days to ensure this. LSC see the seminars as a way of offering more than just a stand of products to their customers.

As the seminars are 'hands on' all participants will gain valuable experience in the use of the Axiom and a full understanding of 'LTP' control with moving lights.

The distributed DMX512 seminar is a must for all consultants and venue operators as it will explain the new trends in DMX512 distribution and the failings of the existing systems.

SEMINAR PROGRAM

A) Knowing Your Axiom Intimately

A group of presenters will take you through the vast features of this range of consoles and provide hands-on tuition for advanced programming. Moving light control will be demonstrated thoroughly.

Tuesday 3.00pm April 23rd.

B) Knowing Your Axiom Intimately

Wednesday 10.30am April 24th.

C) Truss'r'us

Adrian Brooks from Litestructures in the UK will present a brief company history and outlines the products available, CAD design service and the requirements for a good versatile truss system.

Wednesday 1.30pm April 24th

D) Distributed DMX512

Gary Pritchard from LSC will take you through the latest developments in DMX512 and why distributed DMX provides you so many more advantages than conventional looping. Ideal for specifiers, consultants, lighting masters, venue operators and rental companies.

Wednesday 3.00pm April 24th.

All seminars will be held in the Skyline Room at the Sydney Convention Centre right next door to the Exhibition Centre. A map of where to go will be supplied to all who make a reservation.

A \$10.00 holding fee will be required at time of booking. This fee will be refunded at the seminar when you attend. Unfortunately due to LSC's commitment to booking the venue, staff and display equipment, failure to turn up for the seminar selection will mean forfeiture of the holding fee.

For bookings and further info call: LSC (03) 9561 5255.

Bits

● Bruce MacRae of *Macsound Electronics* has taken delivery of a set of four new **Colourscans** and a 64 channel DMX512 controller.

● *AA Music* in Kilarney Vale on the New South Wales Central Coast have also taken delivery of four new model **Colourscans** and **Colourscan DMX controller**. They are currently using them for hire and mobile work.

● *Audio Source* in Western Australia recently took delivery of 2 **Colourscans**, part of a large installation soon to take place.

● *Prolight and Sound* in Granville have added many new products to their hire and sales stock including **UL Lighting Dragon** centre pieces, **Light Emotion Power Moons**, and a stack of **Light Emotion Mini Smoke Machines** and **Minimoons**.

● The Port Macquarie Hotel have just opened their new nightclub with lighting installed by *David Burnes Lighting and Sound*, in conjunction with *IDN Entertainment*. The new nightclub features **F.A.L. Italscans**, **UL Lighting Dragon** centre piece, **Light Emotion Wildmoon 1500W Jumbo Strobe** and two **Light Emotion Sagazaps**. Lighting control is provided by a **Lite Puter 12** channel touch panel.

● The new **Light Emotion** 'Controller Compatible' Intelligent **Technoscans** are part of a new light show at the Lavington Sports Club in Albury. Other equipment includes a **Wildmoon**, **Sagazap** and the **Earthquake**. General lighting control is achieved via a **Lite Puter 12** channel touch panel.

For further info on all the above call: *AE Australia Pty Ltd* (02) 568 2100.



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The best thing to come out of the U.K. since the Beatles!

Multi-Contact Australia proudly announce it's new range of **PVC Multi-Core Lighting Cables**, custom made for MCA by Delta Energy Cables.

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New Zealand Agent :

Multi Contact Technology Ltd 609 Mt. Eden Road, Mt. Eden, Auckland. Phone: (9) 623 4366 Fax: (9) 623 4155
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Showcorp put Chrysler on the Stand

Over the past two years, Showcorp Production Services has worked extensively in making exhibition stands.

In 1994 Showcorp won the right to build a new stand for Hyundai, from a concept designed by Showcorp director Vinni Sedgwick. This won them many awards including the Best Large Exhibit award at the Adelaide show.

On the international exhibit scene, the name George P. Johnson, an American based company, is synonymous with Motorshows throughout the world. Endeavouring to maintain a polished and uniform image world wide, Chrysler International contracted the services of George P. Johnson to oversee the fabrication of new stands in all major international regions. In Australia, upon recommendation by Chrysler Australia, George P. Johnson contracted Showcorp to fabricate the American design for the Australian Motor Show circuit.

Construction was completed over a period of 8 weeks, including Christmas, with up to 30 people working seven days a week. Construction was complicated due to the Christmas break with many suppliers closing down over this period.

The design elements of the stand consist of four key display areas. One area has two Jeeps sitting on rocks with a 6m x 3m rotographic display as the backdrop which depicts 3 outdoor scenes. Several Jeeps or Chrysler models can be displayed throughout the stand either on raised timber platforms or on the spacious carpeted areas.

The 'Hero' car as it is sometimes known, is featured on the stands only turn-table, which is set in front of the frosted



glass walls of the meeting/office area. Most of the signage is rear lit for maximum effect and



impact with four corner ID towers completing the branding of the exhibition space. These ID towers include 12 x 240v par 64 lamps per tower which have been designed into the signs.

Overall the stand has 20 x 1500w floods flown from trussing plus 20 x 500w floods attached to the canopy of the stand. The hero car has 4 x 2Kw TV lights plus 4 x Trackspots displaying the current model and manufacturer logo gobos on and around the hero car's turn-

table area.

The merchandising and product information counter has been designed so it can be located at either end of the stand to maximise general public traffic flow.

For further information call: Showcorp (02) 481 0445.

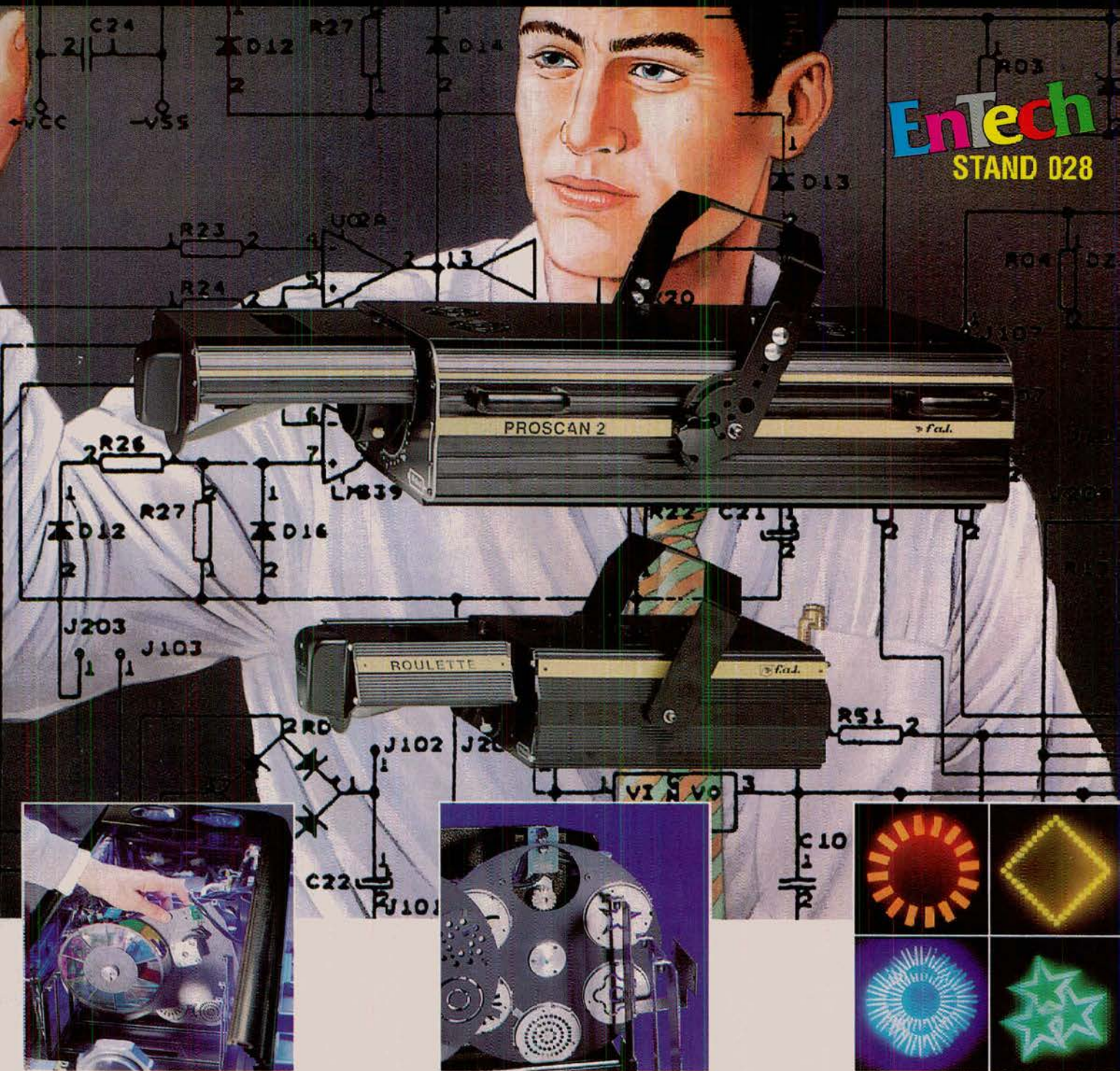


Bits

- Jared Hawke of Premier Lighting, Brisbane has supplied the Reef Casino Cairns Conservatory with 9 Cyberlights and 12 Trackspots.
 - Jared has also supplied Playe's Nightclub in Brisbane with Trackspots, Vipers, Color Pros, Fibre Optic Stairnosng, Universal Controller, Wildfire WF-250 UV Spot together with UV paints and make ups.
 - Herkes in Sydney have purchased 8 Trackspots.
 - Showcorp have supplied Reef Casino Nightclub Cairns with 6 Trackspots.
 - Albury Sound and Lighting have purchased 4 Trackspots and an F-100 Smoke Machine.
 - Mick James Electronics has purchased 12 Cyberlights and 3 Wildfire 250 watt UV Spots for Conrad Jupiters Casino's new production.
- For further info call: GUVT (07) 358 5022.
- Traralgon Arts Centre, Victoria have purchased a 50 way Strand GSX lighting control desk.
 - St Pauls School "Woodleigh" at Baxter, Victoria will be starting the school year with a new drama/media/music facility fitted out with Strand Lighting LX12 and MX12 lighting desks, Strand Redheads, Polaris, Prelude and Quartet lanterns as well as Bytecraft TRV dimmers and patch panels.
- For further info call: Bytecraft (02) 550 3955.

**THE ONLY THING THIS PAGE CANNOT SHOW
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EnTech
STAND D28

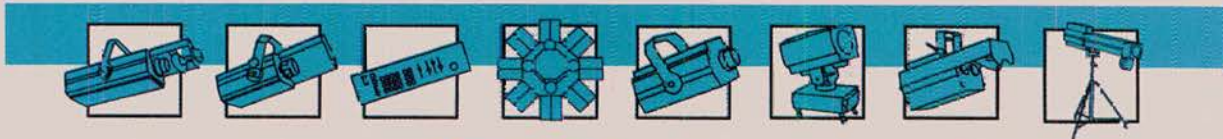


PROSCAN 2

HMI 1200 lamp - 1 Frst filter - 1 UV filter - 1 x 4 colour dichroic filter - 9 dichroic filters with high chromatic yield + white - 58 colour combination - 2 colour temperature filters - 5 interchangeable rotating gobos, indexable, with variable speed continuous bidirectional rotation - 7 fixed gobos - 5 rotating multifacet prisms, indexable - 255 gobo combinations - High speed Iris System - 1 to 7 Flash/sec. strobe effect - Linear mechanical dimmer 0-100% - High precision controllable focus system - 13 microstepping stepper motors - Digital DMX 512, RS 232/423 - Fully modular construction

ROULETTE

HMI 575 lamp - 9 dichroic filters with high chromatic yield + white - Rainbow effect clockwise with variable speeds - twin split colour effects - 7 rotating gobos - 7 fixed gobos - gobo mixing - Fast action shutter for beam black-out - strobe effect fully variable from 1 to 7 flash/sec. - 6 microstepping stepper motors - Digital DMX 512, RS 232/423 - High reflectivity mirror - 350° adjustable and removable head.



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BASIC PRINCIPLES OF LIGHTING CONTROL

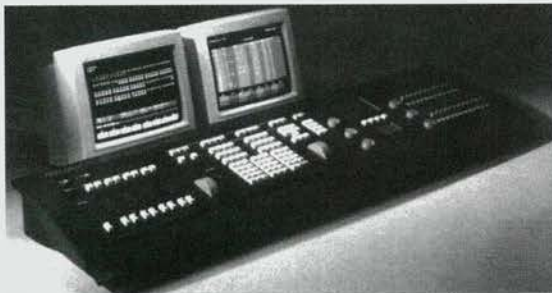
The second installment of a guide for lighting students

MEMORY CONTROL

The memory console emulates a large manual desk by following the four basic operations of a stage lighting desk:

- 1 - adjusting the lighting intensity on stage to give the desired effect.
- 2 - recording the levels so they can be recalled and repeated during the performance.
- 3 - modifying the recorded state during rehearsal, and recording the changes.
- 4 - taking the recording information and replaying it during the performance.

Using a memory console, the operator creates the lighting state by entering the numerical reference of the luminaire on a keyboard and either moving a continuous fader wheel or typing in an intensity level directly. When all the lights are set up, and the stage is properly lit, a memory number is allocated to the scene (by typing in another number), and the lighting state is recorded. To reproduce the same scene during the rehearsal, the original memory number is recalled, and the lighting levels are transferred to the playback - this is similar to setting up a blind (inactive) preset on a manual desk. When the fade button is pressed, the memory system fades the 'preset' onto stage, in the same way that the manual system crossfades between presets. If the scene has to be altered (if part of the stage is too dark, for example), the offending channel number is typed in again, and the wheel acts on the level of the channel in question to increase or decrease the lighting level from its current position. The revised state is then re-recorded, and the control system is set up for the show. During the performance, the memory numbers are normally used in sequence, each one being transferred to the playback in the correct order, and faded on stage in the time required by the designer.



The ETC Obsession ML

The first memory controls were developed primarily to make more efficient use of the lighting designer's time during rehearsal and plotting sessions. Developments continued

over the years, as the power and capacity of the electronics increased. In response to the ever-broadening expectations from spectacular shows, the capabilities of the machines has likewise increased. The modern memory system is not only a 'productivity enhancer', it offers the creative designer a host of techniques to manipulate huge numbers of channels and dimmers, and to control a large number of lighting changes in subtle ways.

Inevitably the advances in microprocessor design and the reduction in the cost of memory chips has meant a great increase in the capabilities of modern memory systems. We are now entering an era of automation, and memory systems are available to control position and colour (referred to as attributes) as well as the intensity of the light. Digital dimmers are capable of sending information to the operator on their performance and current status to receive, display or log.

GLOSSARY of LIGHTING TERMS

AMX Multiplex protocol for transmitting information using analogue levels from a control console to dimmers.

Application Software A software programme that adds specific features to the Foundation Software used with a lighting console.

ASCII Basic text file format Adopted for memory lighting consoles to provide a common file transfer format for sharing lighting data between different consoles.

Blind When changes made at the control do not effect the current lighting state. For example, when a master fader is at zero and a preset is being prepared for the next scene.

Blackout To switch all channels off.

Board One of the names for a control desk, derived from 'switch-board'.

Build A gradual increase in light.

Bump To momentarily flash channels up or down.

Channel The control path from the desk to the dimmer.

Channel Number Reference number which is



The Strand 550

entered on the keypad to control the intensity of a light.

Chase Continuous effect comprising a series of steps which are activated in sequence, each containing a channel or group of channels.

Circuit The electrical path from the dimmer to the luminaire.

Console One of the names for a control desk, derived from organ console.

Crossfade The gradual change of lighting where one lighting state completely replaces another. By definition only one crossfade can occur at a time.

Cue (1) A change in a given lighting state (2) A signal giver, by the stage manager to start a change in the lighting.

Cue Number Reference number given to a lighting change memory. Typically an integer, but decimal numbers are given to cues inserted into a previously recorded sequence.

Decimal Number A reference number for a cue which includes a decimal point. This is used to insert a new lighting change between two other previously recorded cues.

Delay Time The time associated with either the outgoing or incoming part of a lighting change, which lapses after the beginning of the cue, before the part commences.

Dimmer The part of a lighting system which controls the power to the light, and thus the intensity of the light source.

Dipless Crossfade A type of fade between two presets where channels with the same intensity in both presets do not dim and then brighten during the change.

DMX Multiplex protocol for transmitting information digitally from a control console to dimmers, or automated lighting units.

Effects Automatic sequence of lighting events (eg. chase, flash, flicker etc).

Ethernet Data signal wiring system for computer networks which is being adopted for high speed data transmission connecting lighting

continued on page 94



ENTECH VENDORS TAKE NOTE!

Next month's Lighting section will be packed with information on new lighting products to be shown at Entech.

If you want your equipment to be featured - get it in early! Press releases, copy, brochures etc must be with us by Wednesday March 13th. Don't delay.

Osram Cool

Osram have launched a new range of tungsten halogen sealed beam reflector lamps which can be fitted into many existing luminaires. 20 and 30 lamps have reduced UV (UV stop) to protect those extra sensitive displays such as paintings and fabrics. Both 20 lamps in 50W and 30 lamps in 75W can be supplied with either aluminised or dichroic coated reflectors. The dichroic coating provides heat reduction in the beam for heat sensitive display lamp applications.

For further info call: Osram (02) 481 8399.

Bits

- John Murdoch has ordered more **Tour Series dimmers** for his hire stock for use during the Adelaide Festival.
 - GTV9 has purchased another 11 **Linklights** to convert the remainder of their studios to DMX.
 - The World Congress Centre, Melbourne, has purchased a 120 channel single preset **Focal** c/w computer scene module, disk drive and trackball.
 - Greg Hughes of **Eastcoast Lighting** is supplying Charters Towers Entertainment Centre with **Wallpaks** and **Flexipatches** to be installed in June.
 - **Caulfield Grammer** have added lighting bar dimmers, **Selecon** fittings and an **Axiom 36** to their theatre.
 - **Girton Grammer School Bendigo** have fully fitted out their theatre with **LSC** products.
 - **LSC Electronics** have also supplied lighting bars and **Selecon** fittings to HMAS Cerberus for their new band facility.
- For further info call: LSC Electronics (03) 9561 5255.

WHERE DOES YOUR WIGGLE?

Greater Union Village Technology are pleased to announce their appointment as Australian distributors for the Caterpillar, a DMX/Analogue controlled moving light fixture manufactured and distributed worldwide by the Lighting Technology Group.

Caterpillar can be controlled by DMX512 or 0-10V or alternatively in stand alone mode via internal programme.

160° movement in vertical axis and 160° + 160° movement in the horizontal axis is achieved via a DC servo motor coupled to a high quality gearbox.

A 12V 20W 2000hour M47 halogen lamp is fitted within a high performance par 36 reflector producing a beam angle of 2°.

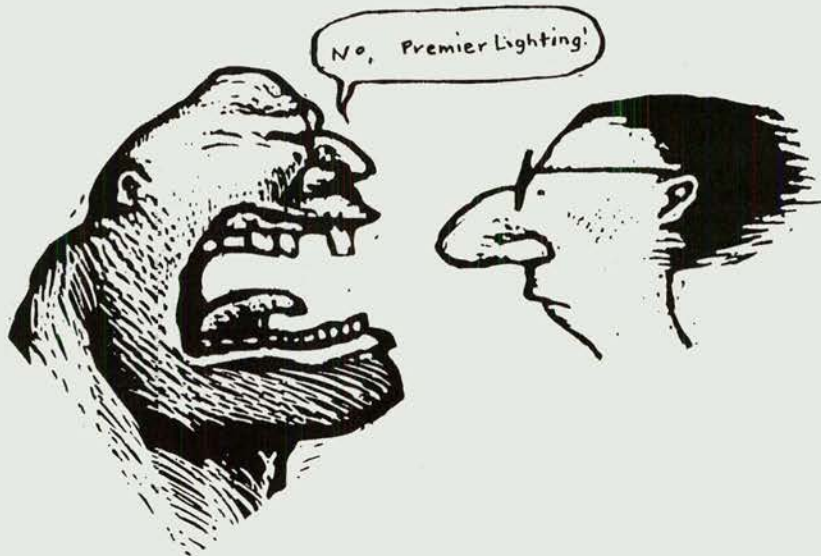
Universal mounting to wall, ceiling or truss is achieved via optional adaptors which fit to the four M6 threaded bushes.

Fixture dimensions are 212mm diameter x 430mm height and weight is 3.6kg.

Caterpillar recommended 1st price (including 22% sales tax) is \$1590.20 and they are available through GUVT dealers Australia wide.

Telephone GUVT toll free on: 1-800-773-187 for dealer locations.

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Chris Isaak stripped down

(sorry, we're only talking about the lights)

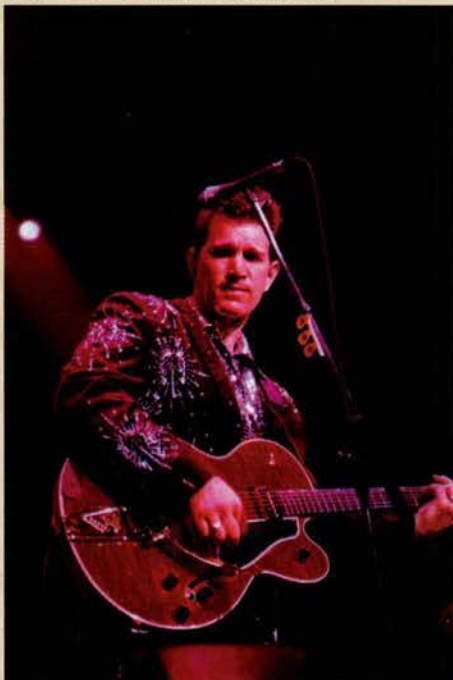
When I last spoke to Chris Isaak's lighting designer Lane Hirsch he was lamenting the small rig he had to work with, and looking forward to a larger system in Europe and the US. When the US tour was being planned, it was decided to bring the highly successful and innovative LD Jonathan Smeeton on board.

Jonathan created an interesting look to the back of the stage with 24ft long white 2" ropes spaced 5" apart which were placed at different angles. At the bottom would be a row of cyc lights and a Starlite was situated at the top or vice versa, so it was lit from both directions.

The V-shaped truss was retained for Australia but gone were all the interesting elements such as the ropes and Starlites. The usual excuse of not enough budget was reeled out and so once again Lane was dismayed at the amount of equipment he had. Lane had been hoping to have more moving lights than in the US and it was only a week before the tour that he was told there would be none. Floor ACLs and par cans were added to compensate.

"The US system was really beautiful but it had a lot of cyc units, 23 in all," said Lane. "The show was really dependant on the cys and that's what made it look big even though we didn't have a lot of instruments. We had to change some of Jonathan's design such as the colours and the Starlite positions. The truss spots didn't work so we had to cancel them. When you had somebody in the truss, the ropes would jiggle and also we had a mirror ball which would also move."

Lane admits to being nervous about working with Jonathan Smeeton and he had worried that they would not get along.



"I thought he would be controlling in the actual looks that I was building per song," said Lane. "But he let me do what I normally do and we got nothing but compliments in the US. The Starlites are pretty old but the guy they gave me really knew how to keep them going and he was a good operator. We lost a couple in New York but nobody said anything and it still turned out to be a good show."

"Although I didn't design the truss system I designed all the looks including most of the moving light looks. It's a bit of a bummer to end the tour without them."

On stage a black sharks tooth scrim was in front of a white cyc so the background looked black until lit up. Gone were Chris' trade mark tiki lamps which Lane had been trying to get rid of for quite a while.

I brought up the subject of Dwight Yoakam, a former client of Lanes, who was about to start an Australian tour and Lane was not shy about saying how he felt about Dwight.

"Dwight stopped using me when he did an all Vari*lite show and I wasn't a moving light operator," he said. "I was hired to do the job and then a week before the tour I was told it would be all Vari*lites. Now that these moving light companies have wash units they say that conventional units are not needed. I now need to learn moving lights or I'm going to get left

in the dust.

"I wasn't too upset because I didn't like working with Dwight. I thought he was kind of a jerk, you can quote me I don't care. A lot of people warned me about him as he's not the nicest guy to work for. He's not at all loyal to his crew and musicians and he treats people like they're below him. You really notice the



difference when you work with someone like Chris. I've worked with Megadeath and they have huge egos. You beat them at basketball and they almost fire you!"

Lane wanted to make sure that the local Jands crew got a mention as he thought they had been great, particularly Michael Webber and Jeff Pavey.

"It's made this tour really easy for me having a couple of guys like that," Lane praised. "I think Jeff is one of the best guys I've ever worked with, he's a complete professional with no 'rock'n'roll ego'."

• Cat Forcer

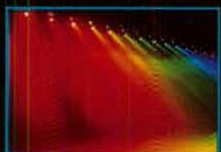
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The **COLOR PRO®** color changing fixture uses rich dichroic color to produce spectacular color changes, cross fades, sequencing, dimming, and many other programmable effects.

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Basic Principles of Lighting Control

(continued from page 90)

consoles, dimmers, remote video displays as a complete network.

Fader A linear potentiometer used for manual control of intensity, either as an individual channel control device, or a submaster, or Grandmaster.

Fade Time The time associated with a cue between the start and completion of the lighting change.

Flicker Effect which oscillates channel levels randomly to give the effect of flames.

another in which only the channels with a new intensity level move; all others remain static. Many move fades can occur at the same time.

Page (of Submasters) A collection of memories used simultaneously across a group of submasters.

Patching The process of temporarily linking a luminaire circuit to a particular dimmer.

Playback The part of a memory control which changes the current lighting to another lighting state recorded in the memory.

Plot A list of instructions detailing the changes in lighting for the entire production.

Pot Abbreviation for 'Potentiometer' - a variable resistance control element.

Preset For manual desks, the group of faders which control the dimmers. Most manual desks have two presets so one scene can be set up 'blind' whilst the other is active.

Proportional Patch A software feature to connect a group of dimmers to a control channel, where the dimmer levels may be set to a proportion of the current level of relevant channel.

Random An effect where a series of presets are activated individually, in a random sequence.

Record The action of electronically storing the lighting state.

Remainder Dim An instruction which maintains the levels of any currently selected channels, while forcing all other active channels to zero.

Remote A method for controlling the lighting at a distance from the main lighting console.

Slider A linear potentiometer used for manual control of intensity, either as an individual channel control device, or a submaster, or Grandmaster.

Soft Key Control push button where the function can change dynamically depending on the current status of the system.

SWC System Wide Control A control protocol which permits simple remote devices (push button wall stations or hand held controls) to control dimmer levels and presets directly.

Undo A memory system feature which cancels the last instruction and returns the console to its previous condition.

Wait Time The time a following cue waits after the start of the preceding cue, before it automatically commences.

This article first appeared in the Sept 95 issue of Lights! magazine, published by Strand.



The Celco Explorer EPX

Foundation Software A software programme that provides basic operating features for the lighting console.

Grandmaster A master controller which has total control of the output of the desk. Also the name of a large resistance dimmer switchboard of the 1930's.

Independent Channels which are locked to one part of a lighting console (eg. one submaster) and therefore only respond to actions from that controller.

Inhibitive Refers to a submaster which sets the maximum level of the channels associated with it. Sometimes referred to as a 'Front of House' master.

LCD Liquid Crystal Display

Macro A sequence of instructions used on a memory console to perform a function, which can be memorised to be performed by a single instruction.

Master A fader which has over-riding control of other faders. For example, the 'A' master of a manual control desk controls the individual levels of each fader in the 'A' preset.

Memory An electronic record of a lighting state which can be re-called during the performance.

MIDI Musical Instrument Digital Interface A Communication protocol used to synchronise lighting consoles with other control systems, or to link two consoles together to duplicate the actions for backup purposes.

Move Fade A fade from one lighting state to

Bits

● **Paul Beck** from GUVT reports the completion of the Optus display in the main theatre foyer of the Adelaide Festival Centre.

Designed by Nigel Levings and controlled by an **ETC Microvision**, the display comprises 14km's of fibre optics, 16 **Rainbow 2/16 scrollers** and 6 **Selecon 150W Metal Halide Condensor profiles** projecting the OPTUS YES logo onto the terrazzo floor.

Two of the condensers needed beams with mirror diverters but apparently still gave a very clean, high contrast image with low heat output.

● **Vari*lite Inc** report that they are busy with the following tours: AC/DC, Smashing Pumpkins 1996 Tour, Ozzy Osbourne 'Retirement Sucks' Tour, Wynonna, DC Talk, Robert Cray, k.d.lang and Cypress Hill.

Vari*lite Europe has equipment on the following shows: Simply Red 'Life' European Tour, David Bowie, Toto European Tour, Oasis, Eric Clapton, Michael Bolton, Mike & The Mechanics, Bjork, Melissa Etheridge, Claudio Baglioni and Gene.

● **CDA** have supplied the Rockhampton Performing Arts Pilbeam Theatre with **Maclux Pro Software**.

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Show Technology can now offer Geni's latest moving light fixture, the Cirrus.

The Cirrus uses an HMI 575 lamp for intense light output and long life. 7 pure dichroic filters can be mixed creating 15 saturated colours. The four colour dichroic filter offers more possibilities. Bi-colour beams and high speed rainbow effects are also possible. Eight gobos on two wheels offers gobo layering for a total of 16 different colour combinations. Gobo scrolling either wheel opens another range of effects. Many standard gobos are available and custom gobos can be supplied.

The fast shutter has a 0-15 fps strobe effect. Optional lenses are available.

Made from aluminium casing, the Cirrus has a powder epoxy coat for scratch resistant finish. The head can be manually rotated plus or minus 90° for accurate positioning. Standard DMX512 signal and addressing makes for easy operation.

Price: \$2339 ex tax.

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

READER SERVICE NUMBER 403

Bits

● CDA have announced that a **Blakes Pyro** distributor agreement for Victoria, NSW and Queensland was established with **Premier Lighting** who are now stocking a complete range.

● **Lotts of Watt** have bought some **DF-50's** for use on the Channel 9 Sydney Midday Show. **DF-50's** have also been sold to **Lightmoves PES**, Melbourne.

● **Coemar** have just released the **NAT MM1200 DX** and **NAT MM1200 Zoom 15/30** at the Siel Show in Paris.

● **Key Lighting** have purchased some **De Sisti Beta** stands and **De Sisti 4K Pars**.

● **Premier Lighting NSW** have acquired some **Coemar Sequenza cyclights**, as have **Total Concept Productions**, Sydney.

● **Total Concept Productions** have also bought another **ShowCAD** control system and MIDI controller.

● **Creative Lighting** are supplying some **Microscan 2's** to a Queensland University.

● **Total Concept Productions**, Qld, have purchased some **TAS** theatre fresnels and profiles for a theatre installation.

For further info call: **Coemar De Sisti** (03) 9467 8666.

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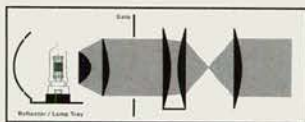
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Titania, Oberon, and Toasted Possums Hanging lights in huge trees

The stagehands at *Midsummer Night's Dream* have been busy. Every afternoon, they arrive at the Botanical Gardens, and put out all the lights, 24 colour scrollers, four Golden Scan 2s, two Super Scan Zooms, pyros, handmade wind chimes, and more. They also set up the follow spot, the sound tent, the smoke machines, and lay out all the cables for the show, which takes place in two areas of the park.

They've had to help a girl who was assaulted in the bushes, rescue a possum trapped in a light, ("he wasn't hurt, just very warm"), revive a girl who was allergic to the smoke, and deal with drunks wandering through.

Other than that, it's been a dream, according to Jason Andine, lighting tech on the show.

★ Madelaine Murray

SKYPAK AUCTION

All excess stock to go under the hammer

Well known Brisbane company, Skypak Lighting are getting ready for what they claim will be the biggest auction of lighting, audio and AV equipment Brisbane has ever seen.

Since their purchase of the entire lighting inventory of Topstage Productions in Canberra, Skypak has been bursting at the seams with excess gear.

Moving lights, search lights, smoke machines, theatrical fittings, dimmers, desks, follow spots, truss as well as AV and sound equipment must go at this mostly unreserved auction which will be conducted by Queensland auctioneers, Davlan Auction Traders Pty Ltd.

Gear from leading manufacturers such as Clay Paky, Studio Due, Martin, JEM, Coemar, Lampo, Optikinetics, TAS, High End, Strand, Technics, LEM, Le Maitre will be available.

See advertisement in this issue for details or call Skypak direct on (07) 3852 2757 for more information.

3 Return Qantas Air Tickets to Entech to be Won!

It's simple, just vote for an Entech award - but you must do so in March. Only voting forms from this magazine are acceptable, no copies. And you MUST vote by APRIL 1st. So hurry!

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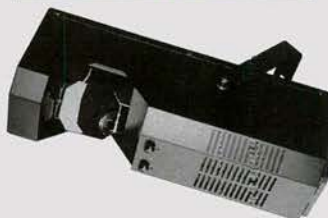
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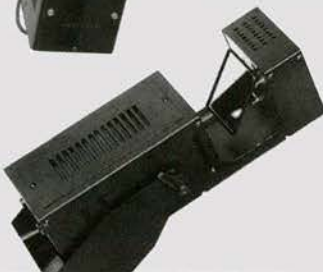
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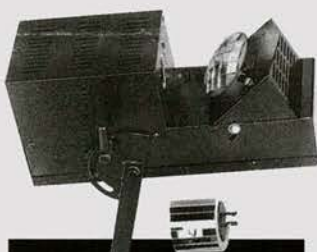
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Writer in Reader Service Number: 193



New LyteQuest products from Disco World

LyteQuest, distributed in Australia by Melbourne based Disco World, will be releasing two new products in March - the Alien and the Spider - and two more in April - the Raven and the Renegade.

The Alien produces six dichroic beams on 3 axis which spin at random and is easily mounted on a tabletop, ceiling, wall or trussing. It takes a 130V, 500W bulb and its voltage is 120V. Price is \$1595 including tax and lamp.

Alien

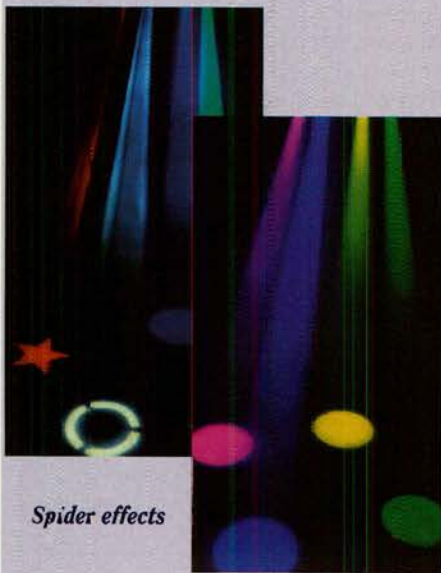


The sound activated Spider is DMX controllable, has a built in program with 512 steps (1024 steps maximum) and has four arms each containing 4 dichroic colours and white as well as 3 gobos with 2 colours. Also has 2 carousel mirror effects plus two rotating mirrors. Arms fold in for easy transport. Price is \$2950 including tax and lamp.

The Raven is also sound activated and can project over 100 concentrated moving colour beams. Price \$1135 including tax and lamp.

The Renegade has four rotating dichroic mirrors, 16 colour beams and is sound activated. Price \$1194 including tax and lamp. For further info call: Disco World (03) 9735 0533.

Spider effects



Billed as The Greatest Music Party in the World, the concert known as the Big Twin Mix was recently held in the UK and included 25 acts such as David Bowie, Rod Stewart, East 17, Eternal and Diane Ross.

The stage design was by Mark Fisher with a Screenco 5 x 4 Sony Jumbotron JTS-35 vision screen dominating the rear of the stage. An additional four single columns of four-screen units were placed 1ft away from the main screen. The staging was built around and underneath the screens.

Lighting designer Patrick Woodroffe and co-designer Dave Hill had to balance the various elements, such as the screens and the television crew, to make a successful show. The main feature of the show were four giant 'umbrellas' each 15ft tall and 20ft wide and weighing over 2 tons which float above the stage. Each of these 'technopods' carried a cluster of 7 Vari*lites and video monitors. Woodroffe, who designed the Rolling Stones Voodoo Lounge

tour, is continuing the trend of designing custom built structures to house lights.

Although Woodroffe is quoted as saying that the technopods remove the need for a large lighting system there were still 110 VL5s and VL6s, six bars of ACLs on stage and a further 20 bars on the five 80ft long trusses over the audience. These trusses also had two six-lamp bars and Rainbow colour changers. Generic lighting on stage consisted of two sets of ACs and two 1200W Panis per side. Added to that were 10 Molefays with Molemags. FOH had six 2kW Xenon Super Troupers.

Six 60W and 80W bulk heads brighten the top of the technopods whilst six 500W floods uplit the underside of the canopy as well as six par cans and a string of small strobes.

Control was an Artisan for the Vari*lites, a Celco 60-way console for the generic lighting, a Zero 88 XL for the Rainbows and a standard Colourmag board for the Molefays.

• Cat Forcer





BYTECRAFT SIZZLE

Julius Grafton, never one to turn down a free beer, reports

Bytecraft's new Sydney branch is a spacious modern factory unit at Stanmore, a short hop from the CBD and closer to the competition, Lightmoves and Premier Lighting. If I'd thought of Chameleon as competition I was wrong, because at the opening in February I saw some cozy scenes.

"We are quite friendly", explained Chameleon Hire Manager Rob Nicholls. Nearby Chameleon MD Tony Davies, and Bytecraft Business Manager Durham Ritchie, were virtually snogging. It seems the push at Bytecraft's Hire Division is towards adding new studio and location lighting such as new Strand Pars and Videolux Fluro Softlights. Bytecraft Sydney are well positioned to hire location and film lighting, assisted by 'Big Bob' who moved over from Channel 7 last year. Chameleon don't chase this market, whereas Premier do.

Bytecraft's co-owner Stephen Found was on hand to oversee the sausages, onions and beer disposal, and he briefed me on some imminent export orders which will set the company firmly on the world stage once announced. I promised to honour an embargo, so there you

go. More later.

Naturally Bytecraft are known for their innovative Status and State scenery/flying control systems, dimmers, and as Strand's Australian distributors. They have the Australian ICON franchise, which puts them head up against Jands Production Services and Vari*Lite Australia, who never look kindly on competition.

With 6 and-a-half staff in Sydney, this largest outpost of the Melbourne firm is busy with sales, service and hire. The branch is run by David Storie, known somehow as 'Darth' - who has worked tirelessly over the years on projects like NEETA - a technicians association.

Anyway, the new Bytecraft (Sydney) is located at:

Unit 5, 31 Bridge Rd,
Stanmore.

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Chameleon MD Tony Davies, Bytecraft Business Manager Durham Ritchie, and co-owner Stephen Found.



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DESIGN ESSENCE

a new business is formed

A new tri-partnership has evolved between Ian Wood, Rod Salmon and Emmanuel Ziino to form a new company - Design Essence Pty Ltd.

Design Essence is a specialist design and consultancy company for the growing entertainment, retail and exhibition lighting and audio industries. The services provided will be aimed at the rapidly expanding national network of architects and lighting consultants.

To keep up to date, the team intend to make regular visits overseas to attend key seminars, exhibitions and conferences, sourcing the latest technology to bring back home.

A network of pentium computers is the platform for 'Microstation' CAD package to be used for the designs, specifications, layout plans and elevations, cabling and control layouts, 3D perspective's and 3D 'walkthroughs'.

Design Essence is headed by Ian Wood who has had 10 years of lighting and architectural design experience throughout Australia, Europe and America.

Rod Salmon has had 20 years experience in the lighting industry and his portfolio boasts such showcase events as Australia's Bicentenary Celebrations and Expo '88. He has been involved in more than 500 speciality lighting designs for nightclubs, theatres, casinos, hotels and retail installations. Rod currently runs Show Technology Australia along with his partner, Emmanuel Ziino.

Emmanuel has had more than 10 years experience in the industry beginning as a DJ before going on to start his own hire company. Emmanuel and Rod teamed up in 1994 to form Show Technology.

For a free consultancy or an information pack, call Ian Wood, Rod Salmon or Emmanuel Ziino on (02) 898 1111.

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Megastrobos 1500W, Disco Strobes, Starflash, Super Starflash.

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The Pentecost & As You Like It

Nick Schlieper elaborates on his current work for the Sydney Theatre Company

Nick Schlieper began his career working at the Independent Theatre when it was "on its last legs and the only thing left to the place was its lighting equipment"

"Consequently I had a golden opportunity at a very young age to spend a year mucking about and making mistakes," said Nick. "Nobody much noticed or cared if the show looked different every night because I was trying something new. I then got diverted into stage management for a few years because I wanted to be a director and I thought that was the best place to learn. Then I decided I didn't want to do that and I played at production manager and technical director but only briefly because I hated that."

By 1982 Nick had found his niche as a freelance lighting designer and hasn't looked back. Highlights of his career include his recent design for London's Royal Shakespeare Company production of *The Heavens*. From a German background, Nick works extensively abroad both in Germany and England. He has a close association with the director Michael Bogdanoff who used to run the English Shakespeare Company as well as the State Theatre in Hamburg.

"I did a very memorable production with him there of an adaptation of *The Ginger Man* which we turned into a sprawling four hour epic," said Nick. "I get paid so much more in Germany and the German government takes all its art forms much more seriously. You can actually make a living in Germany as an artist of any kind without feeling like you're getting begrudging hand outs."

Nick has created lighting designs for the



Photo: Philip Le Maurier

As You Like It

Sydney Theatre Company since its beginning in 1980 and he currently has two works playing - *The Pentecost* and *As You Like It*.

"*The Pentecost* is one of the most exciting new plays that I've read for a long, long time," enthused Nick. "Theoretically I couldn't fit it into my schedule as it went into the theatre directly after Christmas and I was doing a production in Munich which opened on December 17th. I was sent the script anyway and I thought I had to do it as it was so fantastic. In terms of lighting, it became an exercise in perverting lighting something that's com-

pletely 1800 thrust stage with a constant light direction from one side only because of the nature of the set. It was a calculated risk and it means the show looks very different depending on which side or centre you view it from. You get three completely different versions of the same thing. It was good fun and a challenge to make it work from all three sides."

Nick admits he enjoys lighting the space of the STC's Wharf 1 Theatre which gives a range of points of view from the audience.

"If you're lucky and get it right, you can do that nice thing of getting three dimensional air through that variety of angles," said Nick.

Nick used a simple rig, consisting of equipment from the STC stock, which was largely colourless and had an awful lot of par cans up in one corner! There are two scenes where the light doesn't come from that one source - one by candlelight and one by a hanging globe.

"In that space you can afford to almost light a scene with candles," said Nick. "I love using things like that and then all you're supplementing is tiny doses of very carefully positioned lights running at minutely low levels. It's very difficult to do in a bigger space. I like things that look simple although sometimes you have to employ a great deal of complexity to make something look simple. I'm not a great advocate of simplicity for simplicity sake."

As You Like It, showing at Sydney Opera House's Drama Theatre, is a completely different type of show.

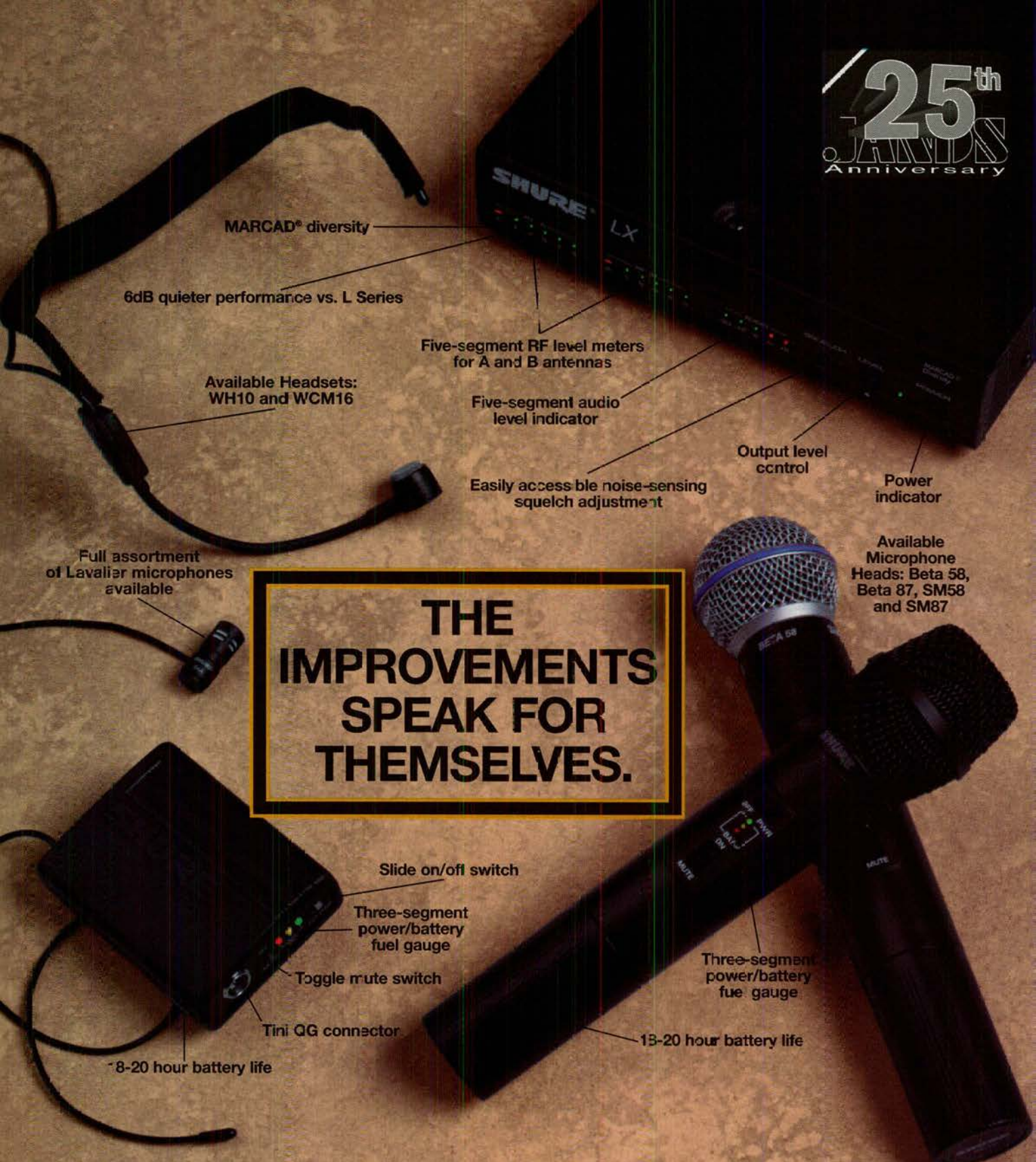
"You're going from a small space to an al-

continues on page 102



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An Interview with Nick Schlieper

(continued from page 92)

to the back wall and very wide at the sides," explained Nick. "The stage opens up about a third of the way into the play. It really is a complete contrast to *The Pentecost* as it's open and airy as opposed to a dingy, ruin of a church with one tiny two ft square window. Its heavily side lit and back lit. The set, designed by Michael Scott-Mitchell, is very colourful and the lighting reflects that.

"There were dire warnings about doing *As You Like It* on the double revolve after the experience with *Into The Woods* but we didn't experience any real problems."

Equipment wise, Nick is still a fan of the 'much maligned Galaxy' which he describes as the first lighting board that could do everything he required relatively quickly and simply.

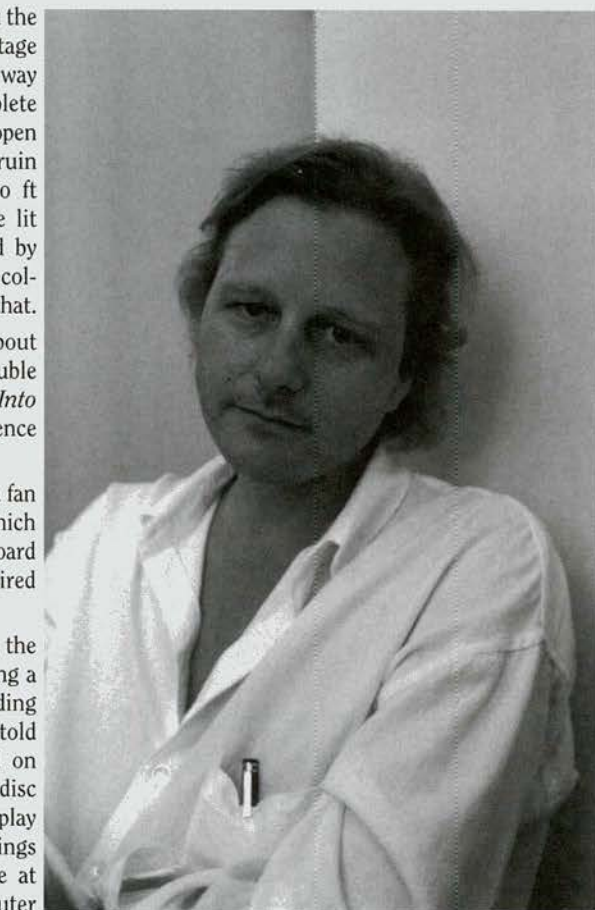
"In the case of *The Pentecost*, the Wharf is in the process of trialing a variety of different boards including an ETC and a Strand 430," Nick told me. "I don't like boards based on PC's. I have no desire to take a disc home to my hotel room and play with it. I can think of better things to do when I leave the theatre at midnight! Starting with a computer and building a lighting board around it is philosophically a backward step. I believe in starting with a lighting board and doing your best to computerise it. In terms of speed, it doesn't interest me in the least how many seconds it takes to make a disc at the end of the night any more than it interests me how many microseconds it takes to process information.

"I'm getting very bored of watching board operators try to trick boards of the Avab variety into doing true multiple cues, for instance. Galaxy's are made to do all these things and I'm disappointed to see Strand heading in that direction as well. I guess they have to make them cheaper and smaller."

Nick believes that Australian lighting design in the theatre is in a terrific state and the good work is on a par with work elsewhere in the world.

After our interview Nick was off to the UK to light a production of *The Government Inspector* for Theatre Clwyd in Wales. On his return to Australia in March he is lighting a show for the dance company Expressions in Queensland.

"They're the only dance company I work for because it's not a form I'm terribly interested in but they're very interesting," said Nick. "Then it's back to the Sydney Theatre Company to do *Galileo*."



Nick Schlieper, pictured above, will be available for interrogation at Entechs **MEET THE LD'S** seminar. Don't miss it - Tuesday April 23rd at midday. Seminar reference is L1. Cost \$10, bookings call 1-800-635-514.

● **Cat Forcer**

Bits

● *High End Systems Inc* have equipment on the following tours: AC/DC, Garth Brooks, Bush, Lenny Kravitz, Tim McGraw, Petra, Red Hot Chili Peppers, Hank Williams Jr/ Lynyrd Skynyrd.

HES lighting gear continues on the road with Alan Jackson, Brooks & Dunn, Billy Ray Cyrus, Elastica, Julio Iglesias, Alanis Morissette, White Zombie and Clay Walker.

● *Lightsounds Pty Ltd* in Leichhardt, Sydney has taken delivery of four **F.A.L. Roulettes** to add to their **F.A.L. Italscans**. Their new hire stock now comprises of several **UL Lighting Dragon** centre pieces, intelligent **Light Emotion Technoscans** and controllers as well as **Colourscans** with DMX controllers. This is all on display in the comprehensive Lightsounds nightclub style showroom, along with the full range of **Light Emotion** products and **Light Puter** lighting control.

Call: *AE Australia* (02) 568 2100.

● *Clifton Productions* have just had the first real live outing for their recently purchased **ShowCAD** control system and **Nebula 3** phase dimmer racks at the new Melbourne exhibition centre.

The system was used on the Victorian government stand which due to the design, lighting etc. took the Best Stand award at the 'Victoria On The Move' exhibition, the first to be held at the new centre. Some of the equipment was also used at the new BMW release which was also held at the centre.

● *CDA* have supplied the Gold Coast Arts Centre with **Microlux** software.

● An **Effects Company** smoke machine has gone to *Mick James Electronics* for Jupiters Casino.

For further info call: *Coemar De Sisti* (03) 9467 8666.

SHOW TECHNOLOGY go MAD

MAD lighting manufacture three versions of their intelligent scanner starting with the most basic MAD308H which features an M33 halogen lamp, 8 colour variations (including white) and 4 gobos (\$1228 ex tax). Above this is the MAD411H unit which includes the extra motor required to give 11 colours (including white) and 12 individual gobos (\$1556). The top of the range product MAD411A has the same amount of colours and gobos but features the ARC stream lamp giving a more intense light output and 6000 hours of life.

MAD also manufacture three versions of their intelligent star effect. It produces several beams that can be rotated in either direction at various speeds. The range starts with

the STAR208H which features an M33 halogen lamp, 8 colour variations (including white) and 4 gobos. Next is the STAR311H which includes the extra motor required to give 11 colours (including white) and 12 individual gobos. Top of the range is the MAD311A which has the same amount of colours and gobos but features the ARC stream lamp.

The MAD1 controller is a 2U size rack mounted unit with all connections being made at the rear. It can address 60 DMX channels and is fully compatible to DMX512.

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

READER SERVICE NUMBER 400



What's New in Moving Lights since last March

Since our Moving Lights guide last March Australian distributors have continued to add to their ranges with many new products.

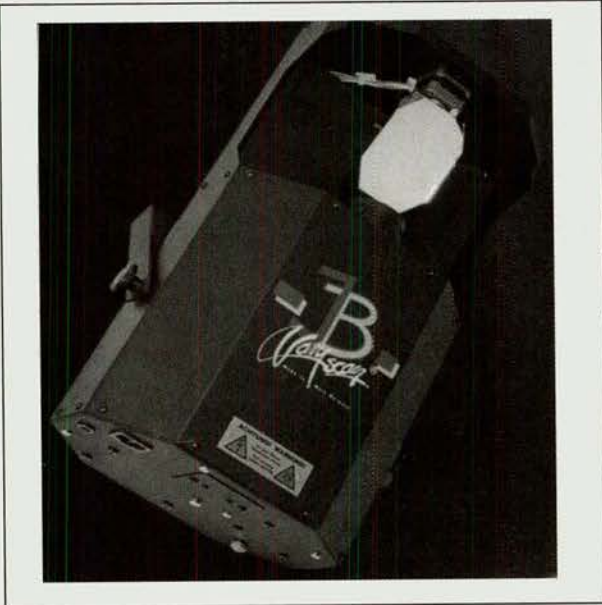
Show Technology launched Clay Paky's **Golden Scan HPE** which went on to win several awards around the world. The main feature of the HPE is that it offers individual control of all 12 functions and has many features not found on the GS3 or the Super Scan Zoom. The **PAL 1200** from **Martin** won the prestigious "Best New Lighting Product" at LDI'95. It uses a patented drive system synchronising a pair of stepper motors on each side to enable fully flexible control in any direction of the entire frame, and fine adjustment to millimetre accuracy. From **Studio Due** there was the **Stratos** and the **Predator**, both intelligent moving head lights. The Stratos has 12-bit high resolution accuracy

rigging. From **Tas** there was the **Crono** which uses a 1200 MSR lamp, has internal ballast and features 11 colours + white, multicolour and bicolour effect and has 10 gobos, 5 of which are rotatable. Also from **Tas** came the **Mini Ultrascan 2** using a 200W MSD lamp and featuring 4 fixed and 4 rotating gobos, 10 colours, blackout, strobing, chasing and the choice of a standard 90 or a super wide 180 beam angle. **TAS' Duetto** has a 10 colour wheel, dual mirror movement (MM) heads, 10 gobos and strobe/black-out.

GUYT launched the **Cyberlight SV** which is aimed at the TV market and retains the features of the regular Cyberlight but has a 75% reduction in overall noise level.

Universal Lighting & Audio launched the Varyscan range from JB Lighting including the **Varyscan 3 Special**, **Varyscan 3 Special Plus** and the **Varyscan 4 1200HMI**.

AE Australia Pty Ltd have just released the **F.A.L.** range of DMX moving lights including the **Pro Scan 2** (uses an HMI 1200W lamp, frost filter, UV filter, 4 colour dichroic filter, 58 colour combinations and 5 interchangeable bi-directional rotating gobos), **Roulette** (uses an HMI 575W lamp with 9 dichroic colours and white, 7 bi-directional rotating gobos mixed with 7 fixed gobos), **Italscan** (7 dichroic colours and white, bi-directional continuous colourwheel rotation, 7 gobos plus clear) and **Colourscan** (new redesigned model with 7 dichroic colours + white, 8 gobos, separate colour and gobo wheel). For more details see page 96.



JB Lighting's Varycolour 200

for smooth pan, tilt, colour and gobo change whilst **Predator** can produce both high-powered moonflower and flat line effects due to an internal beam shaping module. **Geni** came up with the **Cirrus-5** which has 7 pure dichroic colours which can be mixed to create 15 saturated colours plus 4 colour dichroic filters. Eight gobos on two wheels offer gobo layering. **Show Technology** have recently added the **MAD** range of scanners to their stock, see page 102 for further details.

Coemar De Sisti introduced the compact **Microscan 3** from **Coemar** which features some of the spin off technology of the **NAT** range. Utilising a bright 575W MSR lamp, it also has a remote ballast allowing ease of

Not present in last years Buyers Guide were **Bytecraft** who this year have submitted the **Strand Hyperbeam 1200** (high intensity 1200 watt HMI with 9 dichroic colours plus open white, 2 gobo wheels) and the **Hyperbeam 1288** (full dichroic mixing system using secondary colours).

Ashton Admor Pty Ltd have a new version of the **Galileo** -the **Galileo IV** from **S.G.M.** a 1200W HMI scanner which can mix 75 colours, and has 8 rotating gobos on 2 wheels. Just released from **Ashton Admor** is the **Victory** and **Victory II** scanners which have 10 interchangeable gobos (1 rotating), 12 colours, rainbow effect and use a 24V halogen long life lamp.

COOL Control

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Stand Number 028

Introducing great little chasers and affordable touch panels from **Lite Puter**. The **A-405** chaser and the **T-1202** touch panel are just two of the feature packed lighting controllers from **Lite Puter**.



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- ❖ 24 touch sensor "hold" & "flash"
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PH (02) 568 2100 FAX (02) 568 2300

Lite-Puter

Write in Reader Service Number: 195



THIRD STAGE

Cat Forcer takes a look at this successful New Zealand company

Third Stage Ltd was started in 1987 by Graham Munford and Rob Peters, then both working at the Mercury Theatre in Auckland. Graham was head of the Set Construction department, and Rob head of the Technical Department.

Prior to coming to NZ, Graham worked at Elstree Studios in London, UK, on films such as *Star Wars*. In 1989 Rob attended the summer school at the Banff School of Fine Arts, Canada, as a Lighting Design intern and worked afterwards in Edmonton with one of the foremost Lighting Designers in Canada.

Third Stage employs 3 people full time. The rest of the staff are casual contract workers such as designers, steel fabricators, machinists, carpenters, riggers, scenic artists, signwriters and prop makers employed as the jobs demand. Currently Third Stage has the largest permanent scenic production facility for theatre in New Zealand.

The jobs at Third Stage fall mainly into two categories:

- Set building, lighting, special effects, prop building, production management for theatre productions, one off shows, product release shows, display work etc.
- Permanent installation and manufacture of theatre systems such as counterweight rigging systems, motor winch installations, rigging hardware, staging rostra units.

Since 1987 Third Stage have been involved in a wide variety of jobs including:

- a two month NZ/Australian tour for Fisher & Paykel to launch a new range of whiteware products.
- the set builds for the Auckland Opera productions of *The Flying Dutchman*, *Carmen*, and *The Magic Flute*.
- lighting installation and lighting stage man-

agement of the opening/closing ceremonies of the 1990 Commonwealth Games in New Zealand.

- product release and show for Mobile New Zealand in Penang, Malaysia.
- lighting installation at the New Zealand pavilion of the 1992 World exposition in Seville, Spain.
- lighting design and operation for outdoor concerts of Kiri te Kanawa in Auckland and Hamilton as well as Jose Carreras in Auckland.
- counterweight rigging system installation at the Napier Municipal theatre.
- New Zealand wide tours for product releases from Dunlop, Fisher & Paykel, Lawson paper.
- chain motor installation at the St James Theatre, Auckland.

Currently Third Stage has 6 months work on its book. These include the next two set builds for Opera New Zealand productions of *Don Giovanni* (which travels to the VSO in Melbourne in June) and *Lucia di Lammermoor*, both to be staged at the Aotea Ctr in Auckland. Rob Peters will design the lighting for the production of *Lucia*.

Third Stage won the tenders for the stage rigging installations for the two theatres currently under construction in New Zealand. The Bruce Mason Theatre in Takapuna, Auckland will have 65 off 500 Kg counterweight linesets, rigging for orchestra shells and adjustable proscenium opening. The Casino thea-



Set Build for the Auckland Opera production of 'Carmen'.



Kamikaze Shopfront display



Lion Braun Launch, Wellington, New Zealand - design, construction, installation and lighting.

tre is part of the Sky City Casino complex, also in Auckland and will have 60 x 530 Kg counterweight linesets installed. All items for the stage rigging systems are manufactured in New Zealand with the exception of a number of 500Kg and 1000Kg winches which are imported from Melbourne.

A full range of rigging hardware for the theatre is currently stocked. These include multigroove head pulley blocks, various sizes of single pulley blocks for wire and manilla ropes, rigging plates, rigging accessories, winches, chain motors and controllers. Specific rigging items can be manufactured. Rostra staging units are available for hire and sale. They are made from a lightweight steel truss section with pockets welded in each corner to fit standard scaffold pipe so that any desired height can be achieved.

Any one-off rigging, building, design and installation requirements can be addressed.

Third Stage can be contacted on 64 9 443 9518.

The Casino thea-



BUYERS GUIDE

DMX MOVING LIGHTS

CLAY PAKY

Clay Paky Australasia Pty Ltd (02) 898 1666

GOLDEN SCAN HPE

HMI 1200 lamp, 113 single colours, Bi, Quad & Infinite colour mixing, rotating prisms, rotating gobos, super imposing prisms, remote focus, remote iris. Price: \$12,845.

GOLDEN SCAN.3

HMI 1200 lamp, 7 colours + white, bi colour beams, colour temperature correction, 4 way prism, bi directional rotating gobos, frost, iris. Price: \$8675.

SUPER SCAN ZOOM

HMI 1200 lamp, full colour mixing, rotating gobos, rotating prisms, frost filter, remote zoom, remote focus, remote iris, lamp hour meter. Price: \$13,800.

MINISCAN HTI 300

7 colours + white, 5 gobos, HTI 300 lamp, cimming, strobe, 4 DMX512 channels. Price: \$2,999.

F.A.L.

AE Australia (02) 568 2100

F.A.L. PROSCAN 2

HMI 1200W lamp, frost filter, UV filter, 4 colour dichroic filter, 9 dichroic filters plus white, 58 colour combinations, 5 interchangeable bi-directional rotating gobos, 255 gobo combinations. Price: \$9015.

F.A.L. ROULETTE

HMI 575W lamp, 9 dichroic colours plus white, bi-directional variable speed continuous rainbow effect, 7 bi-directional rotating gobos mixablw with 7 fixed gobos, strobe effect. Price: \$3685.

F.A.L. ITALSCAN

MBI-T 150W lamp, 7 dichroic colours and white, bi-directional continuous colour wheel rotation, 7 gobos plus clear with variable continuous colour gobo wheel rotation. Price: \$2295.

F.A.L. COLOURSCAN

ELC 24V 250W lamp, new redesigned model - runs extremely cool, 7 dichroic colours plus white, 8 gobos, separate colour and gobo wheel, adjustable focus. Price: \$900.

LIGHTWAVE RESEARCH HARD EDGED BEAM

GUVT 1800 773 187 or (09) 579 4082.

TRACKSPOT

250 watt, 8 colours + colour correction and white, 9 gobos + open, variable strobe, dimming, inexpen-

sive lamp replacement, DMX512, LWR protocol or analog, stand alone. Price: \$2247.

INTELLABEAM

700 watt, 11 colours + white, 11 gobos + open, variable strobe, dimming, iris, DMX512 or LWR protocol. Price: \$5700.

CYBERLIGHT

1200 watt, variable frost and diffusion, motorised



GOLDEN SCAN HPE



AGENTS FOR:



Panscan 4

- HMI 1200 Lamp
- 2 x 10 Position Colour Wheels with Bi-Colours
- 10 x Fixed Gobos on Interchangeable Wheels
- 5 x Interchangeable Rotating Gobos
- 4 x Rotating Prisms
- 180° Pan, 110° Tilt
- Super Fast Iris and Remote Focus
- 14 Flashes Per Second Shutter / Dimmer
- High or Low Resolution DMX512



Iris

- Dichroic Colour Tunnel Effect
- HMI 575 with Blackout Shutter or Halogen Lamp
- Sound Activation or Slave Mode

DJ Series

- Small, Inexpensive Effects Lights
- Sound Activation or Slave Mode
- High Power Halogen Lamps

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BUYERS GUIDE - DMX MOVING LIGHTS



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T28



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NJLD LOGIC 4004s

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- 4 channel chaser & 4 channel switch panel • 5 amps per channel • 24 programs • Latch/flash buttons • Sound activated • Ideal for small installations and mobile DJ's



NJLD LOGIC TS10R

Programmable Touch Panel

- 10 channels • 5 amps per channel • 10 IEC outputs • Latch/flash buttons • 64 step program • or. can run in sequence mode



NJLD LOGIC S12 Touch Panel

- 12 channels • 5 amps per channel • 40 amp total load • Latch/Flash • Master/Slave feature.

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Earlwood NSW 2206

zoom and focus, three colour system (independent or interactive), gobo stacking, rotating and static gobos, DMX or LWR protocol (CX version also available). Price: \$13,199 (CX \$8965).

CYBERLIGHT SV

Same features as Cyberlight but with 75% reduction in sonic emission. Price: \$14,609.

LIGHTWAVE RESEARCH WASH/SOFT BEAM

GUVT 1800 773 187 or (09) 579 4082.

STUDIO COLOUR AUTOMATED WASH LUMINAIRE

MSR 575 lamp twice the output of 1000 watt halogen, 100 million colour permutations, 8 - 22° beam angle, user shaped to horizontal or vertical positioning, 360° pan, 240° tilt, DMX512. Price: \$9537.

LIGHTWAVE RESEARCH DEDICATED CONTROLLERS

GUVT 1800 773 187 or (09) 579 4082.

TRACKSPOT ANALOG CONTROLLER

32 preset programs, pause, bump, master dim, auto/audio/manual advance modes. Price: \$611.

UNIVERSAL CONTROLLER

Independent dedicated control of Intellabeam, Trackspot and/or Emulator fixtures, 16 addresses, 500 user defineable scenes, 64 programmable presets, 32 position memories, LCD screen, ram card slot, cursor pad. Price: \$2383.

LCD INTELLABEAM CONTROLLER

Independent dedicated control of 24 Intellabeam and/or Trackspot. 891 scenes, 1024 programmable presets, LCD screen, ram card slot, edit and page copy functions, cross fade functions, midi port. Price: \$5746.

LCD CONTROLLER FOR CYBERLIGHT

Same features as LCD Intellabeam except for the dedicated control of up to 8 Cyberlight, Cyberlight CX or SV. Price: \$5746.

MARTIN

Show Technology (02) 898 1111.

PAL 1220

Fully automated framing (shutters), remote swivel of framing system, full colour mixing, MSR 1200 lamp, remote zoom, remote focus, indexed rotating gobos. Price: \$12,499.

ROBOSCAN 812

11 colours + white, 11 gobos + open, HTI 150 lamp, strobe, colour strobe. Price: \$1,569.00.

ROBOSCAN PRO 518

17 colours + white, 2 multi colours, MSD 200 lamp, 5 bi-directional rotating gobos, colour correction, dimming, strobe. Price: \$2725.

ROBOSCAN PRO 1220

9 colours + white, HMI 1200 lamp, colour mixing option, colour correction, 9 static and 4 rotating gobos, variable strobe, dimming, frost. Price: \$7025.

MARTIN DEDICATED CONTROLLERS

Show Technology (02) 898 1111.

MARTIN 3032

A benchmark in PC based lighting control, control 128 Roboscans, 9999 cues, 65,000 sequences, controls and can be controlled by other desks. Price: \$3250.

MARTIN 2308

Controls 8 Roboscans, 10 shows of 255 sequences, joystick, music and auto trigger. Price: \$2065.

MARTIN 2501

Basic control of 32 Roboscans, allows remote selection of preset programmes and colours. Price: \$577.

GENI

Show Technology (02) 898 1111.

CIRRUS

HMI 575 lamp, 7 colours + white, bi-colour beams, 8 gobos on 2 wheels allow gobo layering, strobe, DMX. Price: \$2339.'

STUDIO DUE

Show Technology (02) 898 1111.

STRATOS

Moving yoke projector, 360° pan, 300° tilt, MSR 700 lamp, 2 colour wheels, 2 gobo wheels, iris, 100% dimming, focus. Price: \$12,479.

PREDATOR

Moving yoke multiray projector, pan/tilt 300°, 5 colours, strobe, HMI 575 lamp. Price: \$4679.

CYBERLIGHT SV



MAD LIGHTING

Show Technology (02) 898 1111.

MAD SCAN 3

M33 lamp, 8 colours including white, 4 gobos, strobe, split colours. Price: \$1228.

MAD SCAN 4

M33 lamp, 11 colours, 12 gobos, strobe, split colours. Price: \$1556.

COEMAR

Coemar De Sisti (03) 9467 8666.

NAT TM2500

2500W HTI/SE lamp, YMC colour mixing, 360° total movement head, 10 rotating indexable gobos, rotating indexable multiplying prisms, seamless bi, tri, colour wheels - this fixture has a hard edge beam as standard but also has a frost filter for wash effect, you can also use the focus to obtain a soft edge. Price: \$20,300.

NAT TM1200

1200W HMI/GS lamp, YMC colour mixing, 360° total movement head, 10 rotating indexable gobos, rotating indexable multiplying prisms, seamless bi, tri, colour wheels - this fixture has a hard edge beam as standard but also has a frost filter for wash effect, you can also use the focus to obtain a soft edge. Price: \$8945.

NAT MM1200

1200W HMI/GS lamp, YMC colour mixing, mirror movement head, 10 rotating indexable gobos, rotating multiplying prisms, seamless bi, tri, colour wheels - this fixture has a hard edge beam as standard but also has a frost filter for wash effect,

Write in Reader Service Number: 105



BUYERS GUIDE - DMX MOVING LIGHTS

you can also use the focus to obtain a soft edge. Price: \$7000.

MICROSCAN 3

575W MSR lamp, 9 colour wheel, bi-colours, mirror movement (MM) head, 4 rotating indexable gobos, iris, dimmer, strobe, DMX control, LED multi-function panel addressing. Price: \$4400.

TAS

Coemar De Sist (03) 9467 8666.

MINI ULTRASCAN 2

200W MSD lamp, 9 colour wheel, mirror movement head (MM), 4 rotating gobos, black-out, strobe, DMX control, dip switch addressing, optional 180 wide angle lense. Price: \$2650.

CRONO

1200W MSR lamp, 12 colour wheel, mirror movement (MM) head, 5 rotating indexable and 5 fixed gobos, iris, dimmer, strobe, DMX control, condensor optics. Price: \$5750.

DUETTO

Twin 120V 250W dichroic lamps, 10 colour wheel, dual mirror movement (MM) heads, 10 gobos, black-out, strobe, internal microphone, lamp on/off remote control. Price: 2400.

LEISURE LIGHTING

Coemar De Sisti (03) 9467 8666.

SCAN 250

24V 250W dichroic lamp, 9 colours, 4 fixed gobos, dedicated joystick controller, DMX version available, strobe, black-out, audio input, full manual control. Price: \$920.

N.J.D.

Black Express Light & Sound (02) 559 4367.

IQ250 MkIII

Compact 250 watt, DMX intelligent light with 7 colours, 5 gobos, all stepper motor control, can operate via any DMX desk or NJD IQMX80. Price: \$1105.75.

ABSTRACT

Universal Lighting & Audio (07) 5552 9922

FUTURESCAN 2 CE

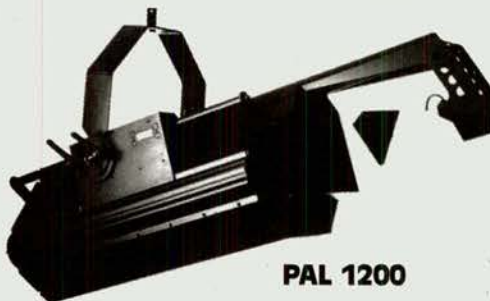
8 colours, 8 gobos, full DMX512 control, full stepper motors, auto dip switch settings, A11232 15V 150W lamp, strobe shutter. Price: \$1012 inc lamp.

FUTURESCAN 2 CED

8 colours, 8 gobos, full DMX512 control, full stepper motors, auto dip switch settings, GE 150W HQL arc stream discharge lamp, strobe shutter. Price: \$1230 inc lamp.

FUTURESCAN 3 CE

12 colours, 12 gobos, full DMX512 control, fully micro-stepped, auto dip switch settings, M33 24V



PAL 1200

250W lamp, strobe shutter. Price: \$1230 inc lamp.

FUTURESCAN 3 CED

Same as above but uses GE 150W arc stream HQL 4000K 6000hr discharge lamp.. Price: \$1450 inc lamp.

JB LIGHTING

Universal Lighting & Audio (07) 5552 9922.

VARYSCAN 3 SPECIAL

20 gobos, 24 colours, full DMX512 control, conversion filter, high speed shutter, strobe effect, full stepper motors, dimming fade to black, uses 200 MSD discharge lamp. Price: \$1966 ex lamp.

VARYSCAN 3 SPECIAL PLUS

12 gobos - 6 rotating, 6 fixed, 36 colours, full DMX512 control, 2 x conversion filter, flood effect, quad prism, high speed shutter, dimming fade to black, uses 200 MSD discharge lamp. Price: \$2704 ex lamp.

VARYSCAN 4 1200 HMI

5 gobos (4 rotating), 24 colours, 24 semi-colours, full DMX512 control, 2 x conversion filter, strobe effect, quad prism, shutter, full stepper motors, fast iris, blackout, uses HMI 1200W lamp. Price: \$7303 ex lamp.

STRAND LIGHTING

Bytecraft (03) 9587 2555

HYPERBEAM 1200

High intensity 1200W HMI, 9 dichroic colours + open white, 2 gobo wheels, 16 or 8 bit DMX512 control, 176° pan, 85° tilt. Price not yet available.

HYPERBEAM 1288

High intensity 1200W HMI, full dichroic mixing system using secondary colours, 2 gobo wheels, 16 or 8 bit DMX512 control, selectable supply voltage. Price not yet available.

S.G.M. ELECTRONIC LIGHT

Ashton Admor Pty Ltd (09) 478 3800.

GALILEO IV

16 channel 1200 HMI scanner, mixing to 75 colours, 8 rotating gobos on 2 wheels, prisms, filters, iris, dimmers, electronic focusing, strobe, highest speed chasing, self test, music synth, DMX or RS232. Price: \$10,912.

VICTORY

8 colours, 8 gobos, dimmer, strobe, 6 control channels, EVC lamp. Price: \$2780.

VICTORY II

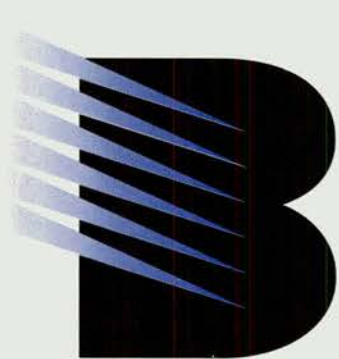
8 colours, 4 rotating and 3 fixed gobos, dimmer, strobe, frost, rotating prism, 8 control channels, EVC lamp. Price: \$3347.

* all prices are ex tax

Note: All vendors have much more than the (maximum) four products illustrated here.

Next Issue's Buyers Guide:
Film & TV Studio
Lighting

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Phone: 07 3252 5988 Fax: 07 3252 2411



Constella Lighting Effects reach out

Already making an impression in WA, Constella lighting effects are starting to reach the rest of Australia. Distributed by Show Structures of Perth, Constella lighting effects are manufactured entirely in the UK and are aimed at the clubs and discos market.

Show Structures tell me that the metal-work and double yoke system are a unique feature of the products. The transformers used are wound in the UK plus the electronics are

designed and built there. They use lower wattage globes but, so I'm told, their optics are very efficient providing superb light output. There is a budget DJ end of the

market ideal for Mobiles plus a range of units more applicable for installations where they have to be brighter to compete with other lighting implements.

The units have switchable modes which activate certain motors on them to provide a more versatile effect light. All the units, except the Chameleon, have forced fan cooling which can be isolated separately from the lamp so that it can be left on at the end of a show to allow the whole unit to cool down quicker before being packed away, which also helps to protect the lamp from damage.

Effects include the **Orbiter** with 6 dichroic coloured rotating moonflowers (\$899); **Twin Orbiter** with 2 x 6 dichroic coloured rotating moonflowers (\$1149); the **Dome** with 2 x dichroic reflectors (\$899); the **Power Twin** with 2 x 6 dichroic coloured rotating moonflowers (\$1059); the **Moondancer** a scanning moonflower (\$529); the **Motivator** with



The Pro Moon

multiple multicoloured moonflowers (\$589) and the **Chameleon** a colour changing moonflower with high output (\$589). All prices include tax and lamp.

Constella will shortly be launching a number of new products including a new Intelligent Scanner called the Startraker and a second edition to the Chameleon.

Call: Show Structures (09) 470 4707.

READERS SERVICE NUMBER 401

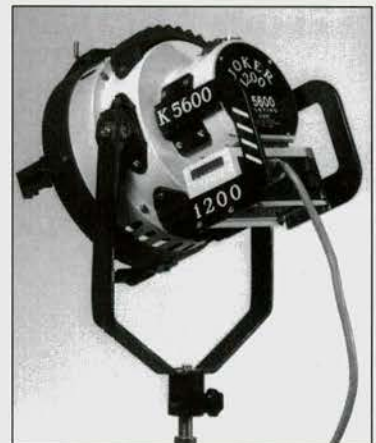


The Moondancer

PAR Excellence - PAR None! JOKER'S are WILD and HERE!



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Big Lights in Steamy Rain

David Burr talks about shooting *The Phantom*

I haven't actually met David Burr, but he sounds nice. He has that same laidback, low key, affable tone that distinguishes Russell Boyd, Dean Semler, and John Seale, and has given Australian cinematographers such a good reputation overseas.

David has just finished shooting *The Phantom*. When I spoke to him, he was about to go overseas for one more day's shooting.

Get this. In Thailand, they shot a fight between *The Phantom*, a lion and a snake. Trouble is, they couldn't get the lion, because he was booked on in Africa. Now he is free, and David is going to Los Angeles to shoot all the lion's action.



In the jungle up in Thailand, they had six Zenons; three 4ks, and three 2Ks, and a whole swag of regular HMI PAR type lamps. "We had lots of weather problems up there," David said. "We moved on during what was supposed to be the end of the rainy season, but it hung on for another month. We got drenched every day, which made things tricky. It was hard to match scenes, because one minute

we'd have bright sunshine and the next minute it was raining. It was difficult from that point of view."

They also shot for three weeks in LA, with three nights on the Universal backlot. "The set was a New York scene, a section of streets and cross streets about 400 yards long," David said. "We had to light for night. That was fairly big, we had about twenty-five

10Ks along the top of the buildings. We also shot on location, with a thing called a night sun. It's remotely controlled lamps on top of a crane, something like a Musco light but a little different. That had three 18K HMIs that were remotely controlled."

"David did a wonderful job," Vic Heutschy, the American production publicist said. "He is a terrific cameraman. He has scenes that are lit and photographed like paintings. And he shot under every kind of circumstance, location, studio, rain, on boats and planes."

• Madeleine Murray



David Burr at work

Some of *The Phantom* was shot in the Warner Roadshow studios on the Gold Coast. "It was a big picture, huge, and we had a lot of lights," David said. "We had probably the biggest set ever built in this country, the pirates' chamber."

The set was all built around scaffold, with the normal gantry, and an additional gantry erected. They had three 20Ks, eight 10ks, thirty-five 2Ks, twenty 5Ks, eighteen space lights, a Dino hung off the grid.



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THE PA PAGE

The Importance of KEEPING IT TOGETHER

Part Two in a series, by Michael Orland.

The fact is, in the professional audio market, rock and roll is not king. The portable live music system accounts for precious little new sales, and as an indirect result, much of the gear you may be using in your P.A. was aimed squarely at studios (home and pro)/installations/broadcast/etc. And as such was only meant for transporting in cardboard boxes between slabs of polystyrene.

In next month's page, I'll be yacking about ways to adapt items, such as effects and amplifiers, individually to cope with the rigours of road use. This month's page deals with adapting them collectively.

There are two types of racks, floating and non-floating. The non-floating rack begins with the simple sleeve. This can be just four bits of wood stuck together, fitted with cagstrip, and then prettied up (painted, carpeted, whatever). A slightly wider sleeve can allow room either side, front and rear, for thin slabs of ply with velcro strips to serve

as "lids". The "flightcase" type sleeve is usually a thinner ply covered in ABS plastic, aluminium, laminate, etc. and assembled with extruded aluminium angle and tongue-in-groove type lids, attached with catches. Once this type of rack extends beyond 6-8 units, one of the lids is usually fitted with wheels, meaning the gear usually travels face up. Despite the minimal vibration protection, for the solo operator with a hiace van sized system where every square centimetre is carefully allotted, the non-floating rack may be the more suitable type. These can easily be adapted for amplifiers as detailed in Connections No. 10.

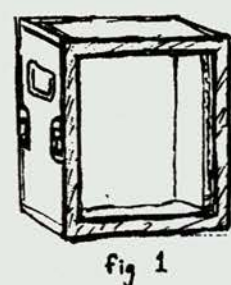


fig 1

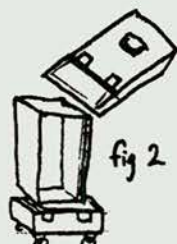


fig 2

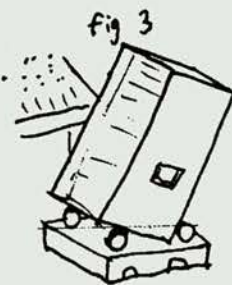


fig 3

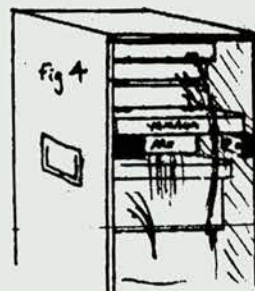


fig 4

as "lids".

When the gear starts getting thrown in and out of trucks, when the suspension is a lot less forgiving, I'd always prefer the floating type. These can either be the type where a simple thin sleeve is suspended within foam within a larger flightcase type sleeve (fig 1) or more commonly, the "teacosy" type where a rack travels within a separate case (fig.2). The former usually come with wheels on one of the lids. Personally, I dislike the idea of gear not travelling flat, so I've relocated the wheels on mine to the bottom of the rack in its upright position. The teacosy case gives you a handy lid for sitting the front-of-house effects rack on in-pub gigs, or a handy base for sitting it on in sit-down cabaret gigs (fig.3).

Like many operators, I prefer the units I turn to most in my FOH effects rack to be the closest to eye level. I like having the effects up the top in the same order, top to bottom, that the auxiliaries occur on the console; top unit - aux 1, next down - aux 2, etc. Beneath these I keep the insertables; gates, compressors, etc. Beneath these, the processing; equalisation, limiting, crossovers, etc. and at the bottom, the

keeps it in position. If you are placing a C.D. player on top of your cassette deck, might I suggest doing this with a small splodge of silicone sealant on each of its feet. Carefully lower it onto the cassette deck with a minimum of smudging, aligning the front panels as you do. Leave undisturbed for a few days. Lower the cassette deck back into its locating holes and reinstall your rack mounting whatever on top to keep the pair in place. You'll find that when the time comes for repairing or replacing either, they can still be separated with a little gentle persuasion and the silicone remnants easily peeled up without leaving a trace. In one of my systems I use a portable C.D. player within a one rack unit drawer which also leaves enough room for 10 C.D.s. After a little head scratching, I even came up with the idea of adding a window lock for safeguarding these pocketables while the crew was at dinner.

muzak machines; cassette deck, C.D. player.

Wanna know yet another thing I really hate? People who take nice looking domestic hi-fi components, drill holes in their sides and rivet or bolt on bits of aluminium angle in a feeble attempt to emulate the "pro" look of brands like Tascam. For goodness sake, if you are really determined to butcher and plummet the dollar value of your gear, at least take the lid off first and attach the ears to them without filling the machine full of metal fragments.

Anyway, there are far more sensible ways of installing them within your rack. Most cassette decks have screws on plastic feet. By careful measuring and drilling with a spade bit into the bottom of your rack, you can make four neat locating holes for the deck to simply sit in. Simply installing a rack mounting whatever sitting evenly on top of it

With rest of the gear within the rack, I always try and insure that each unit rests squarely on the one below it. I dislike the idea of anything in a portable system supported only by its front panel.

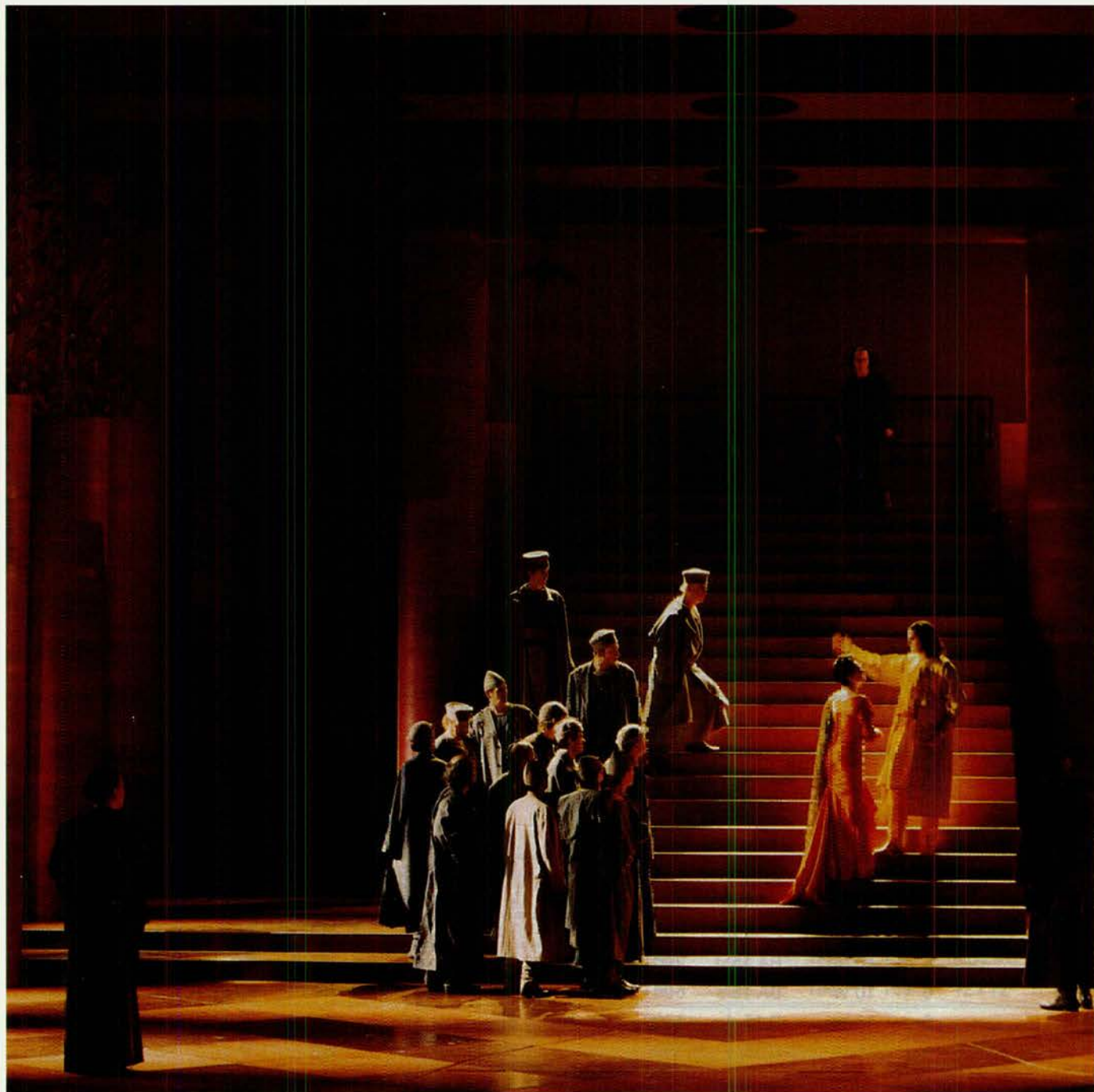
Another example: in each of my FOH racks, the lowest effect unit is a Yamaha D1500 delay, quite a deep unit, which is directly above an ARX Sixgate, quite a shallow unit. Little blocks of wood screwed into the insides of the rack (fig 4) provide neat little shelves to support the rear of the delay, which in turn support the effects above it.

Anyway, you get the idea. The more you're able to spread the effects of road vibration, the less wear and fatigue will result. Take a good look in the rear of your own racks. A little head scratching now can save a lot of hair pulling later.

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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