

★ SEPT 30: MUSIC MAKERS WEEK STARTS! ★

# Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

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SEPTEMBER 1995

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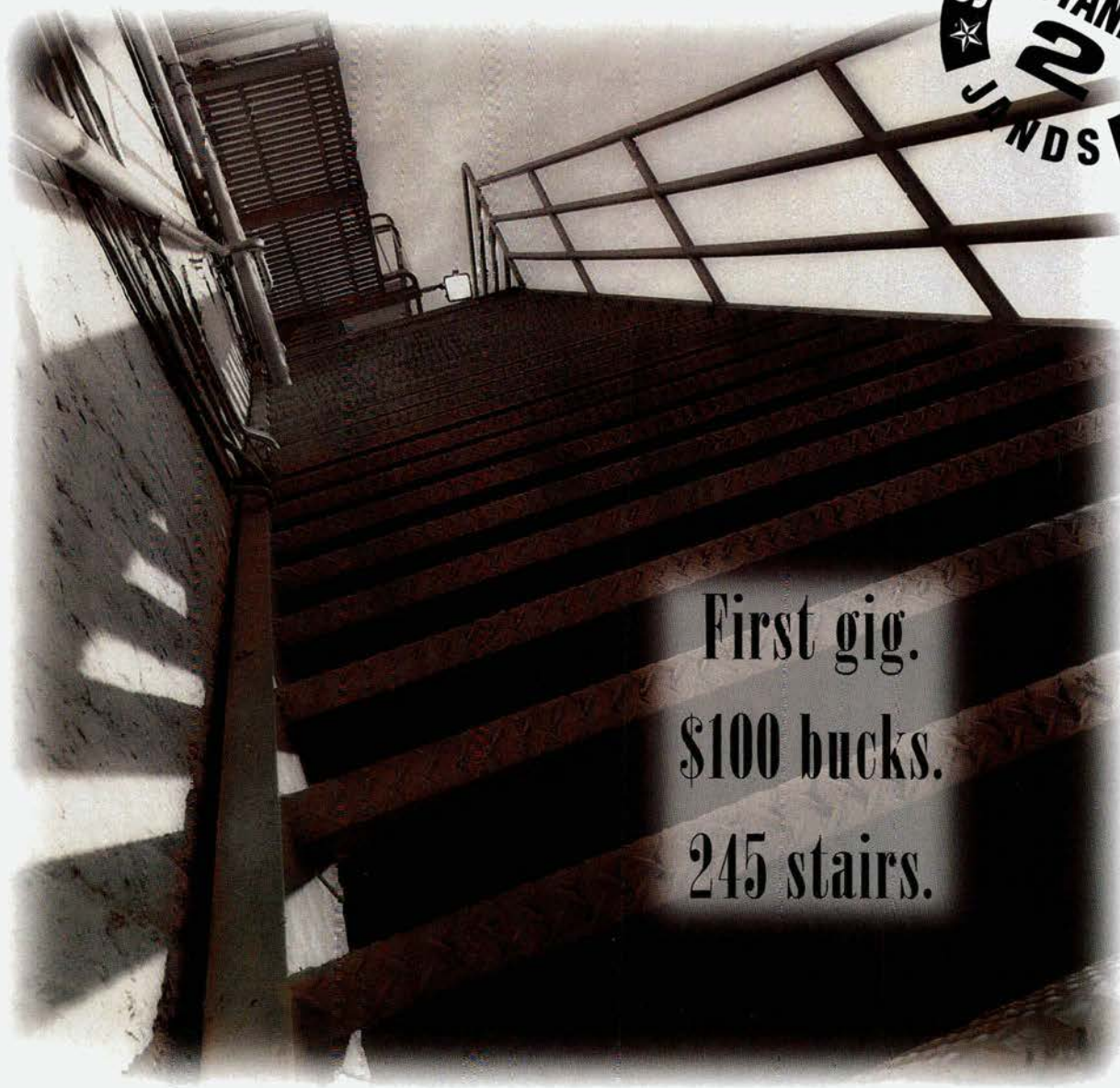
**MOBILE DJ'S INVESTIGATED**  
*CD copyright breeches alleged*

ISSN 1320-5595



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ALWAYS full of NEWS

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EDITORS NOTE

The big issue right now is WHAT will become of our music studios? The downsizing of Metropolis (see page 45) is an omen, and now more than ever we await the Governments response to the music industry summit.

■ This month we have an Asian flavour throughout, with some evidence Australian's are doing well way up North. But.....

Our main asset isn't manufactured technology (although we have some deviously good manufacturers who advertise on these pages and sell to Asia); our strength is people. Our technicians are versatile, adaptable, hard working and have solutions. They can demand -and get- decent contract money in Asia. We are also on the same time zone as Asia, and this is vital.

It's time to take heed of people like Peter Kemp (see page 75) and get together as a team to sell ourselves more effectively.

If it takes as long as next April to convene a summit then ENTECH will provide the venue and the facilities. But I hope it happens before then.

-Julius Grafton

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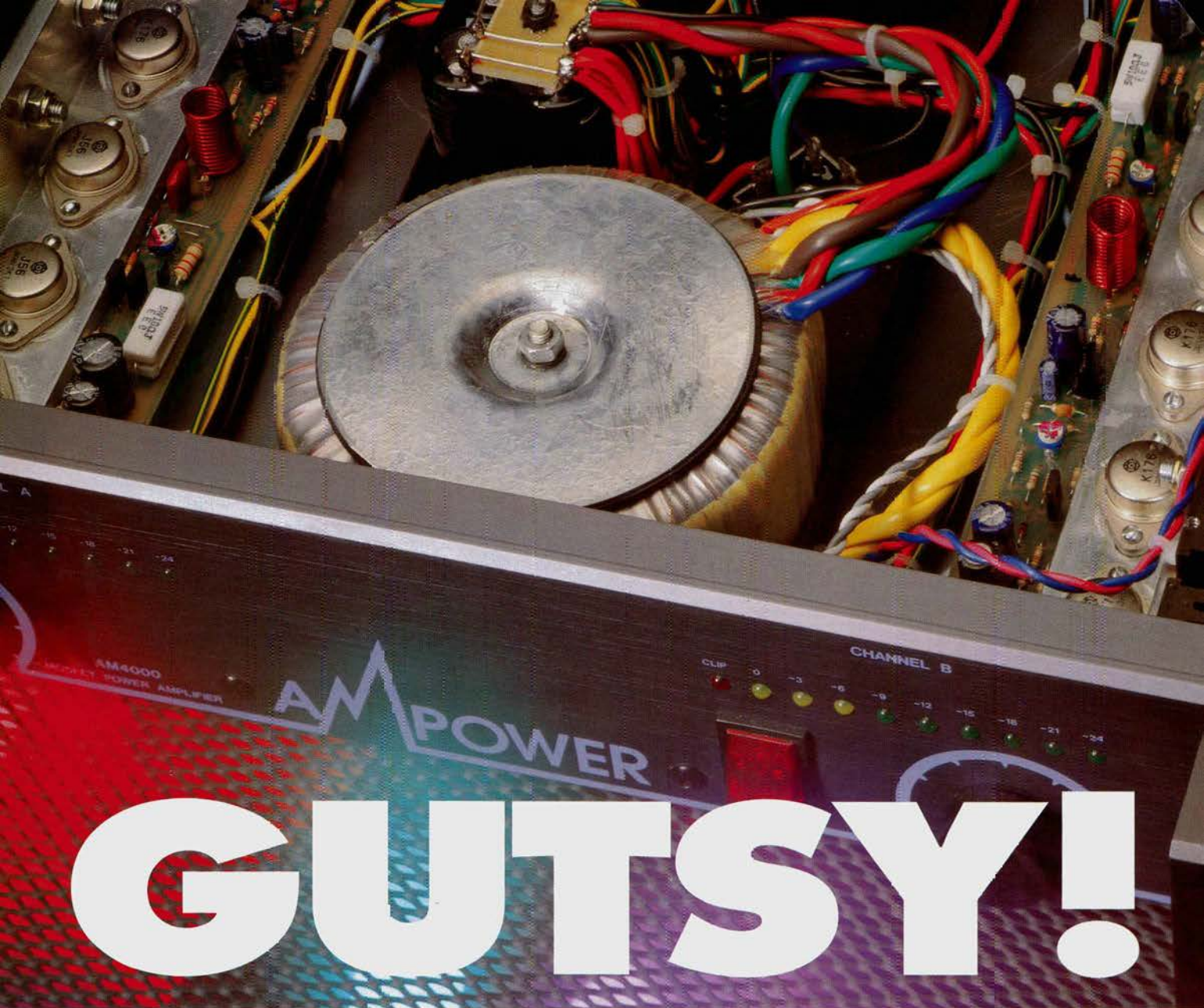


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# Connections

SEPTEMBER 1995. Number 26

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Mikado

Lighting section  
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## MUSIC MAKERS— DATELINE SYDNEY

*October long weekend Mecca for equipment heads and record companies alike, 12,000+ expected at Darling Harbour. And, Meatloaf will be there....*

CD Vendors and Record Companies come together at the end of September for the first AMRA (Australian Music Retailers Association) Convention in Sydney. Adding considerable interest is the bi-annual Australian International Music Show, (AIMS), to be held at the same time. Representatives from 1,600 home entertainment outlets, 700 music stores, and wholesalers of every persuasion will rub shoulders with up to 10,000 punters, muso's and star spotters across the October long weekend.

Music stars such as that leading vegetarian, Meatloaf, will ap-

pear. Australian and international acts are scheduled to play for both trade and public alike, in what will be the country's largest music industry celebration and promotion yet staged.

The Music Show features 75,000 square feet of exhibits from A - Z, with better than 100 firms displaying instruments, amps, computer music equipment, PA systems, sheet music and 1001 accessories for the pro muso or the raw amateur. It operates across four and a half days, with the last two days dedicated to trade only.

AMRA have also assembled 40+ exhibitors occupying a further

25,000 square feet of space to display their wares to the home entertainment retail trade. These exhibitors include all the major and independent record companies.

In addition to the tradeshow, AMRA are selling delegate tickets to the first AMRA Convention, held daily across the long weekend, with industry speakers including the CEO's of Sony Music, Mushroom and HMV. AMRA deals with issues affecting entertainment retailers, and was created from the PSA inquiry into the industry in 1992.

Issues to be debated at the *continued over*

## DJ'S IN TROUBLE

*Music Industry Piracy Unit Probes Mobiles*

By Julius Grafton

The Music Industry Piracy Investigation unit has confirmed it is targeting 'more than several' mobile disco operators who it is alleged have duplicated copyrighted music unlawfully, and in some cases in quantity. At presstime Connections has confirmed that actions are pending, although the investigation is in its early days.

Dominic Reichel from AMCOS (Australian Mechanical Copyright Owners Society) told us "Mobile DJ's have very good reason to be nervous. A Sydney company has had warnings issued". He declined to comment further.

Connections was told by sources the actions followed a complaint from a Melbourne

based DJ who had in his possession an unlawful CD copy of a Hit Disk compilation. Hit Disk managing director Dave Norman says his firm is aware its product has been duplicated in quantity, and he is aware of at least several mobile disco firms who have done so. "When your monthly sales to a firm go from 25 or more down to one copy you know" he said. Hit Disks are the only Australian distributor licensed by AMCOS to duplicate and distribute secondary material to radio stations and disco companies. Dave Norman claims some mobile firms are duping his material to mini disc, others are mass duplicating using CD burners. His CD's are sold for

*(continued on page 68)*

## Silk Road To Riches

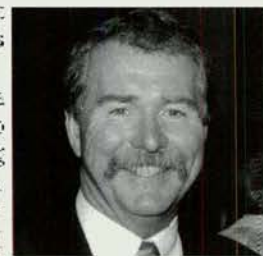
AUSSIE REPS USA AUDIO TO ASIA, SETS TREND

It can be a tough call distributing pro audio equipment in Australia, which is the most remote market of them all. Yet almost every global brand is represented here.

Horwood Australia is a typical pro audio distributor, handling Klipsch, KDM, Furman, Atlas Soundolier White and several other lines. Through several decades of contacts assembled by owner Ian Woodhouse, the firm does OK here. But the real action is in Asia. Four years ago, Horwood started selling Atlas Soundolier products into Asia on behalf of the American firm. It was a process started by the late Andrew Horman.

Today Ian Woodhouse travels the

region every three months, representing Klipsch and KDM. A typical sales trip will take in Singapore,



ASIAN ACTION

Kuala Lumpur, Bangkok, Hong Kong, Taiwan, and Manila. Indo-China is a target this year, but according to Ian India is out due to prohibitive tariffs. China is a huge potential market.

"You can't do business with the Chinese until they trust you - and you must understand how they do business", he says.

So why don't the American's just rep direct? The key is our time zone, virtually the same as Asia. Any US firm serious about the region must either set up an office - or hire a firm like Horwood Australia. -JG

# contacts '95 UPDATE

## i ABOUT....

Append your copy of Contacts with these fixups and additions: (these have now closed til '96)

### CORRECTIONS

#### Category: Production/AV/Hire Video Replay Systems

Correction: Ph (02) 660-1222 Howard Christian (mg. director).

#### Category: General Tech-Power Pty Limited

Correction: Mobile: (015) 413 517

#### Category: Distributors EAV Technology

Correction: Ph (03) 9417-1835 Fax (03) 9417-7704

#### Noisebox Entertainment Systems

Correction: Ph (02) 890-1709

#### Southbank Trading

Correction: Ph (03) 9699-7809 Fax (03) 9696-5691

#### Studio Supplies

Correction: Fax (02) 922-2043

### LATE ADDITIONS

#### Category: DISTRIBUTORS

##### Cinevid & Audio Sales

4 Fiveash Drive  
Pasadena SA 5042  
Ph (08) 276 9664 Fax (08) 374-0198  
Contact: Max Beck

#### Category: DISTRIBUTOR/MANUFACTURE/PRODUCTION-HIRE/REPAIRS

##### Burkinshaw Consultants

12 Budgeree Place  
Hoppers Crossing VIC 3029  
Ph (03) 9748-6864  
Fax (03) 9748-8193  
Mobile (018) 38-6481

##### Contact: Phil Burkinshaw

##### Brand: Suprex Staging Systems

#### Category: STUDIOS

##### Albatross Recording Studio

21 Christa Avenue  
East Burwood VIC 3151  
Stuart Jackson Ph (03) 9802-2068

#### Category: PRODUCTION/AV/HIRE

##### Pot Around Production

141 Penshurst Street  
Willoughby NSW 2068  
Mobile (018) 27-0820  
Contact: Robert Werner

#### System Sound Pty Ltd

58 Porter Street  
Pahran VIC 3181  
Ph (03) 9529-2633  
Fax (03) 9529-4897  
Contact: Jo Sapir

#### Category: REPAIRS

##### Djumak Audio & Sound Engineering

9/4-6 Linvale Close  
Lane Cove NSW 2066  
Ph/Fax (02) 412-4272  
Mobile (0414) 41-2427  
Contact: Hristo Djumak

#### Category: REPAIRS/MANUFACTURE

##### Prompt Lighting

Lot 23 Stansell Court  
Draper QLD 4520  
Ph/Fax (07) 3289-2800  
Contact: Grant Black. Manufactures circuit tube lighting bars and custom patch panels. Repairs & services lighting equipment.

#### Category: RETAIL OUTLET

##### Midwest Music

41 Chapman Road  
Geraldton WA 6530  
Ph (099) 64-3423  
Fax (099) 64-3420  
Contact: Len North

#### Category: RETAIL OUTLET/HIRE

##### Light Sounds

629 Parramatta Road  
Leichhardt NSW 2040  
Ph (02) 560-0300  
Fax (02) 560-0022  
Contact: Eddy Badaway

#### Category: TECHNICAL CREW

##### Baxter, Pascal

Ph (02) 9963-0446  
Fax (02) 387 6426  
Specialises as: Production manager & Lighting designer.

##### Djumak, Hristo

Ph/Fax (02) 412-4272  
Mobile (0414) 41-2427  
Specialises as: Freelance Engineer

#### Category: VENUES

##### Salamanca Arts Centre

77 Salamnaca Place  
Hobart TAS 7004  
Ph (002) 34-8414  
Fax (002) 24-0245  
Contact: Craig Bendle

## Largest Music Show Yet

(from previous page)

conference include emerging technologies and on-line transmission of music, topics which currently have USA retailers complete attention as they will soon face dramatic changes in the retail environment.

**CONCERTS:** The convention sessions will be followed each day by major music acts in the auditorium, presented by the record companies who are pitching their wares to AMRA retailers. These evening music sessions will include major names from Australia and O/S.

Music equipment retailers will also showcase their wares each afternoon in the Darling Harbour auditorium, a theatre seating several thousand people. This is an infinitely better solution than the previous show, where a stage was built on the tradeshow floor, leading to endless noise problems. Noise is an issue the Australian Music Association have tackled with this event, no longer will the halls reverberate to the noise of electric guitars and drumkits. Rules for exhibitors this year require headphones or noise isolation before demo's can be run. Previously exhibitors have gone so far as to build stages on top of their displays with rock bands performing, leading to some chronic fatigue and lingering headaches for visitors.

**FREE TRADE ENTRY:** Trade visitors are admitted free to the event after registration. Public visitors pay \$10 admission on the public days (Friday evening, Saturday, and Sunday), which allows them to browse the exhibits and visit the auditorium to see one of the feature acts in the afternoon of each public day. The feature acts include the infamous Fender Jam, and various celebrity presenters such as Dimebag Daryll (Pantera) and James Burton, one time Elvis guitarist. Local stars to appear include Virgil Donati, Nathan Cavaleri and Joe Camilleri. Trade visitors can browse the trade show without the public flocks on Monday and Tuesday.

To cap the industry interest in

the event, the annual ARIA Awards will be run from the auditorium during the evening of Monday October 2nd.

**POLITICS:** The conflux of AIMS and AMRA goes as far as the event organiser, Rob Walker, being executive officer of each respective organisation. Walker has been pivotal at the AMA for some years now, and is credited with facilitating the drive by musical equipment distributors to increase the takeup rate of musical instruments by young people. The AMA is running various campaigns and programs to improve participation rates from the current guess, which sees 8% of the Australian population playing an instrument of some kind.

AMA and AMRA are representative of their core industries, and the Music Makers week or whatever tag it wears, promises to be an essential 'must see' for Connections readers or all persuasions.

### DETAILS:

**AIMS '95:** Friday Sept. 29,

4pm - 9pm. Public & trade.

Sat Sept 30, Sun Oct 1: 10am - 6pm. Public and Trade.

AMRA exhibits open to AIMS trade, Sat, Sun, Mon afternoons. Mon Oct 2, Tues Oct 3. Trade only.

Showcase performances: Free after AIMS entry, Saturday and Sunday afternoons, 12.30 - 5pm.

### AMRA Convention:

Sat, Sun, Mon. Morning sessions, keynote speakers, training seminars. Afternoons: AMRA Exhibits open, midday - 6pm, front of Hall 2. Sat/Sun evening: live and AV showcases, acts include East 17 (UK), Montell Jordan and Badloves.

Every day: AIMS exhibits open to AMRA delegates.

**AMRA Convention cost:** \$150/3 days if booked before Sept 8, or \$200 thereafter.

•Details, bookings:  
(03) 9525-6755.

## Is Austel STUPID?

Wondered why we are going from 7 to 8 digits for our local phone numbers? America has 260 million people and they still have 7 digits. They DO have a three digit STD code, whereas we have two. Why didn't Austel just rework our STD codes in-

stead? The new numbering system sees Sydney numbers prefixed by a 9, so why not make the STD code 029 instead? Then local callers would not have to add the 9, and every business in the country would not need to reprint stationary. Stupid? Very.....



## JANDS TAKE ON TIGERS FOR CONCERT WORK

*One year in, and Jands Singapore are looking for larger premises already*

By Caroline Grafton

One year after the establishment of Jands Production Services'

### ASIAN ACTION

this can stimulate a great deal of frustration for the man at

Singapore division, manager Peter Rooney (pictured above) while content with trade growth, is still fighting the resentment and prejudices of the mighty Asian Tiger.

Like all Ex-pats working in the Asian region, Peter has had to come to terms with the wariness with which Westerners and Western Companies are regarded. Long term planning is vital to any business but in Asia be prepared to wait a little longer for the rewards a successful business can reap.

Peter is playing the Trust game, working on a two year establishment plan. He displays patience and tolerance with promoters and entrepreneurs alike. Peter tells me "Asian promoters tend to set concert budgets a little prematurely, in many cases before they even see the specification rider", and

the helm of JPS Singapore. Peter continues, "Vari\*lite has also triggered a lot of interest in the entire Asian region with the only concern being the prohibitive cost of airfreight".

Opposition production companies want JPS out and use an armament of tactics to block their progression. The largest production company in Australia, usually the aggressor on home turf in Oz, is now on the receiving end of similar tactics on an unfamiliar battlefield. And why not? Over the last 3 to 4 years Asia has become one of the worlds largest concert circuits and older established production companies don't want to share the pie. But the one thing they cannot fight is JPS's technical expertise and established

(continued pg 37)

## JBL offer free trips to Paris at AIMS '95

Visitors to the Jands Electronics stand at AIMS '95 this month have the chance to win one of two return trips to Paris in November, to witness the finals of the MTV music competition.

In addition, a pair of JBL EON PA systems are offered as prizes,

along with a number of t/shirts and JBL leather jackets.

The promotion is to celebrate the release of the EON system, a compact 'muso' PA. (See page 16)

Jands are finalising the terms, conditions and entry details, but word is: 'turn up and be in it'.

## MOVES

### CHANGE OF ADDRESS

**Altronic Distributors (Victorian branch):** 1 Aristoc Road, Glen Waverely VIC 3150 Ph (03) 9550 1821 Fax (03) 9561 5360

### AUSMUSIC NSW

Level 1, 142 Glebe Point Road Glebe NSW 2037 Ph (02) 552 3232, Fax (02) 552 4529

### AV Technology go to QLD!

Unit 3, 11-13 Olympic Circuit Southport QLD 4215 Ph 07 5531 3103 F 07 5531 0006

### Disculture

PO Box 265 West Ryde NSW 2113 Ph (02) 870 7360 F (02) 870 7361

### Dynalite

Unit 6/119-133 McEvoy Street Alexandria NSW 2015 Ph 02 319 5055. F 02 319 4799

### Polygram Australia

3 Munn Reserve, Millers Point NSW 2000. Ph: (02) 207 0500 Fax: (02) 207 0599.

### Hocking, Vigo and Gerrard

Stalbridge Chambers, Suite 4, 443 Little Collins St, Melbourne 3000. P.03 9602 4344 F:(03) 9602 3575

Music Solicitor **Brett Oaten:** New postal address: PO Box 41, Erskville, NSW, 2043. Ph (02) 557 7173; Fax(02) 519 9290

### NEW PHONE #:

**AIBA Group Insurance Brokers** (Syd) Phone (02) 923 1066

### APPOINTMENT:

Yamaha Music Australia has hired **Billy Mawer** to look after Sydney and Newcastle music retailers. He was most recently handling NSW on behalf of CMI. Greg Wright (director; sales) says Yamaha are already ahead of budget this year, and Billy will help.

### BABY:

Congratulations to Tim and Kate Ireland on the birth of their baby boy, Benjamin James at St. George Hospital, Kogarah at 8.37p.m. on August 17th, 1995. Tim is also father of The Dickhead's cartoon.

### NEW DISTRIBUTION:

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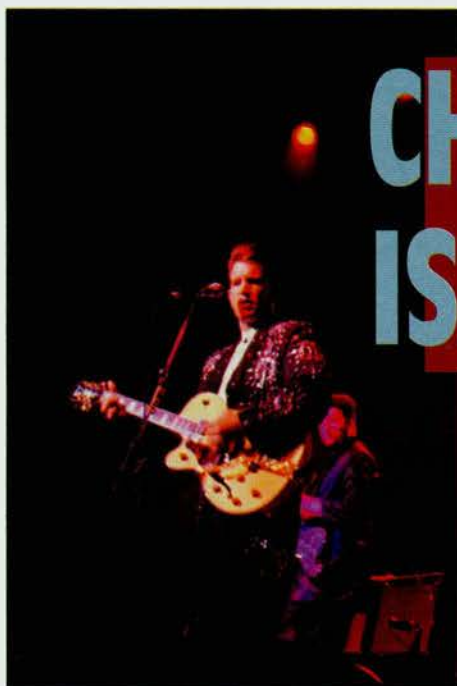
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## CHRIS ISAAK

Lighting designer Lane Hirsch (*who admits on his CV to also being a drum technician, bad career move or what?*) had only been working with Chris Isaak for five weeks and seemed pretty determined to change a few things.

"Chris has pretty much left it up to me to design the show but we haven't really got it together yet," said Lane. "We're just getting through at the moment but I hope to have a new backdrop made soon and add some moving lights, hopefully Cyberlights, for the real tour. This is very much a promotional tour, the proper tour starts in about six weeks."

The stage looked like it had come straight from a prom night. There were tacky coloured 'Easter Island' lights strung crudely across a backdrop upon which 'Chris Isaak' was written in a somewhat naive style.



Lane Hirsch & Paul Dalen

"I'm trying to get rid of the lights and backdrop," said a hopeful Lane. "I want to get a backdrop with a romantic setting - maybe a Hawaiian scene with a volcano, palms and surf. I haven't really talked to Chris about that yet."

The lighting rig was simple, about 90 par cans, a few ACLs, floor cyc lights and lekos with some gobos. Towards the end of the show, Chris changed into a 'mirrorball' suit which added a little something to the lighting effects.

Sound designer Paul Dalen was using a TMS3 speaker system.

"It's a rather old enclosure but great sounding for the vocal range," he said. "I have a Midas XL3 48 mixing desk, again a perfect choice of desk for Chris - very warm, rich sounding desk. For outboard effects I'm particularly fond

of everything TC Electronics makes so I'm using their delay and M5000 reverb. Also I have some Yamaha SPX990s, DBX160 outboard compressors, Drawmer 2C1 gates. Again the gates and compressors are relatively old models but great sounding. For what we need to do with Chris, they do the job very well. I think the most important component of the whole thing is the vocal mic - a Shure Beta 87 for Chris - which is a brilliant sounding, very rugged condenser microphone. In the old days condenser microphones were very fragile and difficult to take on tour but this one is really road worthy."

For years Chris Isaak used a sound engineer called Louis Beeson and they grew together. Louis was very instrumental in defining Chris' live sound.

"I saw Chris' show about five years ago and I've never forgotten what it sounded like it was that identifiable," said Paul. "It had that much of a signature to it. Usually that's not a good thing as the mixer should be transparent and allow the music to speak for itself. But this show sounded incredible - very wet, a lot of reverb, a lot of effects but sounded very natural. It was ethereal, dreamy and sexy. Louis died a few years ago and everybody who's mixed Chris since then has had really big shoes to fill. We've all been trying to recreate what Louis refined and defined over the years. The vocal is the most important thing with an enormous dynamic range in the show."

## Aftershocks/Lady Windamere's Fan

Lighting designer Jamieson Lewis has been busy with two plays showing at the Victorian Arts Centre, Melbourne. Both plays are part of the Melbourne Theatre Company's 1995 season.

*Aftershocks*, by Paul Brown and members of the Workers' Cultural Action Committee, played at The Fairfax and was designed by Dale Ferguson.

*Lady Windemere's Fan*, by Oscar Wilde, played at The Playhouse and the set design was by Tony Tripp.

Below is a scene from *Lady Windemere's Fan*.



## silverchair

Tim Whitten has been working, on and off, with silverchair since they won the Nomad competition. He doesn't work with them all the time, sharing the job as their sound engineer with a couple of other people. But it was Tim who was sound engineer at their recent Metro concerts which got particularly good reports for the sound quality.

Tim was using the inhouse Martin system which, although nearly 20 years old in its design, still suits some styles of music including silverchair. The desk is a Soundcraft 800B, a fairly old model which Tim says has a few odd attributes to it and he suggests maybe a bit of maintenance can be done to it!

"I don't use many effects for silverchair," said Tim. "There's a PrimeTime 2 in the rack at The Metro which is a fantastic machine which you don't see enough of. I have one of the original ones which I use a lot in the studio, I don't take it out live as it's too unreliable. With silverchair I use it on the guitar, a bit of modulation and a short delay time which generally widens the guitar a bit. There's also an Effectron DeltaLab delay which I use on the vocal, the delay time I use is around 120 which gives a slap on the vocal. That's basically it although sometimes

• Cat Forcer

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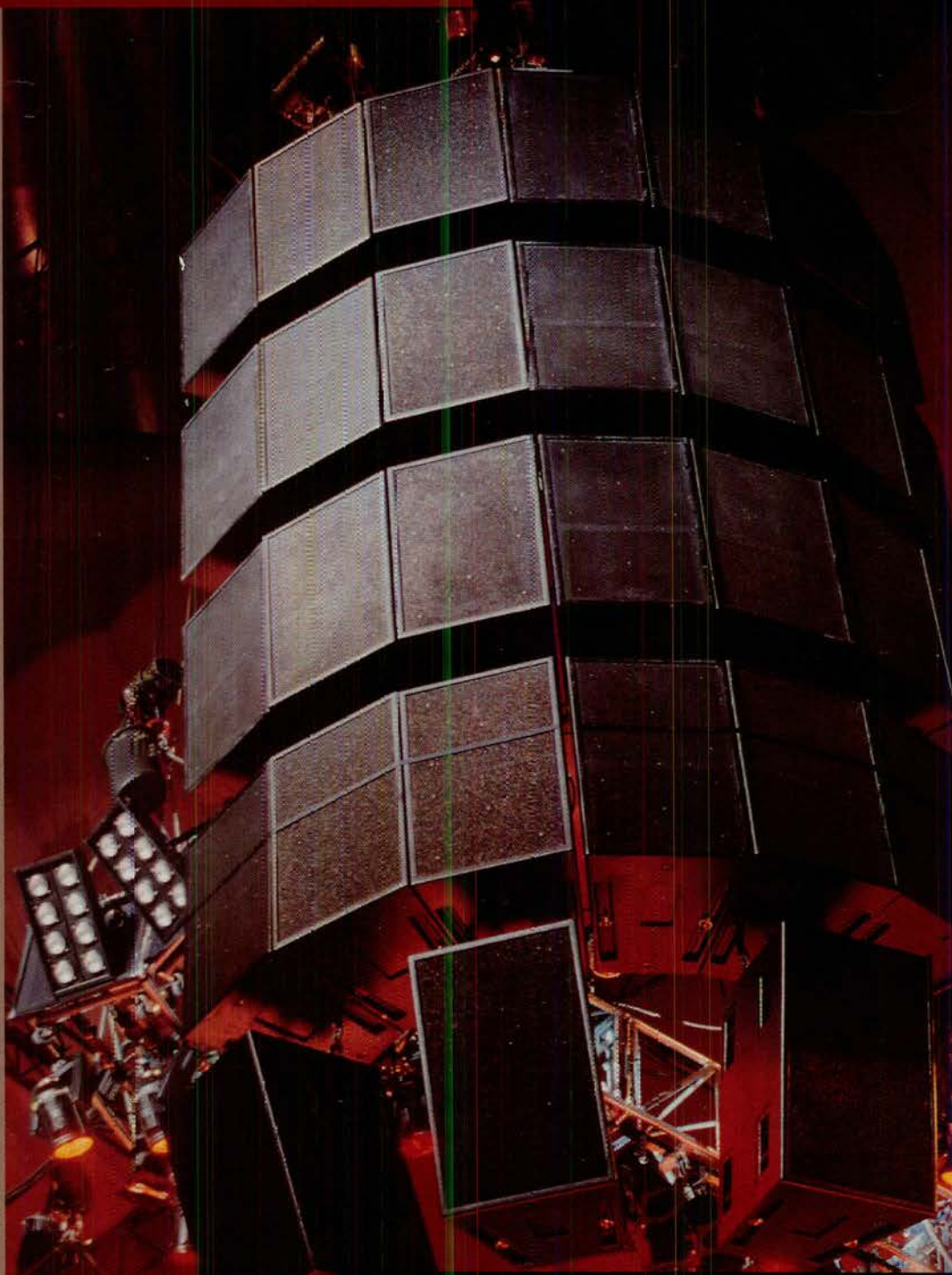
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Sydney: Suite 407, 220 Pacific Hwy., Crows Nest,  
NSW 2065 Ph:(02) 954 5100 Fax:(02) 954 4927

Melbourne: 6-8 Elizabeth St. Richmond, VIC 3121  
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Write in Reader Service Number 123



## Eric Clapton 100th Albert Hall Concert Stadium Array System Concert Sound

<b>NSW</b>	Lots of Watts The PA People Trevan John & Assoc.	(02) 638 0302 (02) 642 5344 (02) 748 7777
<b>ACT</b>	Topstage Productions	(06) 280 5710
<b>VIC</b>	DB Concert Sound Rutledge Engineering System Sales Warehouse Sound	(052) 921 1542 (03) 9419 8111 (03) 9529 2633 (03) 9417 4866
<b>QLD</b>	Hothouse Productions Impact Tech. Solutions Wild Gravity	(070) 51 3811 (07) 3257 1220 (077) 21 3540
<b>SA</b>	CINIVID	(08) 276 9664
<b>WA</b>	Audex Concert Sound	(09) 328 3188

■ EQUIPMENT DISTRIBUTION

**dbx for JANDS**

dbx has appointed Jands Electronics as exclusive distributor or Australia, effective this month. The appointment follows a major revitalising of the brand after it was acquired by Harman International in 1994.

**Jands quit hi-fi**

The distribution of JBL products in Australia will be handled jointly by Jands Electronics (pro audio) and Convoy International (consumer), effective September 18. The change recognises fundamental differences between the requirements of professional users and domestic customers, and reflects changes made with JBL's parent company, Harman International.

**AB International**

Production Audio Services are now exclusive distributor for AB International, a USA manufacturer of power amplifiers and graphic equalisers. AB International's Products include a range of very cost effective amplifiers for the contracting/installation market through to concert/touring sound models.

Prices start at \$1095 for the Model 200 amp.

Details: PAS (03) 9415-1585.

■ MUSIC CONFERENCE

**LEE SAYS NIL**

A mixed group of 400 curious ingenues and jaded luminaries filled Phil Trip's 2nd Annual National Entertainment Industry Conference, in Sydney on August 4 & 5. An expectant audience, waited for the advertised 'response to the Music Industry Summit' from Arts minister Michael Lee.

Minister Lee conveniently swiping the issue at hand, reiterated the governments good deeds to date. The necessity for immediate action to widespread change was the call of the moment that was left largely unanswered.

Other than that, his vague politico speak inspired a unanimous backlash amongst the audience. Laurence Boswell's comment "Quite frankly I didn't hear him say anything of substance," summed up the consensus.

The conferences overall focal point of innovations in technology and techniques in the music industry, opened the can of worms that is expected when ignorance meets fear and the resistance to change is strong.

Musicians and managers displayed foresight in substantiating the Internet's value as a promotional tool effectively cutting out many of the participants of the rock n roll food chain. As Rob Hirst pointed out "You can send that manager and his \$2000 briefcase back to the used car lot."

●Natalie Apostolou

*Music News*

With Natalie Apostolou

● The ninth **LIVID** festival has been set into gear. Thirty bands will be performing in this years line up, with an expected 13,000 turn out. The headlining acts: The Rollins Band, Cruel Sea, babes in Toyland, Morphine, You am I. To be held at Davies Pk. Jane St. West End on the 25th November.

● **Cameron Goold** made an eloquent impression as guest speaker at the Immedia gathering last month. He has since parted ways with Songlines and has set up **Djdry Patan Promotions** with Jacqui Geia. They develop and train Aboriginal musicians as well as organising national and international tours. Call Ph/Fax 03 93999683. Cameron 015 111759 or Jacqui 015 527 894.

● **Chris Murphy**, he of rooArt and INXS (ex manager) fame, has purchased Sydney radio station **2SM** (Gold 1269). Murphy's Kick Media, purchased the network for \$5.1 million. Trevor Smith has been named as CEO. Rumour: a rebirth as a youth orientated station with Aussie emphasis?

● **Roadshow Music** have launched as Australia's newest independent record label. With intimate ties to Triple M and Austereo as well as film and TV production outlets and Intencity, Roadshow music occupies a unique marketing position for its artists. Based in Sydney, they also have a fully operational set up in New Zealand.

● Melbourne based, but globally connected Opulent Music Entertainment Productions, is behind a new music show named **Rhythm Nation**. The program has been screening on Channel 31 Melbourne over the past 12 months. Now going international, the show promises to showcase local talent(40% Aus content) to the o/s market.

● **Colossal Records** have a new Australian label, Tiger Trax. The label is being handled by Janice Ruse, former M.D. for the defunct Possum records.

● Plugged in coolster Aaron Curnow is leaving his home of a few years, **Festival Records** to join **Shock Records**. Aaron worked in the capacity of assistant NSW promotions manager for Festival and also runs the ace fanzine Spunk.

● **Bark** have just signed Perth band **Header** to the stable.

● **Meanwhile** label mates **Presto**, have just finished recording their first album at Charing Cross, & the mixdown at Glebe Studios.

● **SilverChair** have relinquished their mother's management burden by appointing Sony's Director of International Marketing, John Watson as their exclusive manager. Watson will remain Sydney based with Sony announcing his replacement soon.

● **Damien Gerard Studio's** were overwhelmed by the interest in their open day last month. They are now compiling a CD of artists recorded in Studios A and B. Call the Studio on: (02)660 8776

● **Apocalypse** Post-Production studios in Sydney, have changed their name to **AAV Digital Pictures**, in order to align with AAV's national post-production network.

● **2SER-FM** has appointed a Music Producer. **Nicholas Gebhardt** is the man. Contact (02) 330 3000

● **Michael Gudinski** has been appointed to the board of the Victorian Arts Centre Trust.

● **Ausmusic** has created a telephone information hotline. For 75 c/minute, you get a myriad of information simply by leaving contact details after punching in designated numbers for chosen topics, and receiving the info sheet via mail. Call 190 294 1020.

● **Tony Campbell**, Ausmusic's Industry Development Manager, has resigned. He has started up a promotions/management company named TeeCee Management. Contact-Ph: (03)9841 0710.

● **Peter Press**, former Viacom UK, Europe and Asia MD and VP has resigned as managing director of **TV1**. TV1 is Galaxy's general entertainment channel.

● **Estranged Take That** member **Robbie Williams**, is seeking compensation for tour fees and income he would've received had he been allowed to serve his 6 month notice period. The existing members of Take That and the groups manager Nigel Martin-Smith, are being targeted by Robbie as responsible for forcing him out.

● **George Michael** has appointed his greatest ally within Sony Music, Andy Stephens as his new manager. Chosen to handle US affairs for George, is none other than Sydney's most glamorous son **Roger Davies**.

**silverchair**

from previous page

there's a bit of reverb on the drums but generally it stays as dry and straight as possible. It's not necessarily a policy of mine to do it that way but it seems to work best for them.

"There's some compression on the vocal and base, DI on the mic and a gate on the base drum. I use two guitar mics for Daniels set up because he uses two different amps, one all the time which has a clean sound and a distorted sound and an older style amp which comes in only on the distorted sound. So it's fairly simple as far as the channels mic up goes as there's only 13 channels."

Tim wasn't sure as to why the concert sounded so good that

night. To him it was the million dollar question. It can be many things - how the band are playing, the way he's feeling, and the way the PA was set up and tuned that day.

"Possibly what helps is that silverchair aren't particularly loud on stage," thought Tim. "The guitar amp is quite quiet, the bass amp can be loud, but I got that turned down a bit in the soundcheck, and the drumkit is the loudest thing. But that doesn't necessarily equate to good sound but I think it was beneficial that night."

Tim doesn't do much live work now preferring to concentrate on studio work.

● **Cat Forcer**

now there is a real alternative



## SERVO 500 POWER AMPLIFIER

RACKMOUNT POWER AMPLIFIER (3-SPACE)

• DESIGNED FOR STUDIO AND LIVE APPLICATIONS • 250 WATTS PER CHANNEL @ 1kHz, 4 OHMS (TYPICAL) • 127 WATTS PER CHANNEL @ 1 kHz, 8 OHMS (TYPICAL) • MONO-BRIDGEABLE TO 500 WATTS @ 8 OHMS • 25HZ TO 50HZ FREQUENCY RESPONSE • 1/4" INPUTS AND OUTPUTS PLUS BINDING POST OUTPUTS • SMART SERVO CIRCUITRY PROTECTION AGAINST OVERHEATING AND OVERCURRENT • CONVECTION COOLED (NO FAN) • ALL STEEL CHASSIS • RRP \$1099



## MPL 2242 4-BUS MIXER

22-INPUT, 4-BUS RACK-MOUNT MIXER (9-SPACE)

• 10 XLR MIC/LINE CHANNELS AND 6 STEREO CHANNELS • 4-BAND EQ • 6 AUX SENDS: 1 PRE-FADER: 5 POST-FADER • 4 STEREO AUX RETURNS • 10 Hz TO 50 kHz FREQUENCY RESPONSE • 48 V PHANTOM POWER • PEAK INPUT LEVEL LEDs • IN-PLACE SOLO/PFL AND BUS SELECT ON EACH CHANNEL • 10 CHANNEL INSERTS • ROTATING JACKFIELD • HEADPHONE OUTPUT • RRP \$2299

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## MPL 1502 COMPACT MIXER

15-INPUT, RACK MOUNTABLE MIXER (6-SPACE)

• 5 XLR MIC/LINE CHANNELS AND 5 STEREO CHANNELS • 3-BAND EQ • 2 STEREO AUX RETURNS • PEAK INPUT LEVEL LEDs • 48 V PHANTOM POWER • BALANCED STEREO BUS OUT • 5 CHANNEL INSERTS • OPTIONAL RACK-MOUNT KIT • CD /TAPE INS AND OUTS • HEADPHONE OUTPUT • RRP \$899

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SERVO 240 POWER AMP \$899  
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E30 GRAPHIC EQ \$599  
Q5 HEADPHONE AMP \$399



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## World Electricity

Country	Cycles	Volts
Argentina	50	220/380
Australia	50	240/250
Bangladesh	50	220/240
Brunei	50	240
Burma	50	230/250
Canada	60	120/240 & 110
China	50	220/380
France	50	220/380
Germany	50	220/380
Grt Britain	50	240 & 240/415
Greece	50	220, 220/380/127
Hong Kong	50	220, 200/346
India	50	230/400/220
Indonesia	50	127/220
Italy	50	220/380
Japan	50/60	100/200
Korea	60	110/220
Malaysia	50	230/240/415
Mexico	60	varies
NZ	50	230/400
Russia	50	127/220, 220
Singapore	50	230/400
Sth Africa	50	250
Tahiti	60	220 & 110
Taiwan	60	110
Thailand	50	220/380
USA	60	120
Vietnam	50	120/127/220

**Not here?** The COMPLETE Connections goes EVERYWHERE list of Electrical currents around the world is on our online sites, MSN & next.com.au (in magazines).

## DOLLAR HISTORY

HOW the A\$ has fared over time.

	\$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
<b>NOW*</b>	<b>0.74</b>	<b>69</b>	<b>0.47</b>	<b>1.07</b>	<b>1.03</b>

\*At publication date, 20/8/94.

**NZ\$ at publication: \$1.11**

All rates indicative only. Check with your bank.

## MAJOR TRADE SHOWS

- **PLASA**, London, Sept 10 -13. Call +44-171-370-8179  
UK's biggest sound, lighting and staging show.
- **AIMS '95**, Sydney September 30 - Oct 3. Call (03) 535-0144  
Biannual, Australia's international music show
- **SHOWBIZ EUROPE**, Munich Sept. 22 - 24. Call +49-89-470-2399
- **AES 99th**, New York, October 6th - 9th. Call +1-212-586-5989  
USA's leading pro audio show.
- **REPLitech Asia**, Singapore, Oct 24th -26th. Call +1-212-643-0620
- **LDI Miami USA** Nov 18 - 20 1995. Call +1-212-229-2965  
Worlds largest lighting trade show.
- **INFOCOMM ASIA**, Singapore, Nov. 23-25. Call +65-290-5868  
Asian version of leading AV, Multimedia show
- **NAMM** Los Angeles Jan 18-21 1995. Call +1-619-438-8001  
USA's leading music show.
- **Musikmesse**, Frankfurt March 13 - 17. Call +49-69-7575-6662  
Largest music show in the universe!
- **Broadcast Thailand**, Bangkok. April 4-7, 1996. Call +66-2503-2199
- **ENTECH '96**: Sydney April 23-25, 1996. Call (02) 876-3530  
Australia's annual Entertainment Technology show
- **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!
- **World Lighting Fair** Tokyo, June 20-22nd, '96. Call +81-3-3706-5687
- **AES 101st**. Los Angeles, Nov. 7-10, 1996. Call +1-415-558-0391.
- **ENTECH '97**: Melbourne Exhibition Centre, April 1997.  
Annual show, at Sydney Exhibition Centre on even years.
- **SMPTE**, Sydney July 11-14, 1997.  
Biannual TV/Film equipment trade show and convention.

## ESA, APOGEE TRADE DEMO

**SYDNEY**- ESA Audio & JC Sound are displaying the complete range of ARTIST SYSTEMS loudspeakers by Apogee Sound, TECHNOMAD tough speakers and Apogee Digital amps. **Venue:** Cat & Fiddle Hotel, 456 Darling st Balmain. **When:** 11,12,13 Sept, 10am - 6pm. Live band 13 Sept 8pm. Call JC on (02) 642-4738.



## World Weather for SEPTEMBER

Where?	Temp °C	Rain mm			
Auckland	16/9	102	Manila	31/24	353
Bangkok	32/24	306	New York	24/16	89
Beijing	27/14	58	Paris	21/12	55
Chicago	24/14	69	Perth	19/10	69
Dubai	37/25	0	Rome	26/17	63
Frankfurt	21/11	57	San Francisco	23/12	5
HoChiMinhCity	31/24	336	Seoul	26/15	142
Hong Kong	30/25	320	Shanghai	28/19	132
Jakarta	31/23	66	Singapore	30/24	179
Kuala Lumpur	32/22	188	Sydney	19/11	74
London	19/11	49	Taipei	31/23	189
Los Angles	24/16	5	Tokyo	26/19	217
			Toronto	22/12	66

## CASH!

The tight-ass Column.  
By **Beancounter.**

The ed called and said Connections has a new page called 'business', and the fourth column was empty. Could I think of a theme? So here we are. My favourite subject, where I can talk dodgy homilies, such that I will operate under a pseudonym!

### ME & DINERS CLUB

The wino who lives on the traffic island outside my nearest pub has a frequent buyers card. I figured after 800 flagons of no-frills Claret (not for internal use), he would, if still living, have enough points to fly to Canberra. Myself I have a Diners Club card, which credits my Ansett Frequent Flyer with 1.5 points for every dollar I spend.

So I went to the accounts payable department at the regional newspaper for which I work and took Miss Prissy out for a drink after work. She quickly saw the merit in me paying the company STD phone account on my Diners.

Instead of her preparing a monthly cheque to Optus, she makes it payable to Diners. I call Optus with the company phone account details, pay the account, and get THOUSANDS of points every month. I need 17,000 points for a return trip to Sydney, to visit the glam Natalie at Connections! The company is not disadvantaged, and I win. Except now Miss Prissy is looking for love!

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# 5,000,000 WATTS

milli



[ Be Sure To Read The Fine Print ]

Now that we've got your attention, we'd like to point out a small, disturbing fact about amp specifications you may not have noticed - the fine print. Like the headline example above, many amp manufacturers will toss out impressive looking numbers for power or low distortion - until you read their fine print. Then you'll find weasel-words like "subject to manufacturing tolerances" or "typical" specifications. In fact, some of the fine print allows the actual performance of an amplifier to differ as

much as 20% from the printed specs!

At Crown, we don't play games with specifications. We don't have to. When you buy a Crown, you get more than great specs, you get the best, most accurate sound in the business. You get guaranteed performance, with complete, meaningful specifications that are backed up by a Three Year No-Fault Full Warranty. We guarantee that your amp will meet or exceed every original specification for three full years. (Be sure to read the fine print in their

warranties to discover all the items and conditions they don't cover.)

For more information on the Crown range of amplifiers, call David Gable on;

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## People at PALA (Pro Audio and Lighting Asia). Seen in Singapore.



1: **Matt Dixon**-BSS Light & Sound. 2: **Hilary Evans**-Sontec (Vict). 3: **Ray Bond**-Tedeum P/L (and someone to whom Connections owes many, many thanks). 4: **Roger Kelly**-Musitronics/RCF Aust. 5: **Jeremy Collins**-Selecon NZ. 6: **Ivano Burato**-Coemar SPA. 7: Left **Alan Graham**-LSC Elect. with **Patrick Cahill**. (Perth). 8: From left **David & Colin Park**, **Oliver Reed**-ARX Systems. 9: There are six Aussies here, from five different companies. Can you figure out who's who? 10: **Sue Hickson**-GUVT Qld. 11: **Rory Miller**. 12: **Olaf Diegel**-Theatrelight NZ. 13: **Scott Lucas**-Alcatel. 14: Left **John Culver**-house & **Trevor Jansen**-Ashton Admor. 15: Left **Warren Barnett**-Festival Records & **Peter Bray**-PB Lighting 16: **Nick McGeachin**-Numark. 17: **Derek Saunders** & **Jane Durlings**-CPP. 18: From Left **Mario Chirillo**-Q Engineering, **Joe Wee**, **Alvin Perera**, **Wayne Ritchie**-John Barry's & **Lee Conlon**-Showcraft. 19: **Emmanuel Ziino** Show Technology & **Enrico Caironi** Market./Commercial Manager Clay Paky SPA.

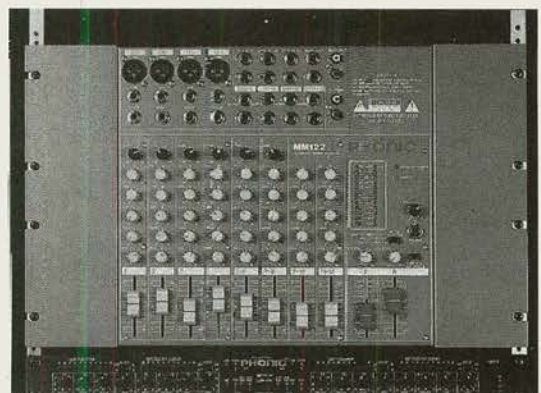
# MM122

## COMPACT LIVE/RECORDING MIXING CONSOLE

✓ Great Value!



- ✓ Phantom power
- ✓ Really noise-free performance
- ✓ Faders on all channels - no fiddly rotary knobs
- ✓ Heaps of headroom through great mic pre-amp design
- ✓ Four inserts on channels 1-4, two post fader/two pre-post switchable. When all four post fader, level to tape controlled by faders - professional!
- ✓ Quality specifications and rugged steel construction make the PHONIC **MM122** a great buy!
- ✓ **\$850**<sub>rrp</sub>



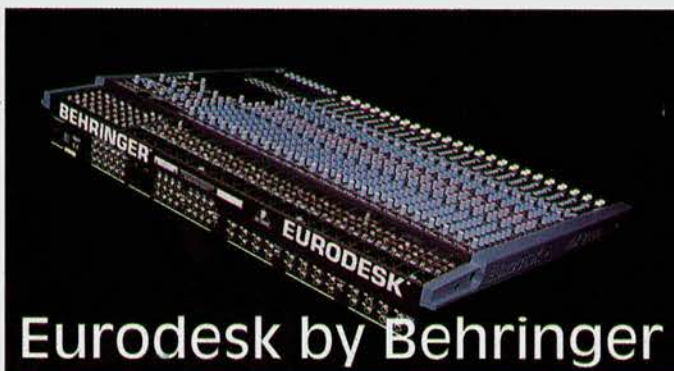
# PHONIC

From **G.M.C. Music**

Call (02) 9905 2511 Fax (02) 9905 0189

# Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH



## Eurodesk by Behringer

48/24 channel, dual input 8-bus console

The Behringer range of signal processors is now joined by Eurodesk, a 24/8/2 inline console for both live and studio work.

Owing to the dual input concept, all channels can be doubled in mixdown mode, thus providing a total of 48 independent channels. Each of these so-called MIX-B auxiliary channels has its own equaliser, pan, level and mute. The MIX-B master signal can be processed as an independent stereo signal with a controllable output of its own and/or it can be routed to the main signal.

An expander port allows other

Eurodesks or different consoles to be added onto the busses. Features include 6 auxiliary paths (used to feed effects or stage monitors), four band equalisation, separate monitor EQ, solo-in-place, monitor mute, 100mm faders, and meter bridge. Behringer say MIDI mute and fader automation will be available soon, which may be retrofitted.

Price: A\$6995 list.

•From: Audio Visual Design (Australia), call (02) 281-2444.

WRITE IN 301 ON READER SERVICE CARD FOR INFO

## PROJECTOR SWITCHER

INFOCOMM in Dallas had the usual swag of new bizzo's and snapdads for the AV industry, notable was the Extron Electronics switcher - System 4LD (below). It'll control any video, data or graphics projector and has a high-

resolution scan line doubler.

You can address the thing from PC or MAC, and Extron say vision remains virtually free of 'chroma noise'. You can use your remote control OK too. Price approx A\$7k.

•Extron USA fax (714) 491-1517.



## EVENT for RCF

RCF originate in Italy, and have steadily improved their speakers to become a real player today. The Event series PA cabinets include 2 and 3 way models, a subwoofer, and stage monitors. RCF say these offer high output and 'destructive power' handling. A 400w box will handle 4000w peak. The range will be released in full at PLASA this month.

•Distributed by Musitronics, (08) 234-2789.

WRITE IN 304 ON READER SERVICE CARD FOR INFO

## JANDS TO DEBUT 'EON' AT AIMS

JBL's new compact PA sets trend with style

JBL impressed everyone when the EON system was first shown in the USA this year. A 'turnkey' out-of-the-box PA system, it includes powered speakers which double as either stage monitors or PA, a ten channel mixer, and subwoofers.

The speakers are the key, JBL use Neodymium magnets which make for a box weighing up to 10kg less than others, they say. The internal amplifiers are ventilated by the air pumping through the speaker, the cabinet has a diecast aluminium front panel with baffle board, tuning ports and high frequency bi-radial horn all integral. Then the rear of the cabinet is single piece polypropylene. A rubber ring joins the two parts together, and acts as

a corner protection around the front of the 'box'.

The speaker 'box' -for they are not a box per se- choices are:



- 10 inch, 2 way speaker;
- 15 inch, 2 way speaker;
- 15 inch, PowerSub

With the amplifiers inside the speakers, the mixer is lightweight and comes as either 10 channel mono or stereo. Each model has a stereo CD input.

Jands offer EON as a complete system from A\$4995, or you can buy the speakers with or without amplifiers inbuilt. Prices range A\$1095 through A\$1995 for speakers, the mixers sell for A\$1095 (mono) and A\$1495 (stereo). There are also JBL EON microphones.

•Details: Jands (02) 516-3622.

WRITE IN 302 ON READER SERVICE CARD FOR INFO

## EQ Remote

Introducing the new hand held remote for Klark Teknik's DN3600 programmable graphic equaliser.

It has a large LCD display, dedicated function buttons, and two thumb wheel encoders for fast access of up to 98 channels of EQ. The Curve mode gives a graphic representation of the response.

DN3698 is battery powered, with optional power supply, and radio remote. Price A\$5275.

•Mark IV Audio (02) 648-3455.

WRITE IN 303 ON READER SERVICE CARD FOR INFO



# PowerLight.



## Uncompromised Performance In A Light Amp.

The new PowerLight™ Series of Professional Amplifiers from QSC are the first light amplifiers to deliver performance uncompromised by lightweight technology.

PowerLight Amps sound incredible, especially on the low end, due to advanced power regulation and "loss-less" switching. They work reliably under grueling road conditions with QSC's rock-solid, drop-tested construction and the best protection circuitry available. And, with unequalled thermal capacity, PowerLight amps deliver excellent 2 ohm performance.

Three models are available. PowerLight™ 1.0, 1.4 and 1.8—1000 watts, 1400 watts and 1800 watts respectively (at 2 ohms, both channels driven). Each amp weighs in at only 8 kg.

LOAD IMPEDENCE	PowerLight 1.0	PowerLight 1.4	PowerLight 1.8
2 OHM*	500 Watts	700 Watts	900 Watts
4 OHM**	300 Watts	500 Watts	700 Watts

\*1 kHz, 1% THD, TYPICAL; \*\*20 Hz to 20 kHz, 0.1% THD

Each amp is covered by QSC's 3 Year Warranty and highly efficient service department.

We always believed that the promise of switching technology should be more than lost weight. So we made high performance a mandate. Groundbreaking amplifiers are the result. High quality sound. High reliability. Very low weight.

If you've been waiting for a light amp without compromise, see the PowerLight Series at your QSC Dealer, or call (02) 299-3666 for a free brochure.

Your wait will be rewarded.

**QSC**<sup>®</sup>  
A U D I O



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WRITE IN 129 ON READER SERVICE CARD FOR INFO

# Ultimate dynamic power



*Amidst the bewildering array of dynamic processing equipment stands one name that has achieved an enviable reputation.*

*Drawmer's innovative design achievements, whilst often emulated by competitors, remain the ultimate assurance to the engineer of uncompromising performance, reliability and the indefinable 'Drawmer Sound'.*

## Drawmer



For full information on the complete DRAWMER range, please contact:

Amber Technology Pty Ltd Unit B, 5 Skyline Place Frenchs Forest NSW 2086 Tel: (02) 9975 1211	A.C.N. 003 231 187 Suite 3, 88 Albert Road South Melbourne VIC 3205 Tel: (03) 9699 1955	10/220 Boundary Street Spring Hill QLD 4000 Tel: (07) 3831 8444
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Write in Reader Service Number: 172

## MICROPHONES

### AUDIX....

isn't an incredibly big name here, but this American microphone manufacturer has won accolades in recent years from live sound engineers and artists. EAV Technology represent the range in Australia. The **OM-3xb** (right, A\$346) is a high output vocal mic, using Audix's VLM (very low mass) diaphragm for high gain before feedback. **OM5** (Centre, \$467) is a hypercardioid vocal mic with 40 - 20kHz range. **D3** (Right, \$343) suits instruments.



• Call EAV for details, (03) 9417-1835.

WRITE IN 314 ON  
READER SERVICE CARD

### NEUMANN.....

have replaced the industry standard KM84 miniature studio condenser microphone. The **KM184** was developed in Berlin, and is said to meld transformerless circuitry with a time honoured transducer design.

KM184 is a fixed capsule, pressure gradient condenser mic with a cardioid directional characteristic and response of 20 - 20kHz. Maximum sound pressure level is 138dB, and it has a signal to noise ratio of 69dB (CCIR weighted). 48v Phantom Power is required, the mic comes with a standard swivel mount and a foam windscreens. Price: A\$1072.00 including sales tax.

•From Amber  
Technology, (02)  
975-1211.



WRITE IN 315 ON  
R.S. CARD

### ELECTRO VOICE

announce new budget prices professional microphones.

The **N/680** directional dynamic microphone (right) has a smooth on/off switch mounted on the collar of the mic; a 'warm grip' handle and memraflex grille from the EV N/Dym mic's. 2 year warranty, retail: A\$109.00.

• **N/D157SB** cardioid dynamic vocal microphone (below, right) has EV's N/DYM magnet for up to 4 times output potential, and is said to offer condenser-like frequency response. The elastomeric shock mount reduces handling noise. 2 year warranty. \$A210 retail Call **Mark IV Audio**, (02) 648-3455.



WRITE IN 317 ON  
READER SERVICE CARD

### BEYER GO 'MUSO' WITH NEW RANGE

Five new BEYER Musician Series microphones have been released by Amber Technology. The MO-1 costs \$179 retail, has a Supercardioid pattern. All come with Beyer's MKV-8 mic clip. Details:

**Amber Technology, (02) 975-1211.**

WRITE IN 316 ON  
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SERVICE  
CARD



## MICROPHONES BUYERS GUIDE page 62

## 3D EYEWEAR

Electrohome offer the new StereoGraphics CrystallEYES active eyewear system, a complement to the 3-D stereoscopic video projectors. The eyewear system is ideal for stereo video entertainment, architectural walk-throughs, CAD and physical modelling.

It employs liquid crystal shutters to recreate the way we naturally see depth. It shutters each eye 60 times per second in sync with alternating left/right eye views of the projected video image. Each eye sees the image with a unique perspective. The brain integrates the perspectives into one high res. image. The system uses no wires, but infra-red transmission. Details: Amber Technology, (02) 9975-1211.

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## AHB 8 Buss Console: A\$5495

The proliferation of mass produced surface mount mixer products have provided the market with a number of relatively low cost but well featured alternatives.

When examining today's compact mixers, it is often hard to convince yourself that some of these expensive pieces of technology still don't tend to suffer from 'toy' syndrome.

The Allen & Heath GS-1 is built like a 'big' mixer, they say. Full length Alps faders, balanced XLR inputs, MIDI muting, metal construction and it is channel expandable.

GS-1 is a compact in-line style console. The meter bridge can be mounted in different ways, including in your rack.

The tape returns can double as extra line inputs when you assemble a mix. A mixdown input flip switch is on each mono channel so mixdown can occur without having to repatch. The MIDI muting is based on the

same FET switching system used in larger mixers. An 8 channel expander is available.

•Details Studio Connections (03) 9646-0544.

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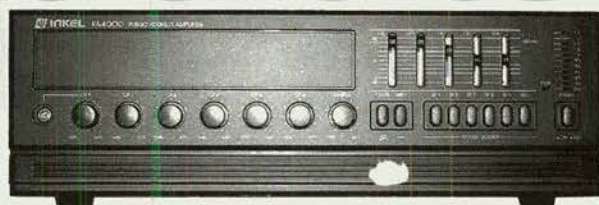
# The Right Choice

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- ✓ FEATURES

- ✓ PERFORMANCE
- ✓ QUALITY

## THE INKEL PA4000 MIXER AMPLIFIER

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- 120W att RMS
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- 6 Balanced XLR (Switchable Line or Mic)
- Chime & Siren
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A trading division of Silklore P/L. ACN 004 004 997  
7 Gibbs Street, Chatswood, NSW 2067.  
Phone: (02) 417 1111 Fax: (02) 417 2394

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

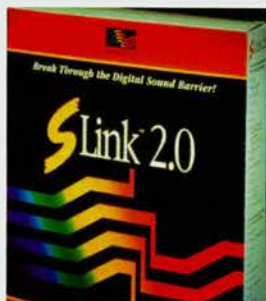
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## Digital Format Translator

Digital Audio formats abound, Synclavier's S-Link utility for Mac allows batch conversion between formats, and it supports most.

S link also translates files from Windows, Amiga, MS-DOS, Digidesign and many other systems. On the fly sample rate (and width) conversions can be done too, you may also view your sound's waveform and transfer part or all of it.

•Sound Devices, (02) 283-2077.



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## M5000 Remote

TC Electronic's M5000 audio mainframe is a digital processor offering four independent modules in two rack spaces. With 1.44Mb floppy drive and PCMCIA card slot, it allows true stereo DSP from each module.

Now the ATAC - Advanced Remote Controller allows one M5000 to be addressed from two studios, indeed this can work the other way too, one ATAC can address up to ten M5000's.

ATAC has the same data entry dials and controls as the M5000, and a backlit LCD panel.

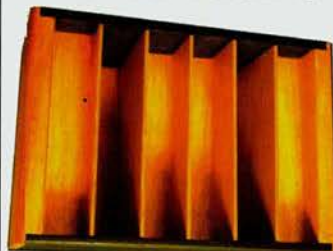
M5000's are finding favour in Australia, recent sales include Sydney Opera House, Audio & Recording, Planet Sound, and Brisbane Convention Centre.

•Amber Technology 02 975-1211.

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## ARO DIFFUSERS



Aro Technology has just released a new range of acoustical diffusers. An advanced timber moulding process forms each well from a single piece of timber veneer. The bottom of each well and the outsides are curved. They are designed for acoustic treatment of critical listening areas, like control rooms and auditoriums. Installed on the rear wall of a control room they promote a wider 'sweet spot' at the console, and eliminate troublesome reflections.

•Aro Technology (08) 346-4199

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**FOSTEX MICROPHONES**  
for Stage & Broadcast  
M221, M321, M521,  
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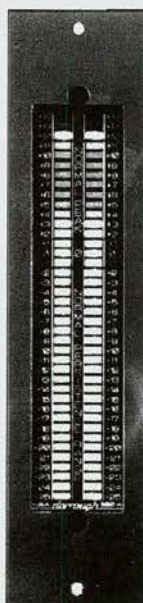
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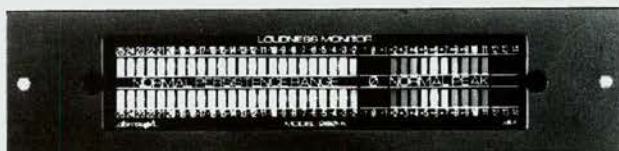
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CHANNEL A CLIP POWER CHANNEL B CLIP



HIGH SPEED - WIDE BANDWIDTH - DUAL CHANNEL POWER AMPLIFIER

# To Get The Job Done Right, Use The Right Tools. Alesis Matica™ Amplifiers.

While this might seem obvious, it's surprising how often this truth is ignored to meet a budget or hit a deadline. Or worse, to simply follow old habits and miss the opportunity to use improved, even better tools.



Introducing the Matica™ 500 and 900 High Speed Wide Bandwidth Dual Channel Power Amplifiers from Alesis. Serious power tools for all your installations. The right tools for the job.

Focusing on the things that mean the most to you: performance, features, value and reliability, the Matica amps are not only the right tools, they're geared to meet the challenges of tight budgets and unforgiving environments.

Heat is the enemy of long-term reliability. The Maticas lick heat with our proprietary CoolSync™ Thermal Management System, employing a combination of a program-dependent fan, massive extruded aluminum

heat sinks, and an innovative output transistor mounting system. The result - operating temperatures are controlled and consistent. And power-robbing, component-killing thermal cycling is a thing of the past.

We've also included eight important protection circuits to further bullet proof the Maticas. High current output relays protect the amps from turn on/off transients, over temperature, DC offset, audio signals below 5Hz, and excessively low line voltage. Bipolar output current limiting, RF interference protection, and a front panel, resettable AC mains circuit breaker complete the package.

Matica's interface is totally flexible. Totally professional. Balanced inputs on combination XLR/1/4" TRS jacks and barrier

strips. Outputs on 5-way binding posts that accept 12 gauge wire and bananas. System control is provided by our exclusive aLink™ Amplifier Interface on a 25-pin connector. aLink accesses several key points of the input and output circuitry for future system level accessories and computer control from Alesis and 3rd parties.

The Maticas deliver their rated power with extremely low distortion, even into 2 ohm stereo and 4 ohm bridged mono. Intelligence, critical in any sound system, is guaranteed by Matica's 80V/μsec slew rate and 80kHz bandwidth.

Designed by experienced engineers who understand your business, the Matica 500 and 900 are your next system solution. And they're priced to fit the smallest church budget. They're the right tools for the job.

Distributed in Australia by: **Electric factory** 188 Plenty Road, Preston VIC 3072  
Ph: (03) 9480 5988 Fax: (03) 9484 6706

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**ALESIS**  
STUDIO ELECTRONICS

Amplifier	8Ω - 2 CH	4Ω - 2 CH	2Ω - 2 CH	8Ω - BRDG	4Ω - BRDG
Matica 500	162 Watts	250 Watts	350 Watts	500 Watts	650 Watts
Matica 900	270 Watts	450 Watts	680 Watts	900 Watts	1350 Watts

Matica Power Output Rating

Typical, 1kHz 1%THD, both channels driven.



HIGH SPEED - WIDE BANDWIDTH - DUAL CHANNEL POWER AMPLIFIER

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## AV Conference Mixer



SCV have introduced a single rack unit Stereo mixer designed to process the signals from three microphones and one A/V source VCR, CD-V, TV etc. The MX32B includes a Voice-Over system which allows one or more microphones to establish an automatic priority over remaining sources. Each input has phantom power capability with a pan-pot.

The unit can be configured either as a stereo unit, with all signals mixed into 2 speakers, or, as a dual-channel unit with microphones on one side and A/V program on the other.

Model MX32BV has the additional feature of video switching on the A/V source.

*Priced from \$1580.00*

•Call AR Audio Engineering, (02) 299-2240.

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## EMU go evolutionary with DARWIN digital 8 track recorder

NEW MDM FOR DEBUT REAL SOON NOW



DARWIN is a stand alone 8 track digital audio hard disk recorder from E-mu Systems. It features screen-based digital audio workstation (DAW) style recording and editing capabilities. E-mu are the American firm who make neat samplers.

DARWIN works to a native .WAV file format for compatibility with computer based recording, editing and multimedia systems. Indeed, E-mu suggest it could be used as an expander to a tape based multitrack. Best of all, it can be slaved to other DARWIN units to make a total of 32 tracks, with an optional sync card.

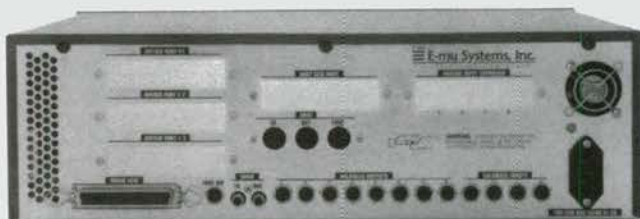
A Virtual Slave Reel (VSR) feature allows you, the user, to create new versions of a project that can be used to record additional tracks. The number of additional tracks that may be created with VSR is limited

only by available disk space.

Standard, DARWIN comes with four analogue audio balanced inputs, an optional card allows four more. An internal 8x2 digital mixer is standard.

The editing and recording features are all on the edit screen, there is no need to 'page around' looking for things. Cutting, pasting and punch-in's are all easy to execute, say E-mu. Actual configurations, options, and prices are tha, but expect an Australian target price of A\$8995. Users would option hard drives according to requirements.

• From Music Technology, (02) 369-4990.



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## Symetrix 422 Stereo AGC/Leveler



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Constant level control using a compressor/limiter means squashing the peaks only. From the 'top down'. So Symetrix say the 422 converts 'all over the map' signal levels into constant level audio. The target level control sets the volume where you

want it. The detector control increases the sensitivity of the 422, as you turn it counterclockwise the unit 'reaches down' for lower volume audio and brings it up. Ideal for contracting applications & PA. A\$1373 •Audio Telex (02) 647-1411.

## SPIRIT LIVE FOUR: 2ND GENERATION

When the Spirit Live Four was introduced some four years ago, it set the scene for lower priced and more efficiently manufactured mixing consoles. Suddenly, price points moved down everywhere. Soundcraft have recently started

to 'distance' SPIRIT as a stand alone brand, and Spirit accounts for more than a dozen different families of mixers with perhaps fifty models available.

The 'MK II version has just been released, with additional features at the same price, says Jands.

Live 4 MKII comes in 12, 16, 24, 32 and 40 channel

frame sizes. A new preamp allows a full 66dB of gain range.

The EQ on mono channels is now full four band configuration with two sweep midranges, vs. one on the previous variant. An extra auxiliary send takes sends to six.

Four of these can go to pre or post fader status by way of a switch. Full mute group facilities have been added, with four mute groups controlled from the master section.

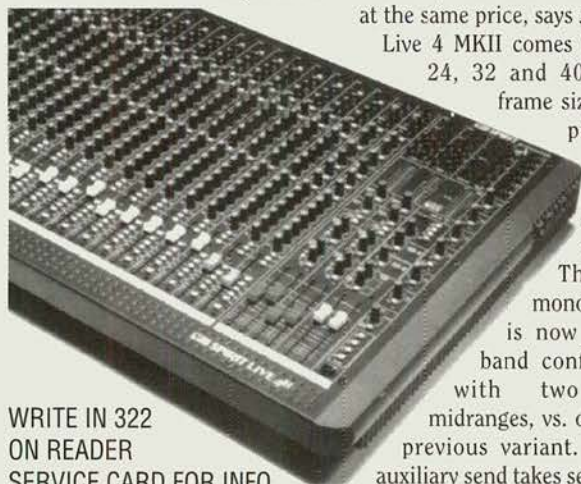
A 6 x 2 matrix section is also available on the master section for additional side-fills or foldback mixes.

All mono inputs have PFL, 100mm linear faders, insert points, direct channel outputs, 48v phantom, phase reverse, EQ in/out switching, and high pass filter. There are two stereo inputs on the 12 channel frame; and four on each of the other frame sizes.

Spirit Live 4 MkII will be launched at the AIMS music show this month.

Typical prices: 12ch A\$4495; 24ch: A\$7995, 40ch: A\$12995.

•Call Jands (02) 516-3622.



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SERVICE CARD  
FOR INFO

## KLIPSH is here

Now freshly distributed here courtesy of Horwood Australia, Klipsch has links downunder via Ian Thacker, the VP GM BM guru. The company hails from Hope, Arkansas, and its product has been sold here before quite successfully.

The KP-3002C has a 2" titanium dome compression driver coupled to a 60° x 40° horn. The 15" 300w woofer completes the trapezoidal carpet covered box. A 'Klip' circuit protects the HF driver.

Priced at \$1555 each.

•Details from Horwood Australia, (02) 585-1011.

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# Stick Your Pole Into a "Stubby-Sub"™

Perfect for the working musician, Klipsch Professional packages the full-range KP-2000-C with the KP-1000-C-X "Stubby-Sub" to create a flexible system that delivers incredible fidelity and low-end punch at a surprisingly affordable price.

Mounted above the "Stubby-Sub", the KP-2000-C is a compact, two-way system that provides exceptional intelligibility. The low-frequency section accommodates a proprietary woofer for tight bass and reliability, while the Tractrix Wave™ horn delivers excellent high-frequency coverage even in the most difficult rooms.

Featuring a built-in crossover, the "Stubby-Sub" provides extended bass response from 150 Hz to below 40 Hz for chest-thumping low end. The optional KP-36-T pole allows easy mounting of the KP-2000 C and other Klipsch systems.

Check out the new Klipsch "Killer Combo" at your local dealer and experience the legendary Klipsch sound.

- High efficiency
- High output
- Earth shaking low-end
- Built-in crossover in Stubby-Sub
- Rugged construction
- Heavy-duty carpet covering
- Recessed handles
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- Locking 1/4" Neutrik™ connectors
- Fully transferable five-year warranty



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## Short & New(s)

• **HBB** will release DDS data storage DAT cassettes this month. They also say their CDR74 CD-R's are rated to 100 years storage life, but will last 219 years. I will test this myself, I am now watching one. In 218 years I will run it up and report on these pages. Meantime, call ASC for HBB products. (02) 901-4455.

• **APOGEE** extended DAT tapes are now available from Sound Devices in Sydney. The new DAT tapes have an extra 4 minutes on each tape, at no extra cost. From Sound Devices, (02) 283-2077.

• **MEYER** Sound Laboratories products are now available from System Sales in Australia. We at Connections had several calls in recent months from people pondering the recent 'directions' announcements from Meyer, and asking where to buy the product from these days. Now System Sales are proud to be appointed importers and resellers of Meyer Sound. Call System Sales, (03) 9529-7755.

• **PRO TOOLS** owners can now get Protron, a plug-in which enables creation of transparently immersive three dimensional sound fields. From Sound Devices (02) 283-2077.

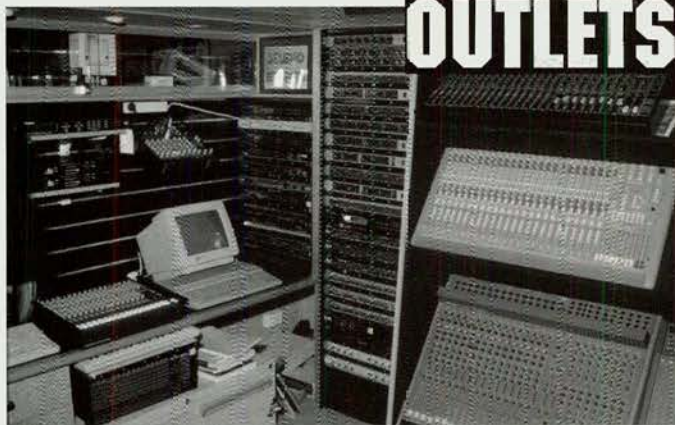
• **MIDAS** XL200 consoles have been sold to the Sydney Convention Centre. Two 40 channel units were chosen, op's manager Al Craig says the operators have taken well to the new consoles, from Mark IV Audio (02) 648-3455.

• **A DDA** Forum console was installed at the Clancy Auditorium at NSW Uni by The PA People. The console is a 24ch unit with 18 mono and 6 stereo inputs. The flexible matrix layout was needed for integrating with the A/V and speaker systems within the theatre. DDA from Mark IV Audio (02) 648-3455.

• **SESSION** Software from Digidesign is about to hit our shores, with an introductory price of \$399. It features multitrack recording on the Power Mac, with editing and mixing. Digital parametric EQ, frame accurate synchronization to Quicktime Video are features, it is built on the Digidesign Audio Engine (DAE). Contact Sound Devices for more details. (02) 283-2077.

• **ACOUSTISEARCH** announces the new Vectorphone noise cancelling microphone for speech use. It has a tailored response and works best in a noisy, reverberant soundfield. Unlike other mic's, the polar plot soundfield is not altered when the mic is placed on a table top. Details from Acoustisearch 008 807-152.

• **SOUND DEVICES** offer the Kenton Pro-2 and Pro-4 CV to MIDI converters, said to make the life of analogue owners easier. Also, new from WAVES is the S-1 stereo limiter. Call them, (02) 283-2077.



## Turrumurra Music: New Studio section

On the North shore of Sydney you will find Turrumurra music. One thousand two hundred and sixty seven Pacific Highway to be precise. Daniel Cole went to view a new dedicated studio showroom.

Turrumurra Music has been in business for 19 years, and is owned by Robert & Anne Stevens. What started as a record/guitar shop, has now become a major supplier of music/pro-audio.

They have recently renovated their pro-studio music retail section. In stock are a range of equipment required to set up a home or professional music recording facility, from patch bays to recorders, music support peripherals, software extension.

"The whole section is dedicated to pro and semi pro," says Studio head Ron Gaydon. "Most displays are working within reason and we carry a lot of stock, so the client has all the options, at different price levels."

The rest of shop caters to instrument sales from brass, wood wind, guitars, amps, to PA sales and hire. There is also a service department, a teaching 'academy' and an education manager employed.

Turrumurra Music specialise in different hard-disc recording systems, "We base our hard disc systems on music rather than post production. We support Mac, IBM, and free-standing systems and we still support Atari systems"

Some brands included here, Cubase, Logic Notator Audio, Op Code Studio Vision. We prefer Logic for Mac, although it is a intense program that initially requires concentration."

A less complex system Ron suggests, is the combination of Cubase with a Yamaha CBX-D5, "This creates a user friendly mu-

sic-based 4 or 8 track system—with synchronisation and notation. It does all this without multi-tasking, it's all on one screen rather than running two or three programs at once."

An alternative to computer based systems is Akai based, "4 or 8 tracks via a DR-4 or DR-8. This works like a normal tape machine yet it is tapeless. It is possible to edit quickly and easily. Computer interfaces are available."

Turrumurra Music are also agents for well known digital tape machines from Tascam, Fostex, Allessis/ADAT, and Sony. "We also have a large turnover of DAT decks," says The Ron.

"Our console range includes Mackie—which is the most popular at the moment—Soundtracs, Soundcraft, and Allen & Heath. There is a huge range of studio effects," said Mr Gaydon.

Microphones include Nueman, AKG, Shure, Equitek, and Beyer.

They also have a good range of samplers in stock including most brands. The studio showroom serves an important role not only to offer a wide range of hardware but to hear and see them working in a pseudo work environment.

"We are here to advise people what they need—people appreciate this hence our clients trust us. We ask them "what are your needs?" and present the options. "We have facilities and skills to install, set up and service systems, or offer tuition. We can also recommend someone to travel to them and offer tuition on their system. In the long term this works out better for the client."

• **Turrumurra Music Centre, 1267 Pacific Highway Turrumurra. Telephone (02) 449 8487, Facsimile (02) 449 5293.**

# Lexicon

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**\$1095.00 RRP**



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■ 112 Presets ■ 128 User Registers ■ 10 Adjustable Effects Parameters ■ Full Dynamic MIDI ■ MIDI Remote Controller (MRC) Compatible  
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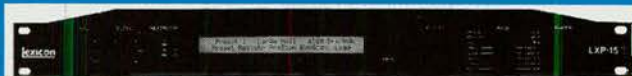
### VORTEX

■ Audio Morphing & More ■ Continuously Transforms One Effect into Another ■ 32 Amazing Effects ■ True Stereo  
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### JAM MAN

■ Digital Delay/Looper ■ Tap Tempo Echo ■ Sampler ■ Looping ■ Creativity in a Box for Composers, Performers & Mixers  
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### LXP-15 MKII

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## VIDEO CO-AX CABLES

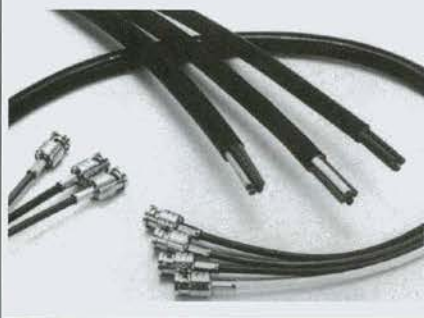
New Canare serial digital video products include the L-5CFB cable. Claimed to outperform 8281 cable by greater than 3dB per 100 metres at 400MHz, it is suited to DV transmission in broadcast and post.

The V-5CFB multichannel coaxial video cable utilises 3, 4 or 5 channels of L-5CFB coax bundled together.

The BCP-C5FA 75 ohm BNC-type coax connector mates with L-5CFB cable.

•Amber Technology (02) 975-1211.

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## Zillion Phone Connections from Teleadapt

As you takeoff abroad with your laptop and modem, you probably have a cable or two and high hopes of making a phone connection somewhere. Teleadapt have identified more than 35 different phone sockets in use around the world, and this doesn't include cunning proprietary if not downright weird phone plugs installed in some hotels! Oh, and you thought the RJ-11 was socket was standard, did you?

To get around this, they market a kit of TeleDaptors, which you can buy individually or in a batch lot. Going to Africa? You need nine adaptors for this continent. Cost: \$199.50.

You could buy the whole kit, which covers 200 countries, but it would cost \$699.50. Better that you identify where you are going, and call TeleAdapt first.

The 'James Bond' solution is the Executive TeleKit, where no socket is available (or where you seek to bypass same. We suspect your legal status may be dubious in some places, but... the kit includes wiring tools, handphone, tester and tone dialer.



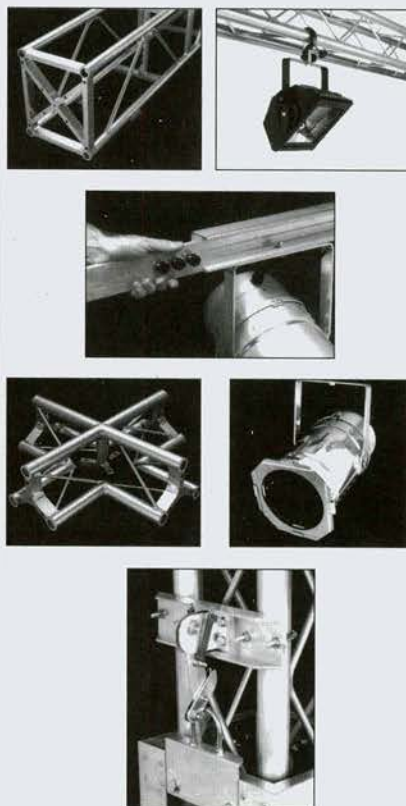
They also have some neat solution-type products, such as a good old fashioned acoustic coupler, the TeleFast Coupler. Just snuggle this over a phone handset, and modem your stuff the old fashioned way. It claims up to 2400 baud (downhill with a tail wind) but - hey! Get the data through! Priced at \$345.50.

Then there is the TeleSwitch for interfacing your analogue modem with a PABX.

• Call TeleAdapt; (02) 966-1744.

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## SYSTEM 2000



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## AUSTERO GETS MORE DCS SYSTEMS

Techtel are adding DCS (Digital Commercial Systems) to the Austereo network, next stop is 2MMM in Sydney, where one time rival 2DAY FM are about to move in. This install will be cut-over across a weekend. Meantime, the installation above is at SAFM, where Colin Bonnar (Techtel engineer, standing) is pictured with Peter Bourke, group project engineer for Austereo.

The mass storage and playback of audio on DCS uses standard PC platforms combined with a variety of Techtel sourced raid arrays. With all machines networked together, program directors, operators and engineers alike can access every audio clip stored on the server for playback or editing.

•Details, Techtel (02) 906-1488.

## Electrohome Rear Projection System

The Electrohome Retro III system accepts any Electrohome ECP or Marquee series projector which can be removed again and used elsewhere. The 67" screen pulls

off the base for shipping.

A single mirror system shoots the video onto the screen.

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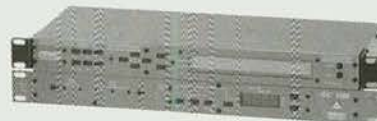
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Write in Reader Service Number: 163

# ★ MISS SAIGON ★

## The Most Highly Automated Stage Show Ever?

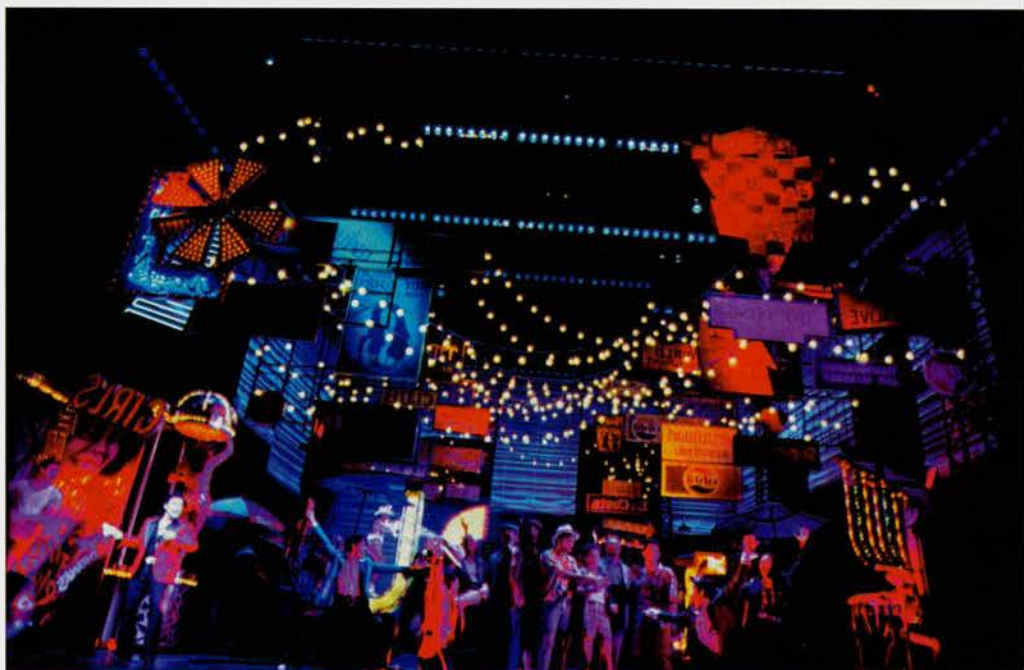
Cat Forcer looks at the Stage Automation System

Cass Jones was working for Cameron Makintosh in London when he was asked to come to Sydney to act as Technical Director for Miss Saigon. After twenty years working in technical theatre in London, Cass was delighted to move to Australia.

"What theatre I have seen in Sydney is absolutely excellent," he said. "I think that the work done on major musicals is really very good. Cameron said that this production of Miss Saigon is the best outside London. All the creative personnel that have come from the UK and USA have been very complimentary about the way the show is built, how it looks and how it works. We're very happy with the results and it's virtually all built in Australia.

"The technical crew are very good and take their job very seriously which is sometimes lacking in London. Like in New York, a theatre technician here is looked upon as a serious employee and as such see it as a career, which doesn't necessarily happen in London. I have the greatest admiration for the technical crew here."

The version of Miss Saigon now showing at Sydney's Capitol Theatre is based on the number one touring version which goes around the USA. It is only second in size to the London show. The Sydney version just fits into the Capitol with no space spare, and may travel to other theatres around



Australia. As well as being responsible for the technical aspects of *Phantom of the Opera*, Cass is working on the plans for an Asian tour of *Les Miserables* which should go out early next year.

"When we first moved into the Capitol there was a staircase from the fly floor to the stage that had been installed in the theatre but wasn't showing on the ground plan," said Cass. "We had to chop half of it away as it was in the way. We had to look at how the show would fit into the theatre from an artistic point of view. We don't just dump the show in the middle of

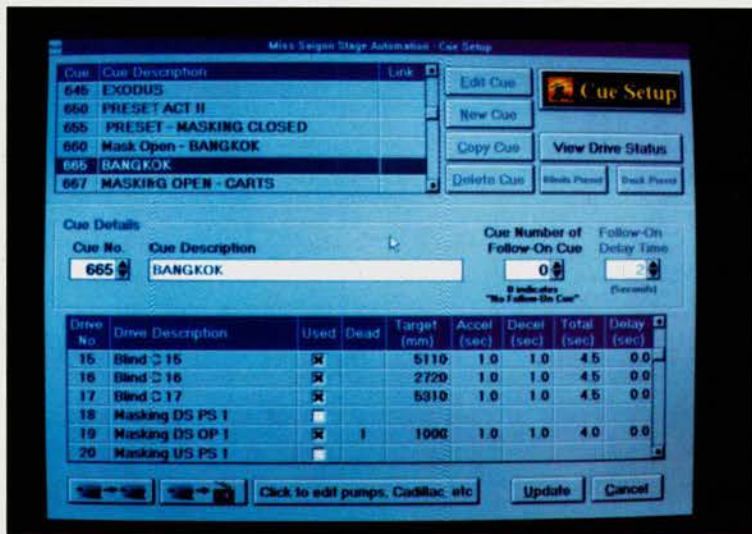
the stage, we try to make the whole environment suit the show. So we made a few minor adaptations to the proscenium which we hope leads the audiences eye from what is the most distracting and over bearing theatre in the world to our set! The eye moves gently from the high decoration to the black proscenium which we have to have to separate our show.

"It's actually an excellent theatre to work in. It's exactly the right thing to do - preserve what is on

the audience side of the curtain and get rid of everything else on the other side. A large flat stage, single purchase counterweight fly is the best way. Big spaces into which you can add your own machinery."

In the early days of specification for the theatre, Cameron Mackintosh were able to suggest what they thought would be good and so there were not many surprises when they arrived.

(Continued over)



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## AUDIO PRISMA

The Digital Audio Workstation & ADAT/DA-88 Editor



**SPECTRAL**

Write in Reader Service number: 158

# ★ MISS SAIGON ★

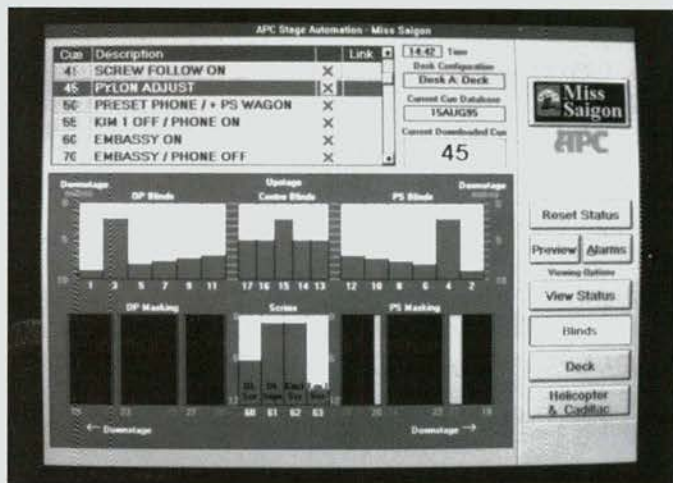
(from prev. page)

"From a technical point of view, Miss Saigon is a very logical show, far more than Phantom, in as much as what the automation has to do," said Cass. "To achieve a scene change there are wagons in the wings, six soft black masking panels and 17 blinds. Before a wagon can come on stage the black masking has to move away and the blinds have to go out - a totally logical sequence to all the scene changes. Consequently it's an ideal situation for computerised automation. Because at any one time there can be up to 35 objects moving, the only way to do the show is with computerised automation.

"As far as I know this is the biggest computerised automation in Australia and I know of no other musical in the world which, on a regular basis, uses this amount of equipment," said Cass. "I was asked in another interview whether the computers had taken over

from the crew and I was at pains to say that was certainly not the case. On this particular production there is a technical crew of 70 and there is often more activity off stage than there is on stage preparing the wagons for scene changes. The automation allows us to achieve apparently seamless scene changes which fit in perfectly with the music. It's a combination of stage craft and automation."

There are many computerised and mechanical elements of the technical aspects of the production which leave the operators free to concentrate on the most important elements to which they add their human touches. Sound has a CADAC control desk (sound equipment supplied by System Sound) with all the memories for the orchestral settings and the ensemble mic settings so the operator can concentrate on the principles. The lighting has Vari\*lites, DHA light curtains and



Graphic display of blinds and masks

Pani projectors with automatic slide change (lighting supplied by Chameon)..

The original lighting rig was designed by David Hershey five years ago and has evolved through to Broadway and then into a touring version. More technology was added for the touring version in particular Vari\*lites to cut down on focusing and plotting time. Upgrades happen as a natural result of technology moving on.

Vari\*lites are a mixture of VL2's, VLA's and VL6's.

"We've recently added a load of Shakespeares which are new," said Cass. "The associate lighting designer, Ted Mather, came over from the States to get the show together. We offered him this new lantern which he liked. It has a higher light output which meant that he got a better effect."

The stage automation system reflects the latest in automation

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Write in Reader Service Number: 161

utilising state of the art robotic control systems. Miss Saigon is the most highly automated stage show ever produced and is probably the largest single installation of synchronised servo drives anywhere in Australia.

Automation & Process Control Services (APC) have been manufacturing industrial automation systems for over ten years and this experience has led to what is arguably the best and easiest to use stage automation system in the world - in the production of Miss Saigon.

Great though the singing, dancing, lighting and music may be, the automation system is oblivious to these, concerned only with moving the correct motors to the correct locations at the correct time - exactly the same situation as is encountered in industrial automation systems every day.

The Miss Saigon Stage Automation System is responsible for the position control of 61 axes. The automation of these axes is achieved using a user-friendly cueing system. When setting up the show, the operator creates a cue for each scene change. He then selects which motors he wants to move in that cue and for each of these motors he specifies the following:

- position to move to (accurate to 1 millimetre)
- time to travel to that position (accurate to 0.1 sec)
- acceleration and deceleration times in tenths of a second

Quite simply - that's all there is to it.

All cueing information is stored in a database in the control desk computer. During the running of the show the operator selects the cue to run from the list of cues in the database. The cue parameters are downloaded to the motors concerned so that when the operator presses the Cue Start button, the right motors move to precisely the right position in precisely the right time. Consequently wagons can travel towards each other from opposite sides of the stage, stopping smoothly just as they touch; the seventeen blinds can zip up and down, starting and stopping at precisely the same instant; automated scrimms can be flown in, programmed to miss the scenery moving underneath them by sheer millimetres. All the motions are repeatable again and again.

Overlaying two or more cues is a simple procedure. When a cue is started, the cue list automatically jumps on to download the cue parameters for the next cue in the list so it is then ready for starting.

So, while one cue is running, the operator simply presses Cue Start and the next cue will commence while the first continues on happily. No awkward finger manipulations are required on multiple start buttons - there is only one per desk. All that remains for the operator to do after pressing Cue Start is to keep a foot on the deadman pedal.

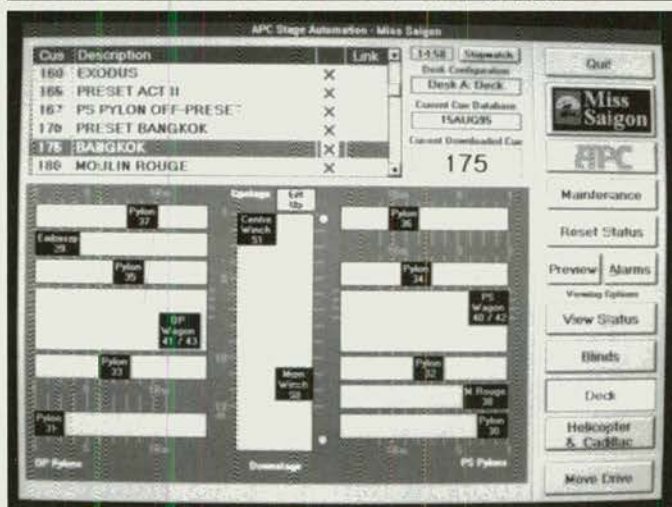
Stopping is just as important as starting, of course, and there are various different ways of stopping. The most important of these is the Emergency Stop. There are thirteen emergency stop buttons located onstage and on the automation platform. Less severe but just as effective are the Cue Stop buttons, one per desk, which immediately stop all motors started from that desk. Finally there is the Pause function - a smooth, controlled stop occurs (in half a second) if the operator releases the deadman pedal. The pause is recoverable - if the operator puts his foot back on the deadman pedal, the motion resumes smoothly and the cue is completed.

#### Hardware

The operator desks utilise



Cass Jones



Graphic display of 'deck'

APC's Workmate VISION software running under Windows NT. The screen provides a fully animated graphical representation of the set. The computers are industrially hardened Workmate PCs.

The system has been designed with a high level of redundancy built-in. The theatre adage the show must go on' is facilitated through the duplication of the operator desks and the communications network with the PLCs and a hard-wired manual backup for each axis. If the software should crash the scenery can still be moved without a processor of any sort being involved. Relays in the control circuitry mean that the processors are bypassed and the operator can control the scenery by turning a speed control knob, but cross patching a faulty axis to another control module by re-plugging it sounds like an easier option. Configuring which motor is connected to which control module is an easy task with the software package.

The system features two control desks, however in the event of a failure the entire show can

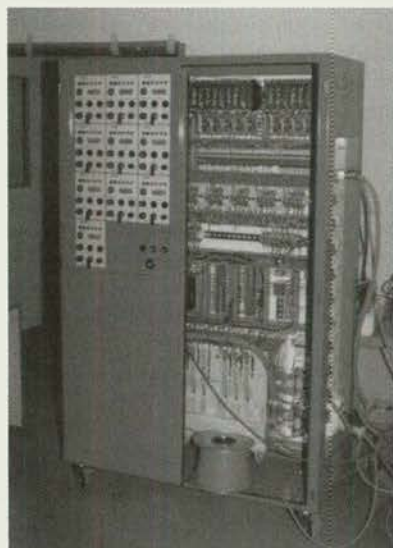
quickly be reconfigured to run from one desk - without any unplugging at all. Why have two desks then? Well those of you that have witnessed the Miss Saigon production will know that frequently there are well over thirty axes moving at once during the production's spectacular scene changes so it makes sense to have two pairs of eyes watching the monitors in case someone should slip over onstage.

#### Features of the system:

Emergency Stops: Each desk, the helicopter, the cadillac, the scenery lift under the stage.



The Control Desk

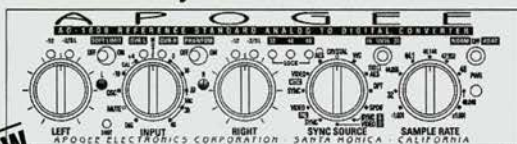


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## ★ MISS SAIGON ★

### Cueing System:

APC say that all the feedback they've had from theatre people with previous experience of stage automation systems is that this cueing system is the simplest and most user-friendly they've seen, from a configuration point-of-view as well as a day-to-day running of the show point-of-view.

### Referencing:

All positioning is done in millimetres. Referencing an axis is as simple as moving it to its reference position marked on the stage floor and turning a key. The blinds are referenced at a comfortable working height from the floor (the automation guys don't have to hang from trusses to perform routine checks!)

### Graphic Display:

When you're operating 12 curtains and seventeen blinds at once, keeping an eye on 29 numbers is a tough call in anyone's book. The Miss Saigon System provides graphical representation of all axes so the operator can instantly see the pattern formed by the blinds, which masking curtains are open, which pylons are onstage, etc. The numbers are available for those who prefer them.

### Previewing a Cue:

Press the preview button on the TOUCHSCREEN and the operator is shown exactly what will move where in the cue he is ready to run.

**Fault Reporting/Logging System:** Any faults occurring in the system are instantly brought to the operator's attention and logged to a database for later analysis.

### Printing Cue Database:

Forget having to enter all the cue parameters twice - once into the system and a second time into a word processor so you can have a hard copy.

### Information for the Operator:

He/She can quickly call up the auto status of all axes in the system, check that the safety pins have been inserted in the helicopter, that the scenery lift has been raised before he moves the scenery on it.

### Snapshots:

Creating cues is even easier if you use the SNAPSHOT method. Move the scenery to where you want it, click the Snapshot/Present button and the cue is automatically cre-

ated with the scenery positions currently onstage. All you have to do is specify timings.

### Remote Control:

For those who simply feel lost without one, the system features a remote control. The operator can stand centre stage, select the appropriate axis using the remote and move it around without having to yell 'MOVING' from some dark, distant automation platform.

### The Show's Piece De Resistance - The Helicopter Scene

The helicopter consists of seven interacting hydraulic axes. The helicopter landing and takeoff cue sequences are the high point of the show for the automation operators. In the eight minute 'Nightmare' scene featuring the helicopter, almost all 61 axes are in use at some point and there is always at least one axis in motion. Despite the outward complexity of the helicopter sequence, all eight helicopter axes are cued via the same cueing system as the other axes - the operator programs in a target position for each axis, a time in which to travel to that position and acceleration and deceleration times. The operator only presses Cue Start once in the entire helicopter landing sequence. The operator doesn't even need a vast programming knowledge to modify the helicopter sequence. The helicopter is physically capable of a lot more than the audience sees every show.

### Modularity

The Siemens motor controllers are interchangeable, the majority of the Toshiba PLCs responsible for position control are interchangeable, interconnections between panels and motors is via (un)pluggable cable sets - there is approximately 12 kilometres of cable!

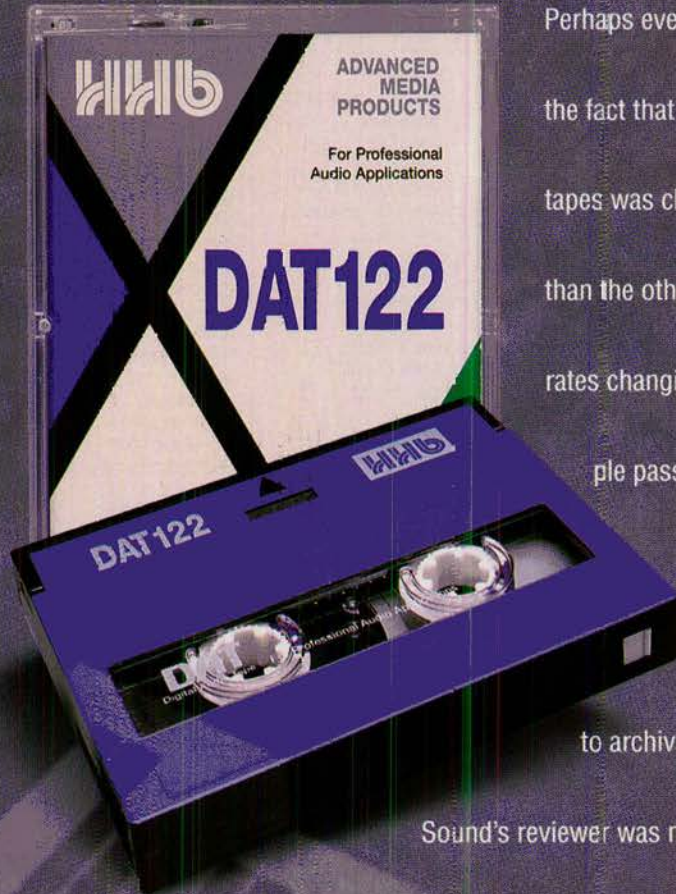
The automation system hardware was all constructed in APC's Adelaide workshop, tested onstage at the Festival Theatre in Adelaide and at the Adelaide Festival Centre Trust's Mechanical Workshop at Gepps Cross, Adelaide, before being shipped to Sydney for the bump-in.

The importance of automation in Miss Saigon is often forgotten amongst the music, the dancing and lighting. However it is nice to be able to tell its story. Meanwhile, APC engineers can get back to their more mundane world - until the next show!! •

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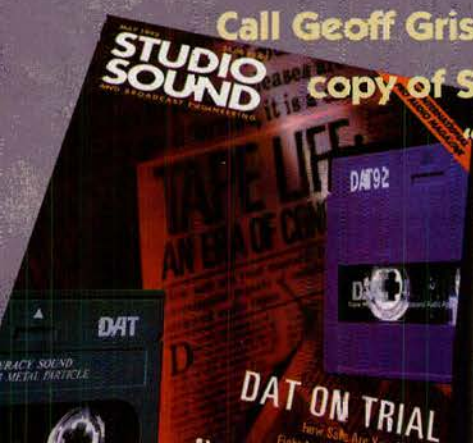
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# THEATRE LISTINGS for SEPTEMBER

SHOW	THEATRE	COMPANY	STATUS	SHOW	THEATRE	COMPANY	STATUS
<b>New South Wales</b>				<b>Queensland</b>			
Blackrock	Wharf 1, STC, S	Sydney Theatre Co	August 30 - October 14	The Venetian Twins	Peacock Theatre H	G & S Society	Sept 1 - Sept 16
Les Parents Terribles	Drama Theatre OH S	Sydney Theatre Co	Until September 9	The Swan	Peacock Theatre H	Zootango	Sept 28 - October 21
Dead White Males	Wharf 2, STC S	Sydney Theatre Co	Sept 20 - October 14	<b>Victoria</b>			
Phantom of the Opera	Theatre Royal S	Cam Mac	Indefinite run	Lady Windemere's Fan	Playhouse, VAC M	Melbourne Th. Co.	Until September 9
The Barber of Seville	SOH S	Australian Opera	Sept 4,9,12,14,16,21,23,26	Hamlet	Playhouse, VAC M	MTC	Sept 14 - October 14
Carmen	SOH S	Australian Opera	Sept 8,13,15,18,20,23,25	Three Tall Woman	The Fairfax, VAC M	STC/MTC	August 24 - Sept 30
Aida	SOH S	Australian Opera	Sept 2,7	Circus Oz	Town Hall M	Circus Oz	Sept 13 - October 8
Nabucco	SOH S	Australian Opera	Sept 1,6,9,11,16,19,22,28	Aus. Triple Bill	State Theatre, VAC M	Australian Ballet	Sept 15 - Sept 26
English Places/Faces	Playhouse, SOH S	-	Sept 11 - Sept 18	Anna Karenina	State Theatre, VAC M	Australian Ballet	Until September 11
Independent State	Playhouse, SOH S	-	Sept 11 - Sept 18	Beauty & The Beast	Princess Theatre M	Disney	Indefinite run
Carmina Burana	Concert Hall, SOH S	Syd Phil Choir	Sept 8,9	The Mikado	Her Majesty's Theatre M	-	Through September
Time of My Life	Ensemble Theatre S	-	Sept 14 - October 14	Phantom of the Opera	Comedy Theatre M	-	Opens August 30
Miss Saigon	Capitol Theatre S	Cam Mac	Indefinite run	Mario Lanzo Story	Miettas M	-	Until Sept 6
The Secret Garden	State Theatre S	-	Opens Sept 7	The Hunchback	Zeal Theatre M	-	Opens Sept 5
American Buffalo	York Theatre S	-	From Sept 21	New Works (dance)	Cub Malthouse M	Vic. Collage Arts	Sept 7,8,9
Diving For Pearls	Q Theatre S	-	Opens August 25	Fathom/Paper Truths	Grant St Theatre M	Vic. Collage Arts	Until Sept 9
Who's Afraid of Virginia Woolf?	Glen St Theatre S	Sydney Theatre Co	August 15 - September 2	Season at Sarsaparilla	Beckett Theatre M	Vic. Collage Arts	Sept 1 - Sept 9
Selected Truths	Stables Theatre S	-	Until Sept 3	Mrs X	Beckett Theatre M	Playbox	Sept 11 - Sept 23
After Dinner	Pilgrim Theatre S	Company 2a	Opens Sept 12	Les Parents Terribles	Monash M	STC	Sept 13 - Sept 16
End Game	Lookout Theatre S	Lookout Theatre	Until Sept 9	The Woman in Black	Monash M	VAC/Alex. Th	Sept 26 - Sept 30
The Sign of the Phantom	Performance Space S	Theatre of the Deaf	Sept 7 - October 1				
<b>South Australia</b>							
English Places/Faces	Playhouse A	-	Sept 6 - Sept 9				
The Floating World	The Space A	Black Swan	Sept 9 - Sept 30				
I Hate Hamlet	Arts Theatre A	-	Sept 19 - Sept 30				
<b>ACT</b>							
Guys & Dolls	Canberra Theatre	-	Sept 15 - Sept 23				
Good Omens	Anu Arts Centre C	-	Sept 7,8,9				
The Yeoman of the Guard	Queanbeyan Hall	Quean.Players	Sept 1,2,7,8,9				
<b>Tasmania</b>							
Dead White Males	Theatre Royal H	-	Sept 5 - Sept 9				

A = Adelaide M = Melbourne S = Sydney B = Brisbane P = Perth H = Hobart

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## TOURING ITINERARIES

BAND	DATE	VENUE
<b>INTERNATIONAL ACTS</b>		
<b>Bon Jovi/Jimmy Barnes</b>	November 10	Olympic Park, M
<i>Frontier Touring</i>	November 12	Australian Formula 1 Grand Prix Adelaide
	November 14	Burswood Dome Perth
	November 17	ANZ Stadium Brisbane
	November 18	Eastern Creek Sydney
<b>Joe Cocker</b>	Sept 8	Perth Ent. Centre
<i>Michael Coppel</i>	Sept 11	Adelaide Festival Centre
	Sept 14/15/16/17	The Palais Theatre, M
	Sept 18	Derwent Ent. Centre H
	Sept 19	Princess Theatre Laun.
	Sept 22	Royal Theatre Canberra
	Sept 23	Newcastle Ent. Centre
	Sept 26	Townsville Ent. Centre
	Sept 28	Cairns Showgrounds
	Sept 30	Darwin Gardens Amp.
	Oct 5	Brisbane Ent. Centre
	Oct 7/8/9/10/12	Enmore Theatre Sydney
<b>Brownie McGhee &amp; Elmer</b>	October 5	Sydney Town Hall
<b>Lee Thomas Blues Revue</b>	October 6	Dallas Brookes Centre
<b>Celine Dion</b>	March 18	Perth Ent. Centre
<i>Michael Coppel</i>	March 21	Adelaide Ent. Centre
	March 22	Flinders Park M
	March 25	Sydney Ent. Centre
	March 30	Brisbane Ent. Centre
<b>Channel Zero</b>	Sept 7	ANU Canberra
	Sept 8	Phoenician Club, S
<b>Delcide</b>	Sept 21	Club Atlantis Perth
	Sept 23	Prince of Wales M
	Sept 24	EVs
	Sept 27	ANU Bar
	Sept 28	The Roxy Brisbane
	Oct 2/3	Phoenician Club S

Submit tour and theatre details to Natalie Apostolou  
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# TOURING ITINERARIES

BAND	DATE	VENUE	BAND	DATE	VENUE	BAND	DATE	VENUE
<b>INTERNATIONAL ACTS</b>			<b>INTERNATIONAL ACTS</b>			<b>LOCAL ACTS</b>		
<b>Dub War</b> <i>Feel</i>	October 7/8	Punters Club <b>M</b>		Sept 9	Perth Ent. Centre	<b>Regurgitator</b>	Sept 5	Sydney Uni
	October 10/11	Annandale Sydney		Sept 12	Adelaide Ent. Centre		Sept 6	Newcastle
	October 13	Playroom Gold Coast		Sept 15	Sydney Ent. Centre		Sept 7	ANU Canberra
	October 14	The Roxy Brisbane		Sept 16	Brisbane Festival Hall		Sept 8	Wollongong
<b>Eagles &amp; Melissa Etheridge</b> <i>Frontier Touring</i>	Nov 29/30/Dec 2	Flinders Park <b>M</b>	<b>Tom Jones</b>	Sept 20	Townsville Ent. Centre		Sept 9	The Metro <b>S</b>
<b>James Morrison</b> <i>Frontier Touring</i>	December 6/7	Brisbane Ent. Centre		Nov 24	Melbourne Flinders Park		Sept 15/16	The Roxy <b>B</b>
<b>Jeff Buckley</b> <i>Frontier Touring</i>	Oct 21	Concert Hall QPAC		Nov 26	Adelaide Ent. Centre	<b>Swoop</b>	Sept 9	The Roxy <b>B</b>
	Sept 2	Prince Patrick <b>M</b>		Dec 1	Newcastle Ent. Centre	<b>The Sharp</b>	Sept 5	Eastwood Hotel
	Sept 3	Athenaeum <b>M</b>		Dec 2	Sydney Ent. Centre		Sept 7	Wollongong Uni
<b>Johnnie Johnson</b>	Sept 5	Phoenician Sydney		Dec 5	Brisbane Ent. Centre		Sept 8	Cardiff Workers
	Sept 20	St Pauls Tavern <b>B</b>	<b>Urge Overkill</b>	Sept 6	The Roxy <b>B</b>		Sept 9	Sands Narrabeen <b>S</b>
	Sept 21	Bridge Hotel Rozelle <b>S</b>		Sept 14	Monash Uni <b>M</b>		Oct 6/7/8/10	State Theatre Melbourne
	Sept 24	Central Club <b>M</b>		Sept 15	The Palace	<b>Tina Arena</b> <i>Frontier Touring</i>	Oct 17	Royal Theatre Canberra
	Sept 26	Tillies Canberra		Sept 16	Liberty Adelaide		Oct 20	D. Joan Sutherland T <b>S</b>
<b>Joshua Kadison</b> <i>Michael Coppel</i>	Dec 4	Palais Theatre <b>M</b>		Sept 21	ANU Canberra		Oct 22	Newcastle Civic Centre
	Dec 8	Festival Theatre <b>A</b>	<b>Wet Wet Wet</b> <i>Gary Van Egmond</i>	Sept 23	Selinas		Oct 26	Brisbane Concert Hall
	Dec 9	Concert Hall Perth		Sept 24	Metro Sydney		Oct 27	Seagulls Gold Coast
	Dec 12/13	State Theatre Sydney		Sept 9	Canberra Royal Theatre		Oct 31	Enmore Theatre Sydney
	Dec 17	Concert Hall Brisbane		Sept 10	Ent. Centre Newcastle		Nov 3	Princess Theatre Launceston
<b>LIVID Festival</b>	November 25	Davies Pk. Jane St West End Brisbane		Sept 11	Ent. Centre Sydney		Nov 4	Wrest Point Casino T. Hobart
<b>Morphine</b>	November 15	Metropolis Perth		Sept 14	Ent. Centre Brisbane		Nov 5	Burnie Civic Centre
	November 17	Liberty Adelaide		Sept 16/17	Sports/Ent Centre <b>M</b>		Nov 7/12	Festival Theatre Adelaide
<b>Take That</b> <i>Paul Dainty</i>	Sept 19	Brisbane Ent. Centre		Sept 19	Ent Centre Adelaide		Nov 10	Concert Hall Perth
	Sept 21	Sydney Ent. Centre	<b>LOCAL ACTS</b>			<b>TISM/Fireballs</b>	Nov 8	Waves Wollongong
	Sept 26	Flinders Park M	<b>Arlie Roach</b>	Sept 8	The Punters Club <b>M</b>	<b>White Man Can't Reggae</b>	Sept 6/13/20/27	Transformers Moorabbin
	Sept 29	Adelaide Ent. Centre	<b>Big Heavy Stuff</b>	Sept 1	The Zoo Brisbane		Sept 7/14/21	Breakers Preston
	October 3	Perth Ent. Centre	<b>Chocolate Starfish</b>	Sept 22	Revesby Workers <b>S</b>		Sept 8/15/22	Paddington Tavern
<b>Teenage Fanclub</b>	October 11/12	The Metro Sydney		Sept 30	Seagulls Twin Heads		Sept 10/17/24	Knox Tavern
<b>The Greatest Hits of the Who Tour</b> <i>John Whale Productions</i>	October 17	Brisbane Ent. Centre	<b>Dave Graney</b>	Sept 6	Coyote's Caringbah <b>S</b>		Sept 16	Fezbah Adelaide Fest. Centre
	October 20	Sydney Ent. Centre		Sept 8	Van Gough's Earlobe <b>B</b>		Sept 23	Tattersalls Hotel Hobart
	October 24	Perth Ent. Centre	<b>Died Pretty</b>	Sept 27	Coyote's Sydney		Sept 30	Launceston Saloon
	October 27	Adelaide Ent. Centre	<b>Ed Kuepper</b>	Sept 16	The Roxy <b>B</b>		Oct 1/8	Knox Tavern
	October 29	Flinders Park <b>M</b>	<b>Kim Salmon &amp; the Surrealists</b>	Sept 27	ANU Canberra		Oct 4	Transformers
<b>The Village People</b> <i>John Whale Productions</i>	Sept 8	Melbourne Sports/Ent. Centre		Sept 29	The Zoo Brisbane		Oct 7	Tattersalls Hotel
			<b>Lee Kernaghan Radiators</b>	Sept 30	The Metro Sydney		Oct 10	Anchorage Bar Great Keppel Island.
				Sept 8/9/10	Twin Towns Tweed Heads			
				Sept 8	Panthers <b>S</b>			

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## Bruce Knight - Faith No More

*Will Burston finds a modern day road warrior of the touring kind.*

**B**ruce Knight is a veteran of the international touring scene, having spent the last 14 years touring the world with various acts. An experienced hand at long haul tours, a large portion of 1995 has been taken by the current Faith No More tour, which is where I caught up with him while they were in Melbourne.

Employed by dB Sound in Chicargo, one of the largest touring audio companies in the US, this association has lead him to work on many headlining shows. Alternating between mixing and system engineering on subsequent tours, this is a move deigned to prevent boredom and burnout from constant touring.

Before starting the Faith No More tour earlier this year, he spent the summer season in America touring with Pantera as the system engineer. Preceding this he toured with Aerosmith as House Engineer for their 'Get A Grip' tour, system engineered Metallica's two year world tour, including the infamous stadium tour of the US combining Guns 'N' Roses on the same bill, and mixed Prince's 'New' tour of 1990. Prior to all this, Bruce spent six years touring with American act REO Speedwagon.

Faith No More used a Jands Production Clair Brothers S4 rig for their tour of the Eastern states, swapping production for the Perth show to a local company. The Jands system was running 12 cabinets plus subs a side, which were all used at every show. The front of house desk was a Midas XL3, not Bruce's first choice in console, as in the US he prefers the Gamble EX56, or in Europe an Amek TAC SR9000.

Returning 28 channels from the stage, the full 48 channels of the XL3 are used once effects and tape returns are brought up on the faders. Most of the microphones used on the tour were supplied by Shure, as the band is covered by a Shure endorsement for touring. Although commenting they were not his first choice of microphone, Bruce is satisfied with them.

The stage is very bare with no set, and a minimalist light show



comprised of Par 64's only, in accordance with the band's wishes.

This is carried right through to the drum mic up, where there are no stands around the kit at all. The kick drum is mic'ed with the now common Shure SM91 (gated and compressed) and Beyer M88 (gated) combination. The SM91 sits on a pillow in the drum, while the M88 is suspended on a custom mount bolted to the drum shell.

The snare top mic is a Beta 57 (gated and compressed), snare bottom is mic'ed with an SM57 (gated), the toms are mic'ed with SM98's (gated) and the cymbals are all mic'ed from underneath with SM98's. With four crash cymbals on the kit, the four SM98's are wired into two pairs to return as stereo pair on the desk, with a third overhead channel being dedicated to a spot mic on the ride.

The bass rig uses four channels, a pre-effects DI, a post-effects DI, along with low and high mic's (Sennheiser 421's) on the bass cabinets. The bass player uses distortion effects live on stage, and Bruce uses the two DI signals to balance between the distorted and clean sound in the Front of House mix. The cabinet mic's are primarily for the foldback system, and are used very sparingly in the FOH. All four of these channels have compression inserted across their signal path.

The guitar is mic'ed in stereo with Beta 57's, as Bruce finds the upper midrange is more pleasant than mic'ing with conventional SM57's. The guitar player supplies all his own effects on stage, using

an Intellaflex as his primary effects generator. The keyboards appear as two stereo pair on the FOH console, the first being the outputs of a Kurtswald K2000, the second pair being fed by two Emax II keyboard for the layered string sounds. These channels again all have compression inserted across them, to catch transients.

All vocal microphones are Shure Beta 58's due the ruggedness, as Mike Patten, especially, tends to throw his around during the show. This has a pair of DBX 160x's inserted across the channel to provide signal levelling, although Bruce's first choice is usually Urei 1176's as they have a more transparent effect on the final signal.

For onboard there were two Eventide H3000 Harmonisers, a TC2290 delay, a Yamaha Rev 5, a Lexicon 480 L and a DBS 120x Sub-Harmonic Synthesiser. The 480 L is used in mono split mode, operating as two independent mono in - stereo out reverbs. Machine A in this configuration provides a general vocal reverb used on lead and backing vocals. Machine B is used solely on the snare drum for reverb. A small amount of snare is also fed to the Rev 5, which is mainly used for reverb on the toms and the rest of the kit, especially the kick.

The TC2290 is generally running a slap delay on the lead vocals throughout the show, but is also used to provide some delay effects in a couple of numbers. The first H3000 provides some gentle chorusing and harmonisation to thicken the backing vocals, and

this preset is unchanged for the whole show. The second H3000 is used for special effects on the lead vocal, and the occasional pitch correction effect.

Using a DBX120x to excite the bass drum, the unit is fed from an auxiliary on the desk returning to a channel with the sub component only. He also has an Aphex C2 patched across the two bass guitar DI inputs, as "in bigger halls it helps get some distinction, clarity and punch in the bass guitar you can't get from EQ alone." One some tours he also patches a second unit across the tom subgroup to bring them forward in the mix.

One tip Bruce revealed concerned reverb patches, and modifying them for use in larger venues. Most factory preset reverb patches, where the LF and HF decay rates can be set independently to each other, have the LF decaying at half the rate of the HF. While he finds these are fine in studio situations, the richness of the LF decay tends to clutter the lower midrange in large halls, where there is already a substantial amount of LF decay occurring naturally. He resets these programs to have the LF decaying at twice the rate of HF to keep the presence of the reverb, without causing too much LF build up.

He also runs a lot of compression, but most of which is not working very hard. This is more to ensure that large transient signals are not let through to the FOH, than about recreating the dynamics on stage.

When asked for his main tip for surviving endless touring, he answered quite simply that it was too take care of himself. Admitting to being fairly wild in his early days, he has found that with age he can no longer meet the demands of extended touring unless he is very healthy and eating well.

But he still hasn't lost his love for live audio, parting with the comments, "I still really love touring, and there is nothing more than the excitement of a stadium full of people screaming and enjoying themselves. When you're mixing a show that's a really, really good feeling." •

## Jands Singapore

(continued from page 7)

international contacts. Jands Production Services have been working with international touring acts for a long time and this has helped JPS wrestle a high margin of international concert production work from the Tiger.

Mainly operating in Singapore, Malaysia, Thailand, Indonesia, Vietnam and Taiwan, Peter is also receiving enquires from India, Korea and China. With technical and safety standards varying throughout the region, the regularly imported JPS Sydney project crews and the local Singapore team find working circumstances difficult. It is not just the load in and rig situation they are used to in Australia. For each and every concert Certificates of Endorsement have to be granted outlining Power Distribution and Rigging Design. A different aspect, as the Endorsers then carry full responsibility for the safety of the

public and performers. In some ways this may be considered an advantage but in an industry of tight schedules, can also be a little prohibitive.

The other factor which has caused duress for the crews is the lack of space in which to prep both lighting and audio rigs. At JPS Sydney each rig is set up to full operational format, then road cased and packed directly into the semis all under the one roof.

Not so in Singapore. Rentals in Singapore are exorbitant to say the least and JPS have had a remarkably small area, utilising every square inch with road cases stacked from floor to ceiling. They have also been forced to store equipment off the premises.

Keeping track of gear has been a nightmare for the in-house JPS staff, Peter, kiwi monitor man Craig Burridge (*known as The Swiss Army Knife, who Peter tells*

*me can maintain anything from Vari's to audio*) and a young local by the name of Rashid. During my visit Rashid was tearing around on a fork lift trying to track down some bit of rigging to no avail, and then Aussie ingenuity took over and Peter devised a new method of rigging. Aussies are famous for our talent to conquer tricky situations and this was another fine example.

Anyway at least the storage nightmare is nearly over, as new premises have been leased which will provide three times more space and improved conditions. Although the boys might not be home, this change will make life a little more familiar.

### DATA

#### RECENT ACTS & SEATS SOLD:

Cliff Richard - 28,000 seats  
REM - 5,500 seats  
Janet Jackson - 30,000 seats  
Phil Collins - 60,000 seats in Jakarta +11,000 in Singapore  
Bon Jovi - 60,000 seats

Boys II Men - 4,000 seats  
Pearl Jam - Unknown as there was a major riot where containment fencing was destroyed and the crowds flooded in.

#### TICKET COSTS:

International Acts range from S\$150 to S\$300.

Cantonese Acts can be in excess of S\$400.

#### JPS (ASIA) EQUIPMENT :

##### Singapore Lighting System

**Rigging** - 8 x 1 Tonne Lodestar Chainhoist with 60ft chains; 2 x 8 Way Jands Chainmotor Controllers.

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**Communications** - 2 x Jands Intercom Master Station; 1 x Jands Intercom Master Station C/W single sleeve; 28 x Jands Sub-Station

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## Tech Reunion

Hard to believe perhaps, but this is a pic of virtually every sound and lighting operator who has worked at the Broken Hill Civic Centre for the past 30 years. Pictured in front is Bob "Shocker" Shannaghan, the first sound and light operator in the centre when it opened in 1940. Bob still remembers the day when electricity was first connected to Broken Hill. Pic courtesy of Harold Walton.

### At last-a new editor?

Connections Publishing Pty Ltd will neither confirm nor deny that negotiations are underway with Bob Shannaghan to become the new editor of this magazine.

### Jands Singapore inventory (continued)

Belt Packs C/W Beyer Headsets;  
**Trussing** - 36 x Jands 8' Concert Truss Sections; 4 x 6' Truss; 12 x 4' Truss; 2 x 2' Truss Sections; 4 x 4 Way Truss Cubes; 8 x Truss Hinged Corners; 4 x Truss Spacers.  
**Lamps** - 148 x Par 64, 12 x Strand Harmony 1KW Fresnels; 16 x

Strand Minutte 500W Fresnels; 4 x 8 Light Molfay Dwe Units; 8 x Duet Molfay Dwe Units; 24 x CCT Silhouette 30° 1Kw Axial Profiles; 8 x Pallas 4 Groundrow Cyc Units.  
**Colourchange Units** - 12 x LSD Colourmag Changers; 1 x LSD Colourmag 32Ch Control Console.  
**Followspots** - 4 x Lycian HT1400.  
**Control Consoles** - 1 x Celco Gold

90-Ch, 1 x Jands Event 60Ch, 1 x Jands Event 30Ch.

**Main Singapore Concert System**  
**FOH Mixer** Soundcraft Europa-40ch. **FOH Drive** 1 X Clair Bros CTS Drive Rack Containing - 4 X S4 CTS Controllers; 4 X TC 1128 EQ; 1 X TC 6032 Remote Head; 1 x Klark Technic DN60 Real Time Spectrum Analyser; 1 X Klark

Teknik 6051 Analyser Microphone  
**Multicore** 1 X 76M 57 Way Belden 4 x 76M 6 Way Belden Drive Multicores  
**FOH PA** 64 X Clair Series II S4 Speaker Cabinets; 8 X JBL 4892 Array Speaker Cabinets (Infill Cabs); 8 X Carver PM 2.0 Amp Racks; 2 X Jands SR3000 Racks.  
**Monitor Mixer** 1 X RAMSA S-840-



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## Jands Singapore inventory (continued)

40 (40-16) With 2 Power Supplies  
**Monitor Drive Rack** 12 X Urei  
5547A 3rd Octave EQ's; 3 X 3 Way  
Jands JX5 Crossovers.

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pression Driver); 4 X R3 Side Fill  
Monitors (2 X 15" + 1 X 2" Com-  
pression 60° X 40° Bi-Radial Horn);  
6 X System 80 Sub-Low (2 X 18"  
JBL); 7 X Jands 960 Bi Amp Racks  
**Microphones** 2 X Beyer M88; 12 X  
Countryman Type 85 Direct Boxes;  
1 X Electrovoice RE20; 8 X  
Sennheiser MD421; 2 X  
Sennheiser MD441; 12 X Shure  
SM57; 6 X Shure Beta 58; 4 X  
Shure SM58; 6 X Shure SM81  
(Condensor); 2 X AKG C414  
(Condensor); 1 X Shure SM87  
(Condensor).

•Additional inventory includes  
smaller systems and lighting.

**Jands Production Services Pte  
Ltd, Call (65) 841-2678.**

## BIZBUZ

**Music City Cairns (Ph: 070 516  
826)** ... recently supplied sound  
reinforcement and backline for the  
4th of July Blues Festival in Port  
Douglas, with Ross Hannaford  
Trio, Johnno's Blues Band and  
Bailer Bros Blues Band. John  
Harmon was sound engineer.

"It was the first time for our  
new system of Fender PX2216D  
Console, Sabine FBx901, BBE862,  
Amcron 2401 & EVS1500 &  
TL15's. The system was surpris-  
ingly small, simple powerful and  
clean. We were late setting up and  
just pressed the reset button on  
the Sabine and bingo the system  
was tuned. What a foolproof great  
sounding system. Compliments  
and amazement all day".

- From Craig Montgomery

**Osmond Electronics (Ph 08 410  
1111)** ... announce the appoint-  
ment of Steve Couper as Audio  
Consultant. After 7 1/2 years with  
Jands Prod. Services, Steve moved

to Adelaide and started with  
Osmonds in August.

The new Midas XL200 is doing  
plenty of work, all operators are  
loving its user-friendly features.  
Combined with EV MT.4 system,  
it pulls a kick-arse sound. (Cruel  
Sea, Machine-Head etc).

The sound department has also  
taken delivery of the new Lexicon  
PCM-80 (with user memory and  
card system. Now available for  
hire. Apart from that, work is  
steady, gearing up for silly season!

**Electric Sunshine (Ph 02 660  
6000)**... recently did the Armenian  
New Year celebrations at the Mel-  
bourne Town Hall. Present were  
the Victorian Premier Mr Jeff  
Kennett, with Armenian/Austral-  
ian society president Mr Ali-  
Jaharrd Zachary.

"We used not only conventional  
lighting, but Disco and Psych-  
edelic and Pyros/Smoke.

Highlight of the night was the  
dance of the seven veils, where  
traditional Armenian dancers  
wearing black veils danced on imi-

tation beads of hot coals. We used  
smoke and imitation fire effects  
for this, as well as loud explosions  
when the men entered the dance  
wearing red robes and holding  
machetes.

The tradition has it that the men  
then begin to slaughter the virgin  
brides, as an offering to the Gods.  
For this we had strobe lighting  
with Miniscan 300's pumping red  
patterns on the wall. Screaming  
came through the PA as 15 red  
fire engine flashers were operat-  
ing through lasers and fog. Mr  
Kennett later commented that he  
felt the whole thing very realistic.

**Nova Productions (Canberra Ph  
(06) 239 2722)**... have just bought  
the following new audio equip-  
ment: 1 x Yamaha 40ch M2000  
FOH console, 1 x Mackie 24/4, 8 x  
Apogee Sound AS 8000 Speakers  
+ Amps.

**Lighting**-We have also just pur-  
chased an outdoor lighting effect  
which is a 2.5 KW HMI effect. It's  
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## Audio Dept new for Radio Systems

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nounce his latest business venture  
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wireless systems.

As the company grows, other  
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main business for THE AUDIO  
DEPARTMENT will be utilising  
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# LETTERS

\*#//@%XX-?!

## CRUNCH?

No more crude references to the problems of coke addicted rock stars and their methods of enjoying same, you're a cultured lot I can tell. Here's a little story from my early engineering days.

The first engineer I worked for was a bloke called Karl at Regent Sound Studios (now long defunct, but once home of sessions for the Stones, Hendrix, the Hollies etc.) in London. Now Karl was like most long-time pro engineers, he didn't suffer fools lightly and his problem this particular day was a string section that he was recording.

If there was a stunt they could pull to get off working, they'd use it: Tea breaks, cocking up takes, working to (MU) rule, '...a dog's run off with my trousers.' -type excuses and so on, anything for a

break. So, after they had cleared out of the studio for the umpteenth time, Karl decided to take his revenge.

He found a handful of those hard plastic disposable drinking cups and dotted them upside down around the floor. One by the foot of the mike stand, one next to a violin case, nothing too conspicuous, just casually placed around the room.

When the string section returned from the bookies, they pulled out their instruments from their cases, tuned them, then carefully placed them back on top of their cases while they had a quick fag before the rigours of the job engulfed them again.

Seizing the moment, Karl took the opportunity to slip outside into the studio and pretended to make an adjustment to one of the mikes.

As he did so, he ground the cup by the violin case hard into the wooden floor with his foot. Sssccrrruncchhh!!! "Oh my God," Karl gasped, "Your violin...I'm terribly sorry..." The violinist looked up at him, the colour draining out of his face at the awful tearing sound. Then he looked down.

"...Of course, they all walked out," Karl told me later, as we coiled up the cables after another session, "but good riddance, they were a pain in the arse the whole lot of them. I was glad to see the back of them."

Funnily enough the few violinists I've recorded didn't find that story as amusing as I did, but they're so up themselves anyway...

**Andy, Max Kay PR,  
LONDON, U.K.**

**WRITE:** PO Box 439, Epping, NSW  
2121 Australia.  
Fax (02) 876-5715.  
Email: Connections@msn.com  
Compuserve 100242,3662

## Training

I refer to your June/July issue and the letter by Peter Scott of Tamworth regarding training. I'm finding on the Gold Coast that there is little or no training means available in the areas of Audio and Lighting production.

I have dabbled in both areas in a very small degree through friends who build their own speakers and one who has a small production company, but none of this is giving me the means I need to charge my career and take on something that I really get a lot of pleasure in doing full time.

It doesn't seem to matter how keen you are to learn, without experience it's a really tough industry to break in to. The way Lighting and Audio technology is forever changing, how are we, the young people trying to break into the field, going to stand a chance?

My message to all you people who run the production companies is this. You were like us once,

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Write in Reader Service number: 116

# Reader FEEDBACK

keen and eager to learn. Someone gave you a go. How 'bout doing the same for us? We can't all afford to drive for an hour or more to get to the places that run the courses, let alone pay for one that may or may not teach us what we really need to know. It is about time the TAFE colleges stepped in, but they can't do much unless some of you were prepared to teach them. It's a catch 22. So who's going to move first?

**Jodie Wood,  
Southport, QLD.**

•Never have truer words been spoken. Perhaps sometime soon we will see some 'grass roots' AV training eventuate out of some of the production firms around the place. Gee, I remember in 1982 running a PA Course weekend and getting 45 people along. I think training is a much larger issue now than it was then, but I still don't see the need being met in broad terms.

Anyway, good luck to Jodie Wood and all others. -Ed.

## Where is Tom L?

Congratulations to Connections staff for producing a top quality local, up to date music technology magazine. I have recently begun assembling a home midi studio and have had to choose between an eight track tape system or an eight track hard disc system. Your reviews of these products since I have been buying the mag have been of great assistance to me in choosing the gear that suits me.

There is something that you may be able to help me with. I have seen an educational video tape produced by an American called Tom Lubin. I don't know where I can buy these training videos. Can you help?

**Ron Coombes,  
Newcastle, NSW**

\*Yes, I've sent Ron the number, and we are talking to Tom about selling his stuff in our pages.

■ Excellent magazine - no complaints. **Chris McFadden, C & K Entertainment, Parramatta, NSW.**

■ Great publication! **John Wallace, North Mackay, Qld.**

■ I was asleep, but now I'm awake. **Michael Graham, Sydney, NSW.**

■ Should have someone check technical accuracy or features to avoid bitchy toned corrections in letter sections. e.g. Phil Alison, Three Phase debate, etc. The letter section shouldn't be for intellectual one-up-manship. **Max Allen, North Perth, WA.**

*\*Keep in mind many mag's don't print critical letters, whereas we do. This amplifies issues which would otherwise die quietly. -Ed*

■ Always need prices. **C.A. O'Keeffe, Cloncurry, Qld.**

■ Prices on all items are vital! **Dean Cox, D.J., Scottsdale, TAS.**

■ Thank you for everything you do for us in the entertainment industry. **P.B. Richardson, Maylands, WA.**

■ Great magazine. Keep up the good work. **A. Colombo, Waverley College, Matraville, NSW.**

■ I find Connections very helpful, especially Connections Contacts 1995. **Daniel Sekers, Vaucluse, NSW.**

■ More actual prices on some of the products in new product section. Expand the Club Column? **Michael Turner, Perth, WA.**

■ BASF National Tracking Guide is fantastic! More on studios. Come & visit SAE Melbourne! Do a whole article on SAE. More interview with sound engineers, Mike Letho, Doug Roberts, Dale Warren etc. **Andrew Broadhead, St. Kilda,**

■ Road test more equipment. **Lindsay Stanley, Reflex Audio, Everard Park, SA.**

■ Great magazine. Perhaps reviews occasionally on loudspeaker systems, e.g. JBL System 1400XL, Turbo Floodlight. **Leon Smith, Goonellabah, NSW.**

*Taken from Readers Service Cards*

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Write in Reader Service Number: 137

# 20 Years Ago

Julius Grafton reflects on business in 1975

The story so far is that in 1975 things were a trifle more sedate than today. Heroin use hadn't become widespread, AIDS wasn't invented, and if you wanted a one tonne van you bought a Ford Transit. Your editor was in his third year of business as Zapco Lightshows, purveys of psychedelic lighting to dance promoters and hirers of all things lighting. He was about to discover sound, and chronicles here long forgotten snippets of suspect relevance, gleaned from the dog eared pages of the long lost diary.....

Theatre in 1975 was a staid industry in technical terms. The Sydney Opera House had opened the year before, and was outfitted with some peculiar lighting technology courtesy of Siemens, who won the tender because Rank Strand Electric were too damn expensive back then. The Opera House had these wonderful Reich & Vogell lanterns,

the follow spots were rumoured to have been used as watch tower accessories at Stalag 13 during the 2nd world war.

If you travelled around the place as I did, visiting Civic Centres and Rural Theatres, you found almost universal use of resistance dimmers. These great steel contraptions were located half way up the flytower, usually (for some reason) on the prompt side. The operator/s could gang faders together by way of interlocks, some larger systems had motor drives for multiple group fades.

Electronic dimming was the expensive option, a large manual board was state of the art, like a Strand SP-40 with two presets. Because decent slider potentiometers hadn't been invented at that time (or were absolutely off the planet in cost) these desks had custom made resistance strip quadrant faders which required rebuilding each year.

Strand made a packet out of replacement fader strips.

Computerised boards were on the horizon, Strand had a small team of rocket scientists who worked on commissioning the first examples of these, called 'Instant Dimmer Memory' (IDM) at prices you would not believe.

## PHIL CULLEN COMES CLEAN.....

Phil Cullen, who readers will recall ran Mac Enterprises Lightshows (a considerably large outfit for the time) in competition with myself has sent me a note headed 'do you remember?'

This confession covers a strange incident, just one of many which afflicted people like Phil and myself in the era. Phil's note does, however, go towards clearing up a slight mystery.

Phil says I got a regular gig at Hornsby Police Boys Club each Saturday night which pissed him

off. "I saw the posters with Zapco Lightshow, and followed the van putting them up. I carefully pulled the wet posters off the walls and then put them over shop windows, phone boxes and the front wall of the Council Chambers!"

Of course the promoter got a lot of phone calls the next day.

Well, thanks Phil, and now that you mention it perhaps you had something to do with the Police raid at dawn the day after I did a gig with AC/DC at Campbelltown? The Police searched in vain for all kinds of merchandise and illicit goods allegedly seen in the back of my truck the night before.....

Got any pictures or anecdotes from the era?  
Send to Julius!  
PO Box 439, Epping  
NSW 2121.

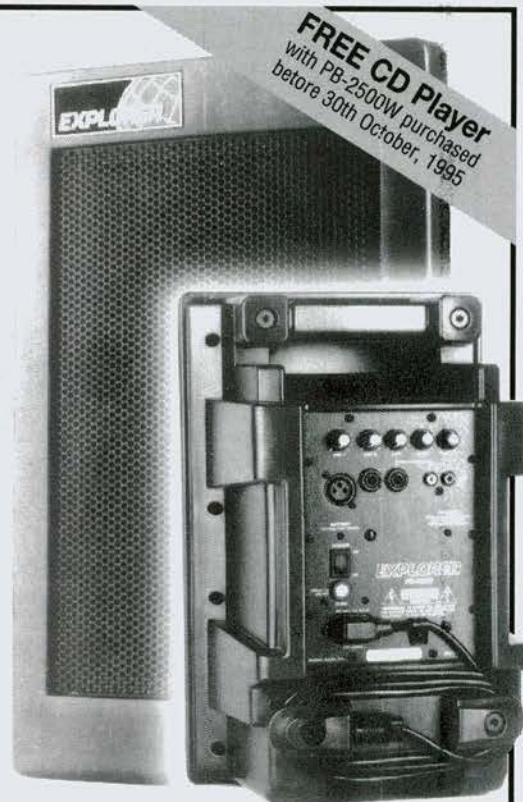
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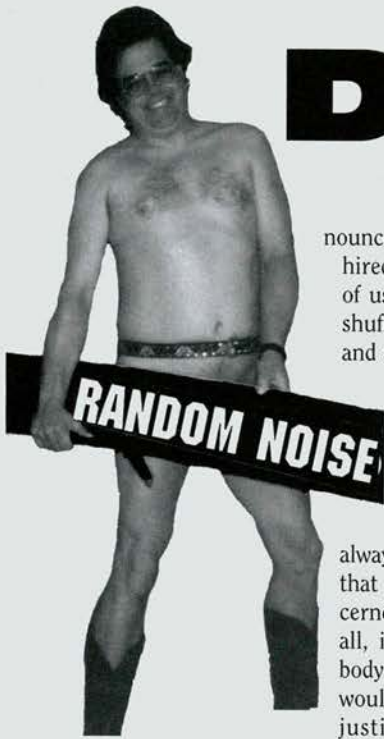
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# Duncan Fry



## A STAR IS BORN

My trusty assistant Andy and I, who followers of this page may remember from the Bo Diddley gig, got a gig supplying the PA and lights for a band at the good old Astrodome, a converted picture theatre in Traralgon down in Gippsland, Victoria.

We had picked up a lighting rig from a lighting rental company, and the deal was that the band was to supply a lighting guy. So, we unloaded the PA and lights out of the truck, put the lighting cases to one side, then set the PA up, checked the monitors, EQ'd the Front of House, and waited for the band to show up.

The band arrived with their stage gear, and as we were setting it up they casually an-

nounced that the lighting guy they'd hired couldn't make it; would one of us be able to do it? Andy and I shuffled our feet, looked at the floor and at each other, rolling our eyes heavenwards.

The problem was that from our experience it was a very bad idea to let a band know that you knew how lights worked! Lighting guys always made it seem so complicated, that as far as the band was concerned, ignorance was bliss. After all, if the band realised that anybody could do it, then lighting guys would have no power base and no justification for the incredible amount of time they took to get it together. I mean, we're only talking 16 cans at the most, not Pink Floyd!

Worse than that though, was the fact that if you let on that you were quite capable of plugging up 16 lights and turning them on and off for a couple of hours, then they'd have you doing it all the time, and usually for nothing. So the best plan from a sound person's point of view was to feign ignorance of all things incandescent!

The band's leader looked desperate. Sensing that there was a bit of a problem, he offered money! Always a good idea. "Look," he said, "We'll pay you the \$80 we would have paid him if you can help us out". Andy's face lit up. "OK" he said, "I'll do it." Well, no kidding, he set to work like a man possessed, and he had the whole thing up and running in 10 minutes flat! To this day I don't know how he had the nerve to get away with it.

He unpacked the lighting cases, pulling out 4 bars with 4 cans on each

bar, and hung all 16 across the back of the stage. He gaffer taped a spot on top of each PA stack, and faced them across the front vocal line. And that was it!

Whatever gels were in the lights when he pulled them out of the cases stayed on them. Whatever order the cans were in as he randomly plugged them into the dimmer rack, well that was the order they stayed. Jeez, it looked bright - but shitful.

Scuttling down to the lighting console, he set it up on a slow chase. Each time the band started a song he would adjust the chase so the light would flash in time with the beat. At the end of each song he'd hit the blackout switch, followed by a 50% wash of the next colour in the chase. It took him about 10 seconds per song to do all this; the rest of the time he spent drinking beer and perving at the girls on the dance floor!

I've got to admit that I was a bit worried as to how the band would react to all this, and sure enough, in the first break, the singer comes striding forcefully over to Andy. Uh oh, I thought, here we go - it's whinge time. Instead, the singer grabbed Andy's hand and shook it vigorously. "Great light show, mate, really great - looks fantastic from where we are!" Shit, I nearly fell over! And then I realised; all the band could see from on stage was a whole lot of lights flashing on and off around them! They probably felt as though they were on stage with a 200 can stadium light show. "How does it look out

front?" he asked. What a question. Bands always ask this, whether it's about the sound or the lights. What do they really think you're going to say? "Oh it sounds/looks terrible tonight; I just can't seem to get it together!" Of course you're not - well not if you've got half a brain and want to get paid, that is. They want to hear how great everything is, and Andy didn't disappoint them. "Looks fine to me," he said enthusiastically, "Makes the band really come alive!" "Really? Oh, great, wait'll I tell the other guys. It's really good of you to do this for us." Andy smiled and said "No worries, mate, glad to be able to help out!" As we walked off to the bar to get a couple of drinks, we were pissing ourselves laughing. "You slack bastard," I said "It'd better be your turn to buy the hamburgers on the way home tonight! That is, if you're head's not too big to fit through the door of the truck!"

At the end of the night, the band asked him if he'd like to do lights for them permanently, they were really impressed by the fantastic show he did at such short notice! He blew it, though.

At their next gig he got totally pissed, and threw up on stage as we were packing up. That wasn't too bad; as we all know, these things happen sometimes, but unfortunately the band caught him trying to mop up his chunder with their expensive hand painted backdrop, and sacked him on the spot!

That has to be one of the shortest lighting careers ever!

## DICKHEADS.

by Tim Ireland



# STUDIOS & POST

SEPTEMBER 1995

Incorporating the **BASF National Tracking Guide**

Edited By Will Burston

## Metropolis Downsizes

Indicative of the general downturn affecting the Australian recording industry, Metropolis Audio announced a major internal reshuffle this month. Moving away from multitrack music recording, the studio has decided to redefine its focus on commercial post production while retaining a single SSL mix room. Although not forced, this change was initiated before it became inevitable.

While many studios have been forced to diversify in order to meet operational overheads in the previous two years, large scale facilities have generally had a broad service base in their operations. As Ern Rose explains, "It would be accurate to say we've subsidised our music interests from commercial production for nearly three years. I think the music industry in our view has shrunk. I guess because we are a fairly big operation it's easier to see the trend than some of the smaller studios who may have bigger aberrations in their operations than we do."

The changes involve the closure of Studio's 1 and 2, along with the Post Hole, effectively removing all acoustic recording spaces used by the studio. Retaining Studio 3, which is the SSL mix room, for large projects and as an audio for picture mix suite, this will be supplemented by the two existing Fairlight Post suites. This halves the floor space that Metropolis has occupied, with the now unused space reverting to AAV, to possibly be incorporated into their Dub Shop operation.

The reasons for such a move are many and complex, but with the current decline being experienced by the commercial production industry, it was no longer viable for Metropolis to subsidise music recording to the extent required to keep it operational. "I think that we were faced with a slight downturn in our commercial work - commercials are quiet, while we expected them to be cyclically quiet at the end of the financial year, it's worse this year."

The new Metropolis will offer a variety of services alongside the existing Post operations. The Outside Broadcast truck will be retained as the facilities primary tracking tool in tandem with Studio 3 for projects requiring large scale remote recording. Workshop facilities will be expanded.

For Ern Rose, and those who work with him, the closure does bring to the end of era in Australian music. "We've seen albums grow from the first Daddy Cool album, recorded in twelve hours and mixed in a similar period, to the Little River Band's, James Reyne's and John Farnham's that have been in the studio for three to six months to make a record. That growth meant that a lot more money was spent in studios on music and music became a predominant part of our studio revenue. It's like watching the clock wind back to the '70's again where the production times have shrunk, the quality has gone down and were back to people trying to produce an album in twelve hours."

## SOUNDFIRM- In the Picture

*This is the 100th year of film; the 70th thereabouts with sync sound. Connections' Daniel Cole went to look at an Australian post-production facility to see how ISDN has changed the face of POST..... and to get THE PICTURE!*

It is straightforward. Soundfirm make soundtracks for film and TV, are based in Melbourne and also operate a Sydney facility.

Located in Lindfield, this sound-to-picture post-production audio facility has some impressive films to its credit. Now international film houses are coming to them. With the advent of ISDN links, they can facilitate audio post-production globally, *in real-time*. So it is now possible to have an Executive Producer in LA and the sound mix in Lindfield. More on this below.

### The Process

One maxim for post-sound production could be "It's not so much the desk it is mixed through it's more the attitude of how the money is spent to get it on the screen." says Soundfirm Sydney General Manager, Ian McLoughlin.

"With film, all the money is directed towards the end product. Most producers' get the script, they do the shoot *then* they start

thinking about sound, about post. Before you know it the budget has gone.

"The ideal production house will plan ahead and say 'maybe we don't need that extra HMI on location because it will pull (budget) out from post.'"

### Staying Local, Going Global

According to Ian McLoughlin about 70% of Soundfirm's work is feature film, 30% of which is Australian. There is, apparently, a growing awareness of high quality soundtracks world wide so Soundfirm are well placed.

Ian McLoughlin says that the main post-production room has been cross funded over the years by larger international and local projects or mid range films. The *Mad Max* films created an opening and an international stamp of legitimacy for Soundfirm.

Ironically this has made it harder for smaller Australian productions to get access to the main  
*(continued on page 50)*

## Telstra spending \$300 million on system as demand for the ISDN NETWORK GROWS

Although there has been much hype about the Integrated Digital Services Network (ISDN) advantage, the difficulty in obtaining a connection to the system and the lack of hardware has led to a slow uptake rate. This is rapidly changing as many radio broadcasters and post production houses embrace the system.

Although not at the stage of being able to transfer full motion video with embedded voice and data circuits, which is the image people have of an optical fibre being run to their house, the system

has never the less many advantages for audio professionals.

ISDN replaces conventional analogue telephone circuits and is built around data channels capable of carrying 64kbit/s, known as B channels. These are bundled together by a D channel, which carries dialling and network signalling information. Multiple B channels can be stacked together to expand bandwidth.

In Australia, as with the rest of the world, two levels of ISDN connection are offered. The first is the Microlink, or basic rate con-



## .....&POST!

Without diminishing from our coverage of the Studio market, we must acknowledge the rise and rise of audio post production - and do so from this issue by extending coverage towards this area. We welcome editorial submissions and suggestions always. **Call (02) 876-3530.**

## ISDN

from previous page

nection, which provides two B channels with a total capacity of 128kbit/s, and a 16kbit/s D channel. The second connection is the Macrolink, or primary rate, which is provided with up to 30 B channels, offering a total capacity of 1.98Mbit/s. This is supplemented by a 64kbit/s D channel for dialing information.

The one anomaly with ISDN as a standard is the US (of course), who had digital phone lines in place several years before the rest of the world. Therefore they developed their own standard, which as with their television standard has turned into a liability. Australia, along with the rest of the world adheres to the European standard, which operates as described above. The American system is called Switched 56, and is the standard connection offered in many of the US states.

Switched 56 has a lower data capacity. While still based around 64kbit/s B channels, the standard omits the D channels, instead bundling all network signalling information into 8kbit/s of the data stream. This reduces the data capacity of the circuit to 56kbit/s, requiring data rate correction if connecting to a European standard circuit. Often all that is needed is the connection of another B channel to make up for the loss in bandwidth, keep this in mind if making regular connections to US.

Audio connections to ISDN network are performed by Codec's, a generic term for A/D and D/A converters that handle the interfacing. Acceptable speech quality can be obtained by using a single B channel. 64kbit/s data bandwidth allows a mono 7.5kHz signal to be encoded and transmitted realtime.

CD quality audio has a much greater bandwidth, requiring a transmission rate 1.4Mbit/s to transmit two channels of 20Hz-20kHz signal in an uncompressed form. Either multiple B channels or data compression has been implemented to reduce this data stream to a manageable size.

Although two B channels may be connected to the same destination sequentially, the data packets

for each may be routed via different paths according to network traffic. Therefore one channel may travel via an optic fibre, while the second may travel over a satellite link. The data arriving will be out of sync, and require reordering before conversion to audio signal.

Currently there is no defined standard for this multiplexing over ISDN, a draft standard has been proposed. All codecs will work flawlessly if connected to an identical unit on the receiving end, but with no defined standards for multiplexing, many manufacturers have defined proprietary algorithms to insure the integrity of their data. Therefore mixed codec exchanges can be dangerous.

The most established codec standard is Musicam, or ISO/MPEG layer II. Musicam is a bandwidth adaptive protocol, starting from a single 64kbit/s B channel which allows 7.5kHz mono transmission, increasing to a maximum of 22.5kHz full stereo with six B channels (384kbit/s) available, at a compression ratio of 4:1.

Musicam has restricted frequency response of 15kHz in joint stereo when restricted to a 128kbit/s data bandwidth (two B channels). This restriction was imposed by the designers of the standard to increase the midrange encoding resolution, and the most common application for Musicam in this format is broadcast.

The Dolby AC-2, or Dolby Fax standard, is the most common standard in the international post production industries. Two channels of 20Hz-20kHz audio can be transmitted along with subcode information for remote machine control. Audio and time code can be transmitted simultaneously.

The apt-X100 standard is the most popular for bi-directional transfers, as it employs Adaptive Differential Pulse Code Modulation to keep the coding delay to around 2.8ms at either end.

There is an initial A\$396 ISDN connection fee. The line rental is A\$960 per year, and for this you receive two B (64kbit/s) data channels, and a 16kbit/s D channel. Calls are time charged at 17.5 cents for the first 120 seconds peak rate or 480 seconds off peak, falling to 7.5 cents for any further block of 120 or 480 seconds. •

-By Will Burston

## ENGINEER PROFILE By Will Burston

## Chris Dickie

A quietly spoken Englishman, Chris Dickie has had the good fortune to work with a number of leading acts and producers during his career. Chris began his musical career as a bass guitarist, before starting at R.A.K. studios, in London, where he worked until 1991, when he moved to Perth. R.A.K. studios hold a long tradition of high end acoustic recording with acts along the lines of Yes, Big Country, the Thomson Twins and Simply Red. Due to the quality of construction and acoustics of the building, the studio still continues to attract this level of artist.

"Working there was great experience for me with that level of act, and the producers they bought with them.

The studio was really kitted out for band recording, rather than the MIDI stuff." The main recording area was one large room, with the option of dividing it down the centre, and still large enough to set up an entire act and gain separation between the players while maintaining visual contact. "With recording bands it's quite often detrimental when you start separating people out of the room, having fewer and fewer people playing on the same takes. When you have a number of people playing together, you gain this added energy that otherwise isn't there."

While working at R.A.K., Chris was surrounded by engineers of the likes of Pete Schwier, Phil Phornally and Will Gosling, all working with acts that were pushing the creative edge of technology. Phil was the leader in this regard, recording acts such as the Thompson Twins, The Cure and Duran Duran, where it was not uncommon to be utilising eight AMS delay units as samplers, and returning them through a manual API console. "There was a pretty creative streak running through there, they were all technically clued up, although not about what

is inside a box and how it works, but what a box does musically or creatively, and how to get that out of it."

During the mid 1980's, music production technology was redefined by the emergence of MIDI, and area that was accepted by R.A.K., but didn't alter their primary focus of acoustic recording to accommodate. "With keyboards the sequencing thing wasn't really much of an option, unless you had someone who was clued up

on CV and Gate sequencing, which very few people were. If you wanted something you played it manually, and if you wanted to layer something, you played it again."

"When I first got there, they had just discovered drum machines,

they had a Drumulator, which was being put on most records. In the first year I was there I only recorded three drum kits and the rest were drum machine because it was the new toy. And we'd be doing things like sitting an Auratone on top of a snare drum in an ambient part of the building, and mic'ing it up to get some of the ambient room and drum sound behind the sample. Then Fairlight's arrived, MIDI arrived with the DX7 and people started doing their keyboard stuff. Initially people were a bit suspicious of the Atari because it looked like a home computer, and spent 10's of 1000's of pounds on Fairlight's before realising they could do the same job with an Atari and a S1000."

One major change in the recording industry over the last 15 years, has been the shift away from record production as a team effort undertaken by a number of people, to today's situation where most acts work with a Producer-Engineer. Chris's first experience of production values were with a man called Mickey Most, responsible for defining the sound of acts

(continued on page 51)





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# STUDIO NEWS

■ There have been rumors circulating about an imminent closure of **EMI's** recording facilities in this country. It is **WRONG**, it is in London that EMI have scaled back their operations, closing The Townhouse and The Manor studios. 301's Jim Taig also assured us that they are not moving to Silverwater and any other variations that may be hinted at. They have, and this is fact, just installed their fourth Sonic Solutions workstation, once again expanding their Mastering facilities.

■ **Damian Gerard's** started last month off with their open nights, the first of which explored the areas of Mastering and CD Manufacturing. By all accounts the night was a roaring success, with the studio also sold on the benefits of the Session 8 digital recorder. The night lead to the announcement of a compilation of acts recorded in the A and B studio's. Call DG's on 02 660 8776 for more information.

■ While on the subject of open days, **Troy Horse** are launching their new facilities with an open weekend, utilising a line-up of musicians that would make most promoters green with envy. Yes, the facilities will not only be open, but in use, which will eventually be released as a promo CD for the studio. Bookings are essential, as entry is restricted, call them on 02 698 9399.

■ **Studio RBX** in Melbourne has appointed the Stray Alien, a publicity/marketing company to the full time facility staff. With many years of experience in recording and publishing, they are aiming to lift the profile of the studio with the young and upcoming acts of Melbourne. The Stray Alien specialises in guiding and developing the careers of artists, and can advise on all facets of the industry from live work to recording and releasing product.

■ **Eclipse** are breaking out the

champagne with Silverchair's entry into the US Top 20, the first Australian studio to have an album reach this marquee in many, many years. It only reinforces their average this year, which has seen every Single and Album from the studio reach the Australian Top 20. That's a pretty fair effort.

■ **Cloud Studio's** in Wyong, NSW, are establishing themselves as a dark horse in the facility market. While being out of the way, so to speak, for us city dwellers, they have established a facility with specifications that made my eyes water. Running 48 tracks of MCI 2", feeding a Amek Langley Big (with Supertrue automation and the virtual dynamics package), this is supplemented by outboard such as Neve V series racks, an Audio Logic DAW, an Akai S3200 with MO for storage and a Yamaha CD writer. With full residential facilities, here is another option for those with the budget to escape the city.

## Preditor AVID

Launched in February 1995 through the partnership of Jim Stewart and Phil Lamont, Preditor AVID offers the latest in AVID Technology, combined with 15 years of post production experience. Preditor AVID provides the dual advantage of two editors offering continuity between off-line and on-line edit suites.

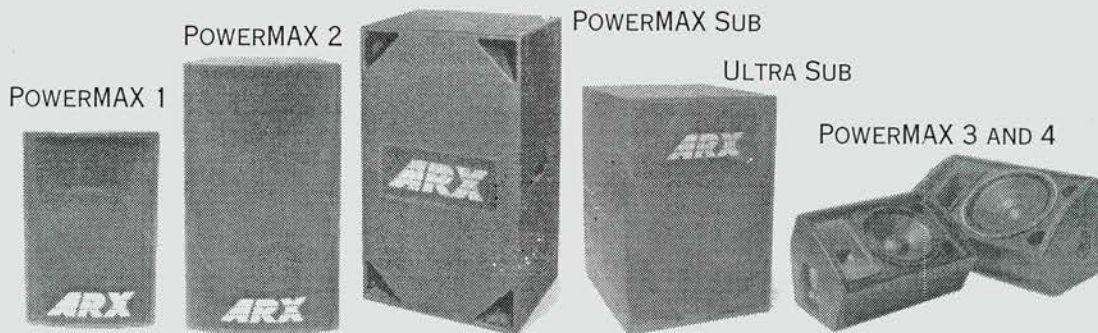
The company can do TV commercials, corporate videos, music video, feature films & docco's.

Josie Dyhreberg is facility manager. Call (02) 436-4430.

## SAE Stockholm

SAE, the Australian entity owned by Tom Misner, has acquired Soundtrade Studios in Stockholm. The four studio complex is the largest in Sweden, and is being renovated to incorporate an SAE college. The main studio uses a 54 input moving fader Neotek console.

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## Woodstock Studio

Where communication is high on the priority list...

Attempting to remove any barriers between musicians and production staff, Woodstock has been designed with spaciousness and purpose high on the list of priorities. Built over the last year by Joe Camerlino, of The Black Sorrows fame, it is not only a personal work space for he and his label, but a full residential studio for acts wishing to achieve focus on their project.

The studio design has a distinctly English feel to its design, with an open control room also serving as a primary performance space. Surrounding this are three medium sized isolation rooms, including a drum room, supplemented by a large iso-booth in the machine room. While studio purists may claim that in this situation proper isolation is impossible, the interaction this layout makes possible is unbeatable.

During construction acoustics were high on the list of priorities, which has certainly paid off with the studio totally isolated from all

other areas of the building. The ceiling of the main performance area is dominated by a large acoustic diffuser, supplemented by bass trapping in all areas to reduce problematic standing waves. The three iso-rooms vary between live surfaces for the drum room, and semi live for the other two.

Based around a Mackie 32•8 console, this feeds any combination of 24 track ADAT, an Otari MX80 2" 24 track, or an eight track Session 8 system. "I think analogue and digital marry extremely well, it's up to the performer as to what they want to use. I think you become extremely anal if you tell me you can hear a digital mix at the end of the day. I love anything that helps you create the sound you are trying to create, and if you can do it with digital then you should be able to do it with digital. As the years roll on I think it will become possible to create digital recordings that have a totally valve sound."

An extensive patching system



has been wired into the building, bringing up all connection points on a Bantam patch bay beside the desk. Plenty of excess capacity has been allowed for, on top of the already extensive selection of outboard equipment that is in-house. This includes a large selection of Summit and Neve outboard modules, supplementing a large selection of outboard effects processing including a number of Lexicon units. This is teamed with diverse collection of modern valve microphones.

The studio also carries a large range of instruments as standard equipment, with a B3 Hammond

and Leslie, Honner piano and a wide selection of guitar amps housed permanently on premises.

The apartment upstairs is a large New York, loft style apartment based on a totally open floor plan. Filled with natural light it has an open kitchen and living area, with sleeping in a loft above this and well away from the action. Even the studio has natural light in this building, and with Carlisle Street only minutes away, very little is left lacking.

• Rates start at \$700 a day for the studio, and \$900 a day with the residential facilities included.

-Will Burston

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# SOUNDFIRM

from page 45

post-sound room at Soundfirm

"We run on a three month booking for the main facility however we are opening up other post-production rooms. They don't have all the features of the main space but they do have excellent equipment and staff support. This is our next phase: to improve our studios and still be competitive in the local industry."

Currently the average budget for an Australian film is around 2-3 million, compared to 30-45 million on larger overseas films, so it is understandable that Soundfirm is expanding globally. Not only is new technology making this easier, but also the high regard Australian film technicians have internationally.

"We have very good sound cutters and mixers who are very young but already have reputations overseas" he says.

Both the staff and facility is starting to draw in international projects from Asia and the US. Recently, Soundfirm finished Jackie Chan's latest film *Rumble In The Bronx*, also *Temptation of a Monk* which is, according to Ian Mc Loughlin, "the most applauded art film to come out of Hong Kong". This is unusual since that market is highly competitive as Ian McLoughlin continues,

"Hong Kong is the world's most economically driven film industry. They 'turn' a film in two weeks; from the beginning of the edit to the end of the mix—that's about our pre-mix time!

Yet according to Ian Mc Loughlin the Hong Kong market is aware that audiences are demanding more in terms of sound-track quality—compared to films from the US. This is due to the increase in reproduction standards in theatres.

"A big upturn in Asian films is good because the Australian film industry is not big enough to support the level of technology that is demanded by international film productions. We've now got that technology and we are going for high budget American and Asian

projects—and getting them"

With the advent of new markets in non English speaking counties you would think that doing post production sound for foreign films in Australia would be difficult;

"Cantonese, Mandarin, German, French—it makes no difference to us. If anything I'll be a little more careful mixing for intelligibility—which as a mixer is a real problem. The hardest thing is with mixing is to maintain freshness; to hear what the audience will hear—I know *every line of dialogue* in our current project!"

The state of the American film industry has been inadvertently positive for Soundfirm,

"We are at least 30% if not 50% cheaper than similar facilities in the US. This is due in part to administrative costs for instance in the US, demarcation means that to move a tape from one room to the next the sound editor has to call transport to move it say 15 feet!

"In LA there is a complete breakdown in the creative process; producers can't talk to sound editors, sound editors can't talk to mixers because of all the chains of command their supposed to go through.

"We don't have these problems but we have the facility and the staff. Distance is no longer a problem." he says.

## New Technologies

Due to new developments in telematic links there is now a major change occurring in the film industry as Ian Mc Loughlin explains,

"In LA, due in part to technology, they are asking 'do we need everything in one centre?' Subsequently there are strong challenges from production houses in Canada, Northern America, Australia—New York is going *through the roof* in post-sound production.

"We have put in Dolby and ISDN links for our current project. It is the basis for the next step-up for this studio. With this we've done a couple of simultaneous recording

sessions between Sydney and LA. That is, running the picture here *and* driving LA and it's machines; doing simultaneous dialogue recording sessions with a director in LA, talking to us and watching the picture in sync!

"Since they don't want to leave LA they like to send us the tracks and we can send them a preview of a mix the same way. We have sent a final mix over the ISDN line.

"This development will change the shape of the industry in Australia, and a lot of international work will start coming through and not just for Soundfirm. We are finding that a lot more American producers are comfortable dealing with Australia because their executive producers back in the US can be played stuff immediately."

So it seems that ISDN technology has finally annihilated tyrannous distance,

"It means we can have say, an alternative line of dialogue in four hours instead of 36. Soon we'll be able to do real-time image transfers and we are putting in a macro link in a months time which should help also."

## Location Sound Recording

The staff at Sounfirm encourage sound recordists to get *editable sound*. This sounds straightforward yet as Ian Mc Loughlin describes there are a few concerns.

"In most film locations you are lucky to catch *useful* or good sound—in a pub for instance you can't turn off Sky Channel, the Pokies, the piss-heads in the corner."

That's one point, the second is that time may be wasted doing it;

"You can record a city bar *any time*—I can send a guy out and do that. The dialogue and performance is the main thing—always. *Dialogue is God*. We don't need a

recording of the car coming down the road; that's easy to reconstruct in our studios.

"Many sound recordists work under the misconception that for a car pass they need to put up two mics in stereo. That's OK *but*—headphones are 8-9 inches apart: you put that sound in a large theatre and you have huge problems. I have a 22 ft screen here; in America they are up to 70 feet.

"We have put in Dolby and ISDN links for our current project. It is the basis for the next step-up for this studio.

With this we've done a couple of simultaneous recording sessions between Sydney and LA. That is, running the picture here *and* driving LA and it's machines"

"A lot of people spend precious time getting beautiful stereo sound effects. Headphone sound is one thing. Sound for TV/Cinema is different. Most of these types of recordings become unwieldy for us."

Mr McLoughlin says that dual mono is the norm these days, usually a radio-mic on one channel and a boom on another,

"We can pan a mono recording and change the divergency of the pan as it passes through discrete channels of left, inner-left, centre etc. We fill the image and make it continuous so the pan works.

"So, for a car pass we will add a tyre run, differential whine [yes!], (*note here Cole is an old-Holden man. -ed*) muffler, gravel—there might be five of six elements and we pan them all."

According to Mr Mc Loughlin good (sound) practice is to know what the post studio wants and what it will more than likely do to the sound;

"One the countries best sound

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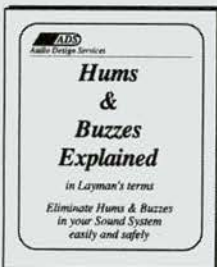
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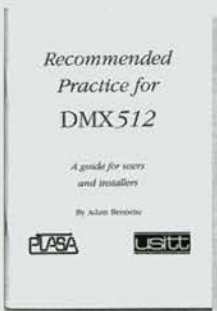
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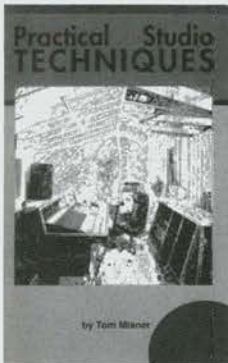
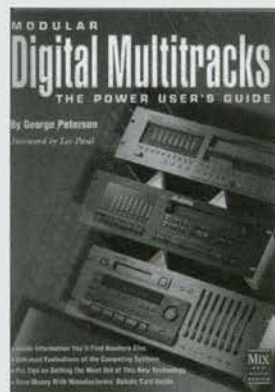
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By George Petersen. 120 pages, written 1994. **\$49** This guy knows his chops, he is an editor at MIX, the world's greatest studio magazine. This book covers everything you need to know plus more. It details the ADAI, DA-88, RD-8, ADAM and DMR-8 systems, talks about tape, techniques and how to make your own cables.

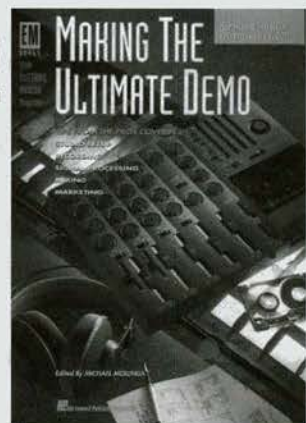


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By Michael Molenda. 128 pages, written 1993. Find out how to record and market your demo tape, record killer vocal and instrumental tracks, and improve your mother's cooking!



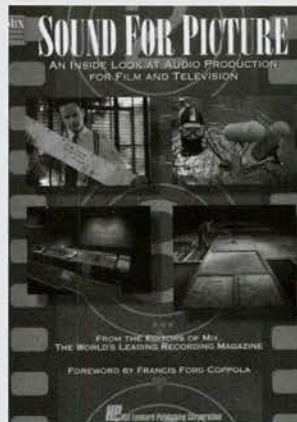
## Live Sound Mixing \$35

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



## Concert Sound \$44

By David (Ruby) Trubitt. 166 pages, written 1993. This is a very useful book, Connections say that if you are interested in, or work in, the live sound field, get it! details touring sound for bands like U2, Stones, Van Halen etc. Has gear tips, rigging, pix of major systems, and is well put together! What more do you want?



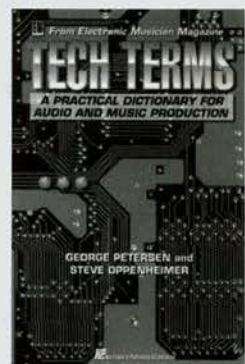
## \$32 Sound for Picture

From the editors of MIX. 134 pages, 1993. An inside look at audio production for film and TV. Includes section on sound effects, with case studies.

## Tech Terms

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

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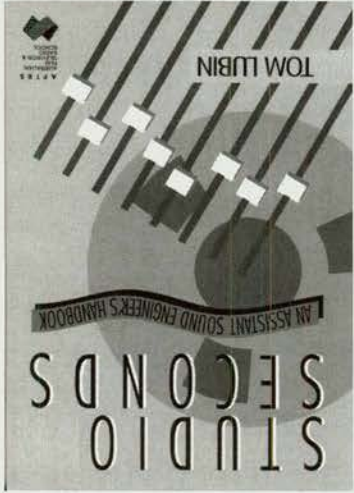
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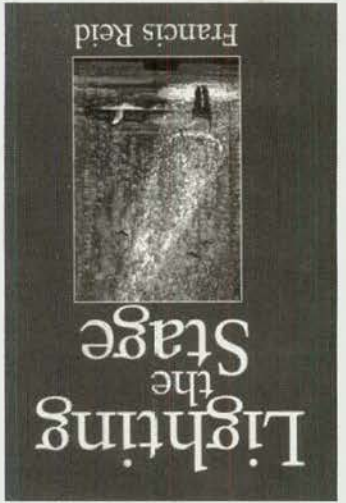
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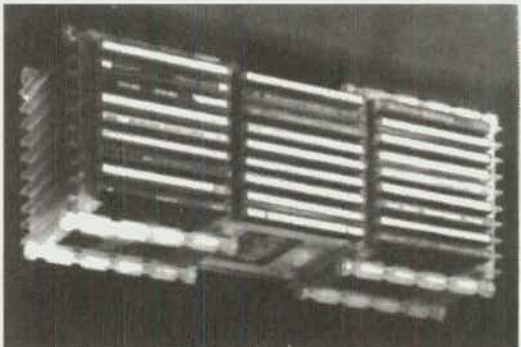
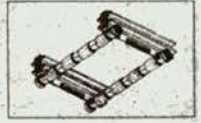
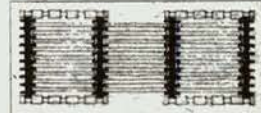
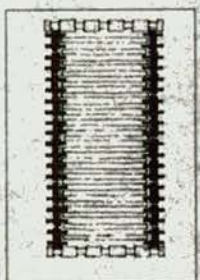
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# SOUNDFIRM

from page 50

recordists is Ben Osmo. He comes in to Soundfirm when he can and because of this knows the technology that we use, how we process sound. What machines such as Protools, gates and other tricks do to the sound—so he gives us edited sound with this in mind.

"We try to give as much feedback as possible to sound recordists because they are the only sound sensitive people on film sets. Some directors have a desire to catch location sound yet if you look at an average TV crew, out of 90 people you will probably have two sound people—so it's hard for them to request a re-take—at \$9000 an hour unit cost there is no time for sound."

## Mediums

According to Ian Mc Loughlin Soundfirm haven't touched a piece of 1/4 inch tape in six years. DAT mastering is the preferred option.

"DAT is a robust medium. The Americans will still dual-record with DAT and Nagra but I haven't experienced drop-out on DAT yet."

However there is a discrepancy with the correct level to record on to DAT, both in location and mastering as Ian Mc Loughlin explains,

"Everybody thinks that a DAT machine will give heaps of dynamic range—and it does—but when that sound is transferred to 35mm the editor has to control the incredible dynamic range of 70dB and just can't handle it.

"Most sound recordist would die if they saw the amount of compression we put on dialogue.

When using a Nagra you used to have to chase between your noise floor and your distortion point. The same thing is equally valid on a DAT machine but not as much. The thing is a DAT recording still has to get into the analog domain for the mix.

"So if I'm dragging up -70dB which has 5dB of modulation on it I'm still bringing with it an enormous amount of noise.

"Reference tone for location sound is tricky. I will try to ex-

plain and I'll take the Fostex stance; -20dB is perfect for digital mastering when to CD -20 below clip. If the format is 16mm, the line-up tone is -8—so I have above 0vu, 8db of headroom before I hit distortion. If its 35mm, depending on the type of noise reduction, either 12, 14, 16dB. If its Dolby SR I'll go for 16dB.

"I just ask for a tone point and I'll reference to that and depending on medium I go to I'll drop back -4. Manufactures recommend different levels; HHB recommend -8, Sony; -20. Post houses get confused lining up -20 up to 0-VU and wondering why it's distorting.

"Sound recordists ring up and ask, 'above 0dB how much headroom have I got?' The answer is to use headroom and dynamic range intelligently.

According to Mr Mc Loughlin some location sound recordists are using desk compressors,

"This is a pity; a bit of manual intelligence works better—an overdriven limiter usually fluxes out the frequency, getting that tinny sound..."

It is probably worth exploring some of these issues at a further date in the future. Soundfirm are doing some impressive work, and the facilities really are remarkable.

There was one facility which is worth mentioning—the gravel box. Under a secret hatch in the floor of one of the studios is an area containing most varieties of sound making gravel for footsteps! Also contained here, other wondrous material direct from reverse garbage that make specific and unique sounds, harkening back to the early days of sync sound for film.

Some methods are just indispensable.

• **Soundfirm Pty Ltd**,  
101 Eton Rd,  
Lindfield, Australia  
Telephone: (02) 416 9533  
Fax: (02) 416 9560

Chris Dickie from page 46

such as Hot Chocolate and Suzi Quatro. "It was old style engineering, with an old school production style. There would be the band playing, who would have some input as they had written the songs, then there was the Producer who was in charge. The engineer was employed by the producer. The tape operator sat with the machine pushing buttons. That kind of combined effort and hierarchy don't exist anymore." No longer is there a progressive path from lackey to house engineer, but a major leap in the level between assistant and engineer.

Chris has worked with the producer and wunderkind Flood, responsible for many and much noted releases in the past few years, on Depeche Mode's 'Songs of Faith and Devotion' album. Although the main basis of the album had been recorded before Chris was incorporated into the project, he was responsible for recording and mixing the most acclaimed ballad contained in the ten tracks that made it to release. "When I was involved it was really overdubbing and lead vocals. The one track I recorded and mixed was 'One Caress', with 28 piece string orchestra playing as Martin Gore put down the lead vocal. They are (Depeche Mode) are in the situation where they can spend a lot more time recording than most people. Floods good, really, really good. He has a great kind of patience, and is prepared to spend a lot longer developing an idea."

When selecting the microphone to use with a vocalist for a project, Chris's first choice is the Neumann U87, as he finds that the easiest as a standard from which to judge what will be a sympathetic microphone for a certain voice. Other favourites are the AKG C12VR reissue, a valve Neumann U47, or a Shure Beta 58 if the vocalist prefers to hand hold. During tracking sessions he always ensures there is a hand mic present in the control room for laying down spontaneous ideas. He cited an example during the Morrissey project where they were in the process of laying down a bass part, and while that was under construction the drummer was improvising patterns on the side

of a rack case which were more important to the development of the groove for the track. With the hand mic they were able to catch these off the cuff patterns.

"Recording is a marriage between the technical and performance aspects, and for me it's quite often knowing what you want to get out of the project. This is especially true when choosing a mic for a specific person, with Morrissey he used an AKG C12. David Gahan from Depeche Mode on the other hand, monitored through open wedges using a Shure SM58. Yet another instance was in Bearsville with the Dave Matthews Band where the vocals were recorded in the control room with a Beta 58 or Beta 87 monitoring from the control room speakers."

Chris doesn't support a single side when asked about the analogue / digital debate, preferring to use whatever is available. He feels that it is possible to gain good results for either medium, and it is simply good engineering techniques that determine the final outcome rather than the medium used. "In the UK I didn't use much Digital, but occasionally I'd use 48 track Sony for Japanese projects because it was part of the spec. With the studio in business in England, there was such fierce competition for business, that even the major studio's couldn't afford the investment of digital DASH machines, especially when they couldn't be sure of what the standard was going to be. A lot of people still wanted the option of a razor blade edit on a 2" multitrack master to cut different drum tracks together, which gets hard unless you have more than one machine with digital. But since being in Australia I've used more digital formats, especially the ADAT format, because the studio's in Perth are quite a bit smaller."

Chris still prefers to master to 1/2" analogue running at 30ips, "I like the tape compression and the character you get back. Dat's are OK for some things, and hard disk can be great if it has good converters and a system that is working and operates well."

Currently in Sydney, Chris is engineering and producing the debut album for Baby Sugar Loud.

# BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
<b>New South Wales</b>			
<b># Sharp Studio</b> Jeff Cripps (02) 534 440 24 Track 1'			
T-Bang	J. Cripps	J. Cripps	CD
Geoff White	J. Cripps	J. Cripps	Christian CD
Melinda Johnstone	J. Cripps	J. Cripps	Country CD
Menai Anglic.Church	J. Cripps	J. Cripps	Christian CD
Nicholas Dellellas	J. Cripps	J. Cripps	CD
<b>Airmotion Studios (02) 5506576 Kristen Wolek 24 Track Recording</b>			
Sister	Sister	John Tebbitt	Rec/Mix Demos
Growin' Up Strong	Wendy Notley	Guy Dickerson	Mix Child. Album
<b>Artrage Peter (Feeney) Williamson (02) 564 2509 24 Track Anal.</b>			
Welcome Mat	Brad(H.Gurus)	Wayne Connolly	Dubs for Album
Zac The Black	Zac/Rusty	Rusty Jovasevic	Demos
2000FM	Rusty	Rusty	Editing
Working Women's	Rusty	Rusty	Jingles
<b>Bush Tracks Recording Studio Ruth Miller (066) 89 1290 24 Track Rec. &amp; Multi Media Studio</b>			
Paul Jones	Paul/D.Highet	Dave Highet	Album Tracks
Tim Tonkin	Tim/D.Highet	Tonkin/Highet	Album Tracks
Spiff Masters	Tim/Dave	Tonkin/Highet	Album Tracks
Peter Pix	Tim/Dave	Tonkin/Highet	Album Tracks
Harry Freeman/Ruth Miller	Gala Films	Dave Highet	Soundtrack Item
Various	Dorian Dowse	Dave Highet	Animation S/Track
<b>Charing Cross Studio David Sykes (02)387 8362 - 24 Trk Neve</b>			
Magic Dirt	Paul Mc Kercher	Paul Mc Kercher	EP Mixing
Bellydance	Martin White	Keith Cooper	Album Trk/Mixing
Kneival	Wayne Connolly	Wayne Connolly	EP Mixing
Godstar	Nick Dalton	John Rafferty	EP Mixing
Pollyanna	Dave Trump	Dave Trump	EP Mixing
Presto	Jim Hilburn	Tim Powells	Album Tracking
<b>Cloud Studios (043) 532429 Parris Macleod 48 Tracks/DAT/CD Mastering</b>			
Power Corporation	Patrick McNally	Paul Howard	Corporate
Wayne Davison	Parris Macleod	Kim Lemke	Live to CD
Jack Lord	Bruce Waite	Bruce Waite	Demo CD
Natural Mystics	Parris Macleod		2nd Alb.PreProd.
Amsterjam	Parris Macleod	Parris/Kim Lemke	Mixing
Subfusc	Kim Lemke	Kim/Paul Howard	Demo
<b>Crystal Clear Recordings (02) 975 3769 David Tozer 24 Tk Digital ADAT System &amp; BRC 32</b>			
Dark Crystal	Band/D. Tozer	Dave Tozer	EP
Gary Burdett	Gary/Dave	Dave Tozer	Demos
Eternity	Don Syme/Dave	Dave Tozer	Pre Prodn.
John Williamson	Steve Newton	Steve Newton	Live CD Mixing
Flat Alice	Band/Dave	Dave Tozer	EP
Durostyle Kitchens	John Lambiris/Dave	Dave Tozer	Radio Jingle
<b>Damien Gerard Studios Contact Marshall (02) 660-8776 2 x 16/32 Track</b>			
Hoodoo Gurus	Charles Fisher	James Carter	Demos
Dave Steel	Dave Steel	Russell Pilling	Album
Sunshine Crowd	Jim Hilburn	Russell Pilling	Album
Cluster	Jon Stevens	Russell Pilling	Album
Harlots	Band/G. Clarke	Greg Clarke	Album
Vision Thing	Band	Jaimie Carter	Demos
<b>Eclipse Music Studios (02) 264 7734 Jodie Sharp 24 Tk Anal/32 Trk Digital</b>			
Mother Hubbard	K.'Caveman/Shirley	Kevin/Phil Munro	Tracking/Mixing
Bellydance		Martin White	Mixing
Downtime	Kevin Shirley	Phil Munro	Mixing
Silverchair	Kevin Shirley	Kevin Shirley	Mixing
Carol Young		Jim Bonfond	Mixing
Maree Sheehan	Peter Martin	Mike Ward	Tracking
<b>Festival Studio (02) 660 4022 Catherine Knapman 2 x 24 Trk &amp; 32 Trk Digital</b>			
Mother Hubbard	Lollie Shelton	Mark Thomas	Album
Baby Sugar Loud	Band/C. Dickie	Chris Dickie	Album
Anti Anti	Kevin Shirley	Kevin Shirley	Album Tracks
<b>JMF Sound Studio Fran Esther (02) 790 4097</b>			
Street Theatre	Band	Ralph Esther	Demo
The Rejected	Band	Ralph Esther	CD
Boshra Abraham	Boshra	Ralph Esther	CD
NED	Band	Ralph	Demo
<b>Main Street Studio Rob Specogna 042 834 515 16 Track</b>			
Cheyenne	Band	R.Specogna	Demos
Zabourne	Band	R.Specogna	Album
Dave McLean	Pat Maloney	R. Specogna	Demos
Wongawilli	Band/Rob	R.Specogna	CD Album
Vesna	Vesna	R.Specogna	Demos.
<b>Megaphon Studios (02) 550 6576 Kristen Wolek 24 Track Recording</b>			
Mark O'Shea	David Price	David Price	Record Album
Magic Dirt	Paul Mc Kercher	Paul Mc Kercher	Record Album
Automatic	Tim Whitten	Tim Whitten	Record Album
Cafe At the Gate	Of Salvation	Guy Dickerson	Alb.(30 Piece Choir)
<b>Mirage Studios G. Nixon (02) 211 3915 16 Track Digital, 48 Tk. Digital 24 Track Analogue</b>			
Fallen Justice	Winds Records	Band/G. Bourgeois	Album Mix
Temple Gods	Larriken/Cadsky	James Cadsky	Single Mix
Kerrie Biddell	Kerry/Julian Lee	G. Bourgeois	Album Mix
E.S.P.	Eric Sebastian	G. Bourgeois	Single Mix
Spindelwood	Band/C. Porteous	Craig Porteous	Album Mix
Adam Reilly	Village Roadshow	Doug Brady	Single Mix
<b>Paradise Studios Bill Field (02) 357 1599 48 Track A'log, Custom Mixer,</b>			
Tania Kernaghan	Garth Porter	Ted Howard	Tracking
Jackie Love		Glen Phimister	Demo
Rolf Stuebe	Julian Lee	Glen Phimister	Album
Died Pretty	Wayne Connolly	Wayne Connolly	Mixing
Knievel	Knievel	Wayne Connolly	Mixing
<b>Pathways Studio Frank Kerestedian 048.721336 24 Tk. 2" Analog</b>			
Dave Debs	Jim Bonfond	Jim/Frank	13 Track Tracking
Bad Fun	Frank K.	Frank K.	Mix 5 Track EP
Mark Callaghan	Mark C.	Frank K.	Sony Project
<b>Powerhouse Studios Doug Henderson (02) 318 1220 Neve Console 8128 Input/Studer A800 24 Trk.</b>			
Joel Harvey	L.Berger/D. Henderson	Doug Henderson	CD
Scarlett		Craig Beck	CD
Abusement Park	Jay Aldiss	John Darwish	EP
Marcus Lagudi	Leon/Doug.H.	Doug Henderson	CD
Bliss	Band/J. Darwish	John Darwish	EP

Tyrone Coates Band	Band	Boyd Moore	EP
<b>R. &amp; R. Recording Robert Zimola (02) 624 4484 16 Track 1'</b>			
C.JJM	Mike Kerin	Robert Zimola	Album(Chris Turner)
Charlie Bostel	R.Zimola	R.Zimola	Album
Eye Cue Communic.	P.Saunders	R. Zimola	Corporate AV
<b>Rocking Horse Studios Alan Devendra 066 884 131 48/24 Trk.</b>			
Tiddas	Tiddas	Jeremy	Album
The Great Unrest	Brad.Thompson	Greg Courtney	Tracks
Mark Abriel		Greg Courtney	Tracks
Vanessa Hunter		Greg Courtney	Tracks
Grinspoon	Phil McKellar	Phil McKellar	Triple J Unearthed Comp.
Ode to a Goldfish	Phil McKellar	Phil McKellar	Triple J Unearthed Comp.
<b>Sony Music Studio Ross A'Hern (02)332 0320</b>			
Wanderlust	Mike Bukovsky	Ross A'Hern	Album Mixing
Autohaze	Wayne Connolly	Wayne Connolly	Recording
Jammin'		Simon Tomx	Rec. & Mix CD
Carl Rafferty	Carl Rafferty	Simon Tomx	Rec. Trks for CD
Bluebottle Kiss		Tim Whitten	Rec. Trks. for CD
Smudge		Tim Whitten	Mix Trk. for CD
<b>Sound Level Pty Ltd. Joe Breen (02) 552 3200 32 Channel - Live to DAT, Multi Track available.</b>			
Midnight Oil	Band	Rory Mackenzie	Demo
Hoodoo Gurus	Charlie Fisher	Rory Mackenzie	Demos
Big Mexican Dinner	Mark Carson	John Soane	Demo
Chris Connell	Chris Connell	Phil Gannell	Demo
<b>Soundwarp Audio Services (02) 905 7144 Meredith Brooks</b>			
'Babe' S/Track	Kennedy Miller	Meredith Brooks	CD Master
France Jemon	Guy Saminaden	Meredith Brooks	CD Master
The Revs	Michael Fetch	Meredith Brooks	CD Master
Cameron Daddo	Massive Recs.	Meredith Brooks	CD Master
<b>Studio Arts Productions (042) 849128 Ed Lee. Independent Recording Studio</b>			
Erica's Jive	Band/Ed Lee	Ed Lee	CD & S/Track
Pariah		Ed Lee	Demo
Adam & Andrea		Ed Lee	Demo
Chuck Mansu	M.Mansu/Ed	Ed Lee	4 x Cass. Voice & Music Pack.
Matheu Sylvian	Matheu/Ed	Ed Lee	CD Album
Clare Roberts		Ed Lee	Demo
<b>Studio Shift Nonda/Tom Kazas (02) 3984268 24 Track 2'</b>			
Andy Timmins	Andy/Nonda	Nonda/Andy	Album
Carina Grace	Tom Kazas/Band	Tom Kazas	Demo
Funky B'day	Nonda	Nonda	Single
<b>Trackdown (02) 550 6890 Geoff Watson 24 Trk, 8-16 Trk, A-Dat 8 Trk.</b>			
Wayne Law	Cass/Murray	Martin Cass	Album
Pat Drummond	Pat Drummond	Aaron Ruig	Single
Optus	Dave Skinner	Chris Brooks	Commercial
Julie Vaskioli	John Field	Aaron Ruig	EP Demo
Don Spencer	Alan Caswell	Martin Cass	Album
Vanessa Fallon	John Field	A. Ruig/C. Brooks	Album
<b>Velvet Sound (02) 264 3420 Dave McCunn 2' 24 Track</b>			
Hammerfish	Aya Larkin	A. "Muff" Smith	Album
Cactus Child	Craig Portells	Tony Wall	Demos
Dan Mullins	Craig Portells	Tony Polson	Demos
The Millstones	Band	Rusty Jobasevic	Demos
Skunkhour	Sony	Tony Wall	Corporate
The Strange	Simon Polanski	Simon Polanski	Album Tracks
<b>Queensland</b>			
<b>Advanced Studios Rod Watts (074 424 233</b>			
Steven Huth	Paul Cheesman	Paul Cheesman	CD Album
HatzFitz & Booz Bitz	Paul Cheesman	Paul Cheesman	Demo/Alb.
Mind Vandals	L.Griffith/Paul.	Paul Cheesman	CD Album
Ross Williams Doc Span	Williams/Span/Cheesman	Paul Cheesman	Demo
Kate Gibson	Paul Cheesman	Paul Cheesman	Trk. Laying for Alb.
<b>Grevillea Recording Studios Malcolm Jacobson (07) 262 8422 24 Track</b>			
The Secret Garden	Mike Duffy	Robin Gray	Aust. Cast Rec.
The Secret Garden	Mike Duffy	Mal. Jacobson	CD Mastering
Chris Young	Chris Young	Mal. Jacobson	Mastering
Kate Gibson	Paul Cheesman	Mal. Jacobson	Mastering
Fish & Chips	Tim Brooker	Malcolm Jacobson	Mastering
1,2,3	Jonathon Ward	Mal. Jacobson	Mastering
<b>Outlaw Recording &amp; Records. 018 772 380 Jerry Reinisch Adat 16 Track</b>			
Nerve	Eric Chapus	Eric Chapus	Greenpeace song
Chris Fomberg	Chris	Uncle Jerry	Jingles
Mangrove Jack	Mick	Uncle Jerry	Comp. CD
Rick Martin	Rick	Uncle Jerry	Album
<b>Suite 16 Audio Productions (07) 369 8733 Murray Lyons 24 Trk.Analog.24 Tk Digital</b>			
Entity	David Richards	David Richards	Demos
Kristie Faulkner	Garry Smith	David Champion	Demos
Queensland Bolls	Garry Smith	David Richards	Song
<b>Vandersound Studios Eric Vandersande (075) 468100</b>			
Woodhill	Eric	Ken Bird	Demo
Van Hayman	Eric	Eric	Demo
Paul Addie	Eric	Paul Addie	Demo
Paul Carrel	Eric	Paul Carrel	Demo
Daniel Karnchek	Eric	Daniel Karnchek	Demo
Cameron Hess	Eric	Cameron Hess	Demo
<b>South Australia</b>			
<b>Mixmaster Productions Mick Wordley (018) 822 986 24 Track 2" Dolby</b>			
Kinetic Playground	Band	Mick & Evan	Album
Kranktus	Band/Wordley	Mick Wordley	Album Mix
Chids	Band	Mick Wordley	Tracking
Daisy Heads	Band/Mick	Mick	Tracking
Clowns of Decadence	Mick	Mick Wordley	Album Mix
Mother Lode	Band/Mick	Mick	Tracking & Mix
Victoria			
<b>Allian Eaton Studio (03) 95340752 Leanne 48 Track</b>			
Lilians Story	Cezary Skubiszewski	Robin Grey	Filmscore
Cosi	Stephen Endelman	Robin Grey	Filmscore



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ARTIST	PRODUCER	ENGINEER	PROJECT
The Secret Garden	'Duffy'	Robin/Duffy/Mal.	Cast Album
Belair Sound (03) 9563 7887	Danny Olesh 24 Track anal. 16 Trk.Digital	S. Segal	Album
Violet Hour	S. Segal	R. Smith	Album
Jonestown	Jonestown	D.Olesh/R.Smith	Album
Naked Scream	Naked Scream	D.Olesh	Album
Limor Ezra	D.Olesh	R.Smith/D.Olesh	Demo
Norsia	Norsia		
C'est Ca Audio-Visual Services	Maira McCourt (03) 419 1506	Auto 24 Trk.-	
Circus Oz	Siiri/Band	Siiri Metsar	Tour CD
Snapdragons	Girl Zone Recs.	Siiri	Compilation CD
The Tea Bags	Girl Zone Recs.	Siiri	Compilation CD
Kirsty Stegwazi	Girl Zone Recs.	Siiri	Compilation CD
De Regulator	Girl Zone Recs.	Siiri	Compilation CD
SULK	Girl Zone Recs.	Siiri	Compilation CD
Gotham Audio	Tom Kehoe (03) 879 9400	48 Track Dig. /SSL Console	
Christine Anu	Mark Forrester		Remix
Merril Bainbridge	Ross Fraser	Aaron Humphries	Remix
Acri	Asao Okayama	Takayoshi Yamanouchi	Album Rec.
Things of Stone & Wood		Michael Letho	Demos
Hunters & Collectors		Tony Cohen	Live Concert Mix.
001 Recording Studios	Contact George Siew Ooi (03) 348 1300	24 Track 2 Digital Rec. Midi Room	
Bestial Warlust	Band	Mark Ingram	Album
Agonize	Band	Brian Marsh	Demo
Kismet	Band	Dennis	Album
Nick Disbrey	Nick Disbrey	Paul Kosky	Single
Dean Baroni	Dean Baroni	Sam Melamed	Single
Tlot Tlot	D.Bolwell/Siew	Marsh/Bolwell	Album
RB-X (Australia) (03) 94296199	Bevan Quelhurst 24/48 Trk	Rec. SSL Cons.	
Nova	John Von Ahlen	Mark McDougall	Single
Wash	Matt Voigt	Matt Voigt	Demos
Mike Brady	Mike Brady	Doug Brady	Ford A.Just.Open
Footcams	Steven Stok	Melita Jagic	Post Prodn.
Car 7	Adam Quaif	Adam Quaif	Demos
Alan Harding	Alan Harding	Mark McDougall	Jingles
Sing Sing Phil & Kaj (03) 428 4622	48 Track		
Suiciety	Kaj Dahlstrom	Kaj Dahlstrom	E.P.
Strumpet	Band	Mike Letho	Album
Music Men	Sam See	Kaj Dahlstrom	Single
Thermal Skunk Rust	Band	Matt Voigt	Album
Champion/Buchanan	Sam See	David Davis	Album
Killjoys	Chris Dickie	Chris Dickie	EP
Studio 52 Paul Higgins (03) 417 7707,	32 Tracks StudioA/Studio B	ADAT 8 Track	
Soul Promise	Helen Hopping	Trevor Carter	Album
Teramaze	Trevor/Dean Wells	Trevor Carter	Album
Tunari	Willy/Luis	Trevor Carter	Mixing
The Flute Patrol	R.Montgomery	Rowan Alcock	Album
Various		Rowan Alcock	Demos
HQ/Mahogany	Harmonic Hell	Alcock/Carter	Tracks

Wombat Road Studio (051) 454204	Barry Clissold 24 Trk. Plus full Midi Facilities		
Collene Honeyman	D.Pruser	Barrie Clissold	Album & CD
M.G.M.	Band/Clissold	Barrie Clissold	CD Demo Trks.
Still Life	Band/Clissold	Barrie Clissold	CD Demo Trks.
Imperative	Band/Clissold	Barrie Clissold	CD Demo Trks.
Samm Rauza	Rauza/Clissold	Barrie Clissold	Album Tracking
Way Out West	Band	Barrie Clissold	Demo Tracks
<b>Northern Territory</b>			
Kakadu Studios	Ker Hutton 089 411344	24 Track, Mobile, Digital Mastering	
Urshola Youitch	K. Hutton	K. Hutton	Album Originals
Alex Taare	K. Hutton	K. Hutton	Album Originals
Paul Francis	K. Hutton	K. Hutton	Album Covers
D. Venn	K. Hutton	K. Hutton	EP Originals
Mimi Band	K. Hutton	K. Hutton	Album Originals
Allyson Mills	K. Hutton	K. Hutton	Album Originals
<b>Western Australia</b>			
Bonsal Recording Studio	Tom Thorpe (09) 349 6029	24 Track	
Norbert	Tom Thorpe	Tom Thorpe	Demos
Project X	Tom Thorpe	Tom Thorpe	CD
PMFM Morn. Crew	Tom Thorpe	Tom Thorpe	Jingles
Planet Sound Studios	Contact John Villani & Denise Preston (09) 382 2211	48-32-24, 2 Rooms - Both SSL	
Hank Marvin	Hank Marvin	Les Williams	Album Tracking
Yasubiro Yamane	Mr. Nakane	Masami Kikuchi	Trking./Mixdown
Wayne Simmons	John Villani	John Villani	Album Tracking
'FRANC'	John Villani	John Villani	EP Tracking
Poons Head (09) 339 4791	Rob. 32-48 Track		
Circus Murders	Rob Grant/Band	Rob Grant	Album
Spank	Rob Grant/Band	Rob Grant	Album
Sage	Rob Grant/Band	Rob Grant	Album
Ditch Witch	Rob Grant/Band	Rob Grant	Album
Hedonists	Rob Grant/Band	Rob Grant	Album
Sour Puss	Rob Grant/Band	Rob Grant	Album
Troppo Sound	Mick Connolly 091. 922 394.	24 Trk. Dolby S	Dat Master
Various	BMAC		Womans Album
Pigram Bros	Band	Brett Lyons	Debut Album
Various	Chazley	Chazley	Kimberley Pickers Album
<b>Wiltzed Recording Studio (09) 331 1818</b>			
Alan Dawson 16 Track			
The Subterraneans	A.Dawson/Band	Alan Dawson	Album
Water Mouth	Alan/Band	Alan Dawson	Album
Two Minute Noodles	Alan/Band	Alan Dawson	Album
Cushtie Chantas Choir	Maria Wilson	Alan Dawson	Album
Urban Roost	Alan/Band	Alan Dawson	Album
Bayou Bros.	Alan/Band	Alan Dawson	Album

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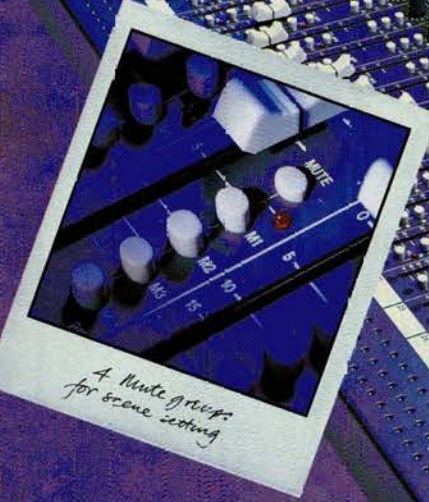
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# The desk and the DAT

This month I want to describe a recent repair involving a mixer: it was a classic of its kind for showing that with tiredness and a lack of the right equipment, a difficult repair can turn into a really rotten one. The call-out was late on a Friday night - the complaint was that one side of the master monitor send had gone noisy.

The mixer itself was reasonably easy to work on, although getting to the back panel connections meant crawling under the desk and propping yourself on one elbow

whilst checking it out. Eventually, the noise problem manifested itself and we got to work.

The main outputs from the desk were connected via the patch bay to the inputs of a fairly new DAT recorder. The signal could be interrupted at the patch bay to be routed to a cassette deck or any other piece of gear. The DAT outputs were sent back to the mixer, again via the patch bay. The mix could be monitored at the console by toggling a button which selected either the send to the DAT or the return from it. Earlier in the day the customer had started noticing that the return signal from the DAT was given a nasty static kind of distortion. He had patched the mix signal around to various equipment with mixed results

I should tell you that when I arrived on this job I didn't have an oscilloscope with me, and from the look of the problem I didn't think I would need it either. In any case, the workshop wasn't too far away, so I could always duck back and grab it if need be. With the noise now permanently present, we began checking on which element in the chain was causing it. Monitoring the mix output from the console showed that it was clean - this made it look like the fault might be in the final balanced output stage. Putting the DAT into input monitor mode and selecting tape monitor at the desk brought the noise up loud and clear. The fault had to be in either the DAT or the mixer output as described above.

Leaving the desk in tape monitor mode and playing a DAT didn't give any noise at all - this seemed to put the DAT's output circuit in the clear, for if it was defective then we would have been getting the noise imposed on top of the music. So, the gremlins had to be in either the mixer output or the DAT input and a final check would nail it down to one or the other. Because the patch bay was a dog's breakfast which I couldn't understand, I got the client to patch in so that the mix output was routed to the inputs of the cassette rather than the DAT. Again, we put the cassette deck into input monitor mode and the desk into tape monitor. This time - no noise, everything very quiet indeed. Just to be sure, we patched back to the DAT - yup, plenty of noise. Back to the cassette - no noise.

Well, this was different. The DAT recorder was very new: surely it couldn't have gone faulty? It's not a bad working principle to sus-

pect the weakest link in a given chain, and for "weakest" you should read "cheapest", "oldest" or "I bought it from me mate!". With this in mind, I was thinking that the fault might still somehow be in the desk and that I had better experiment some more, just to be sure. We teased the DAT out from its cubbyhole so that I could reach the back panel connections.

I found that they were XLR connectors, so it was an easy job to mate the males to the females. The object of this, of course, was to allow the signals to travel from the mixer to the DAT and back again, whilst leaving the DAT out of the equation. This configuration gave perfect silence - no noise at all. I patched the XLRs back into the DAT and sure enough, noise.

By this time, I was well convinced that this DAT must be faulty, new though it was. Now I took the inputs to the DAT and reversed them, so that left input was connected to right and vice-versa. In this mode the fault presented completely different symptoms - the noise was still there but distinctly different to what it had been. With confusion setting in, it was clearly time to round up the oscilloscope - there's quite like being able to see the noise.

Having done some to round up the oscilloscope, something I was beginning to think I should have done some time before nothing, the pieces started to fall into place. Looking at the open circuit mix outputs from the desk, I could see that they were oscillating wildly. In fact, some of the voltage peaks generated by the noise were amazing. However, when I looked more closely, what I noticed was that only the negative, or cold, phase of the balanced outputs was faulty - the signal on the positive phase was undistorted.

So, it was the desk that was faulty - but, how so? How was it that everything pointed to the DAT? This explained why the noise disappeared when the cassette was patched in - its inputs were unbalanced, grounding the side that was oscillating. And no doubt you are wondering why the fault still didn't show up when the DAT was bypassed and the desk was patched back to itself? This is the really wicked part - the mixer outputs were balanced, but the tape monitor inputs were unbalanced - hey presto, no noise! This little sucker game came to an end when I traced the problem to the output op-amps. The compensation caps on the negative phase of the op-amps had failed, thus inducing the oscillations - a truly exotic fault.

Footnote: the DAT was one of those which can only be placed into input monitor mode by inserting a tape and keeping the unit in record-pause. I wonder how many will die a premature death through their owners keeping them in record-pause for prolonged periods?

*\*Howard runs Studio Solutions, 02 9906-4363*

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Yes AKAI have introduced a new range of samplers with SIMM chip upgradeable memory software graphic editing for the Macintosh platform (compatible with Sound Designer II files and AIFF), optional 4-channel multi-effects board, SCSI standard, up to 16 Mb of ROM memory, up to 32 Mb of RAM, stereo re-sampling and a great price from TURRAMURRA MUSIC CENTRE that would put a **SMILE** on anyone's dial!

### \$2000 Sampler

For under **\$3000.00** this high performance sampler offers a simpler operating system in a 2U case but retains most of the features of previous Akai samplers.

Standard memory is 2Mb expandable to 32Mb, reads Roland / Emu CD-ROM, 32 note Polyphony

### \$3200XL Sampler

The top of the range, professional model with all of the features of the others but with a standard 16Mb of RAM expandable to 32Mb of RAM and 16Mb of ROM.

You may also install a hard disk drive or the very convenient 3.5 inch MD drive.

The S3200XL has balanced XLRs, AES/EBU and S/PDIF digital I/O, a second bank of multi-mode filters offering lowpass, bandpass and highpass filters and third multi-stage envelope generator for more sophisticated sample processing and enhanced synthesiser functions. 4-channel multi-effects included as standard and multi manufacturer CD-ROM compatible all for under **\$9000.00!**

### DR4 & DR8

#### Hard Disk Recorder

If you after a comprehensive hard disk recording system with portability in mind, but don't want the hassle of a computer system, then the DR4 or DR8 are just the recorder for you.

Both units have excellent audio quality with the ability to cut, copy, paste, insert and ping pong tracks.

Editing software (Macintosh only) is available for the DR4 and will be available for the DR8 soon and is sound designer compatible.

The DR8 also has the feature of a 16 channel mixer which can mix 8 external channels and 8 internal ones!

**TURRAMURRA MUSIC CENTRE**  
1267 PACIFIC HWY TURRAMURRA  
Ph: 02 449 8487 Fax: 02 449 3293

# NIDA- FOR THEATRE EDUCATION

CATRIONA FORCER reports on the Sydney institution

**E**stablished in 1958, NIDA (National Institute of Dramatic Art) is Australia's national theatre training institution and its main objective is the pursuit of excellence in training actors, stage managers, designers, theatre craft workers, directors, voice and movement teachers, production managers and playwrights.

Located at Anzac Parade, Sydney, NIDA's purpose built premises contain theatres, rehearsal rooms, specialised teaching studios, workshops for the manufacture of scenery, properties and costumes, a library and administrative offices.

On the technical side, NIDA offer a three year, full-time course - Bachelor of Dramatic Art in Technical Production. The course provides training in all aspects of stage management, and a grounding in theatre crafts, technical theatre and theatre administration. The primary aim of the course is to equip students with the necessary personal and managerial skills to enter the theatre profession in the field of stage management.

The course also provides students with the intellectual and cultural background that will enable them to pursue future careers in production management, sound and lighting design, administration or direction.

Stage management is the core subject of the course and most graduates find employment in stage management. The course also provides training in production management and theatre administration and a range of technical theatre technology and scenery, props and costume manufacture.

The course balances formal instruction with opportunities to acquire skills working on NIDA productions. Students are continuously engaged in the preparation and presentation of productions, undertaking different areas of responsibility each year.

During the first year, a study of stage management theory and

practice is balanced with instruction in theatre crafts. Students are taught the basic technical skills which enable them to work in theatre with safety and efficiency. There is intensive class and studio work in lighting, sound, computer-aided design, theatre drafting, stage scenery and mechanics and rigging. Students also do the St John's Ambulance First Aid Certificate Course and the NSW Fire Department Fire Warden's Course.

Students work as an Assistant Stage Manager, a lighting assistant and a sound assistant on NIDA play productions. They are also allocated crew roles.

During the second year, stage management training is advanced and practices and procedures for the various performance disciplines are taught by visiting professionals and a formal study of management is undertaken.

There are short courses in production management, theatre administration, company and tour management, and music theatre. Lectures are given in theatre health and safety, rigging and scaffolding, pyrotechnics and advanced computer-aided design and drafting.

All students work as the Deputy Stage Manager, controlling the rehearsal room and calling the performance. Under the guidance of technical staff, each student also takes the role of lighting operator and sound designer.

The third year enables students to practice their skills by undertaking major stage management and technical theatre responsibilities in the NIDA Play Production Program, and by periods of attachment to performing arts companies, where they gain experience of the technical organisation within these companies. Students are now encouraged to develop skills in specialist fields such as stage lighting, production management, stage sound and theatre administration.

Head of Technical Production is Garry McQuinn, currently on a sabbatical to work as production manager on *Beauty & The Beast*,

with Tony Youlden in charge of Technical Theatre/Lighting and Paul Charlier as the Video/Sound Co-ordinator.

## NOT JUST STAGE MANAGERS

"Part of our philosophy is to offer as broad as possible training to the kids that come here although we have a reputation for turning out stage managers," said Garry McQuinn. "On average we take 12 students and usually about 10 of those will walk away as stage managers. We put a great deal of emphasis on floor training, most particularly lighting and sound, without claiming to produce full blown light and sound graduates."

Tony Youlden stressed that somebody with a natural talent for lighting or sound is allowed to follow their own particular path. But Garry wanted it made clear that essentially the course is about stage management not sound or lighting design.

"The students get a good introduction to scaffolding, counterweight systems, flying, rigging, ropes and all that stuff we think is terribly important," said Garry. "We're very conscious about safety issues so we're careful that the students, above all else, are instructed in safe ways of working and that they know the limitations of the equipment they're working with."

When the students are seconded to companies for work experience in their final year it is important that they are not putting anyone out of work. The students are not there to replace professional theatre workers but to learn.



Peter Amjah teaches a class rigging

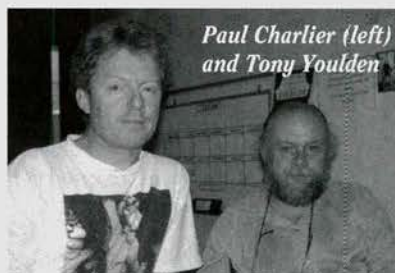
"The companies provide them with board, we provide them with a bus ticket and a meagre amount of money," said Tony. "It's up to the host company to look after them. We have found in the past that some people have taken advantage of this scheme and we're very careful to ensure our students aren't used as cheap labour. They're there to learn not hump stuff off trucks. Some years ago we had three people seconded to a company and it turned out they were actually running the company so we put a stop to that!"

Recent allocations had included the Sydney Festival and the Fringe Festival at Bondi, Womadelaide, the Sydney Theatre Company, Belvoir St Theatre plus productions like *West Side Story* and *Cinderella*.

"The range is pretty wide and although we have a list of companies that we can rely on."

Although most graduates go into stage management, Garry believes that after about ten years most have moved on to other areas in entertainment.

"Partly that's because stage management in this country is a young persons game and we generally don't treat them well," he said. "I think that this course equips them for ten years further down the track whether it be thea-



Paul Charlier (left) and Tony Youlden



Garry McQuinn

tre administration, production management etc. Students that we taught maybe ten years ago are now coming into positions where they are employing people and come back to us."

## 100 APPLICANTS, 12 PLACES

Usually about a hundred people will apply each year for the 12 available places on the course. Most have theatre experience of some sort, in fact you don't really stand a chance with out it.

"What's more important to us is finding some personal quality in the student that leads us to the conclusion that they are actually going to lead the way in a few years time," said Garry. "To find the spark of some leadership quality in those young people, combined with drive and commitment, is what puts them above the rest. For that reason we often encourage people to reapply if they don't get in on their first application. Some come and spend time at NIDA - it's a bit like a work experience program for promising, would-be NIDA people. Often before we start interviewing for the year, we think we've already got half the people from the previous year. When interviewing people I think 'do they interest me and would I like working with them?'"

The age range of the students is also very wide with the oldest being about forty and last year a seventeen year old was accepted although that is quite unusual. As the course is fairly stressful and tends to take over your life, Garry says they try to steer away from young people.

Added to the three permanent staff are the many part-time tutors and professional people.

Teaching studios include a lighting studio with just about one of every lamp available which is used for practical teaching. Students can get used to focusing, colours etc and actually see what individual lights do. In addition there are four different fly bars so the students encounter different flying systems. The sound studio has recently been renovated and set up to record on CD.

Keeping up with emerging technology isn't easy although many hire companies tend to give NIDA

favourable rates.

"I think they realise it's in their own interest as we produce the people they'll be working with in the future," said Garry.

The NIDA theatre is particularly favourable for tuition of sound and lights as it's possible to get up to the grid in seconds. "It has control positions which can come out of the floors, in the middle of the auditorium or wherever so we often use it for exercises," said Garry.

"The Parade Theatre holds 338 and, because it has a cross arch and is not terribly expensive, it's not uncommon for us to let it out several times a year. We tend to bring a fairly ideologically sound backing to that by which I mean we favour companies which are doing genuinely good and interesting things."

The NIDA Theatre has an Avab 202XP controlling 96 Bytecraft IVS dimmers whilst the Parade Theatre has a Strand M24, 72 ch. controlling basically 48 dimmers.

"We augment it for production to get it up to 72 channels," said Tony Youlden. "They tend to be old JTM's and a mixture of new wallpacks and everything else we can hire in. The lamps are nearly all Strand equipment with some CCT profiles. Most of the equipment is at least six years old with the boards being 13 years old. In fact they are due for replacement."

Sound equipment is placed in the theatres as required.

"We have a store of Bose 802s and other speakers which we dish out again depending on the need of the show," said Paul Charlier. "We hire anything else we need like for the musicals it's not worth us purchasing extra mics. We don't do radio mics as we can't afford it. With one of the musicals we're doing this year we're trying to solve the problems acoustically rather than with radio mic's."

"We have a good relationship with Coda Audio as well as Sound On Stage. With the change over to digital, DW Productions have been very supportive."

In the sound studio there is one ADAT machine, a 32 channel Tascam desk, an ASR sampler, SPXRPD4, LA classic compressor, JBL and Tannoy monitoring and a large sound effects collection. •

## What's Available

Connections don't endorse ANY course. You would research any industry you intend entering **before** being trained within it. One you are trained, the oldest rule in the book is that most good jobs are never advertised. Network, circulate, work for free if you can, and keep your eye's wide open. And, use this list. But please don't call us, we can't help you get a job! Oh, and if you offer training and somehow we missed you, please drop us a line so we can incorporate your course in our coverage this time next year.

### RESEARCH BY DANIEL COLE

#### ACT

##### Australian Centre for the Arts and Technology

GPO Box 804  
Canberra ACT 2601  
T 06 249 5640 F 06 247 0229  
Contact: **David Worrall**  
Postgraduate courses in computer music, computer animation, multimedia.  
When: February 1996  
Cost & Duration: On application

\$445

*Radio & Television Announcer*  
When: February/May/August 1996  
Duration: 10 weeks (P/T) Cost: \$495  
*Radio Announcer*  
When: February/May/August 1996  
Duration: 10 weeks (P/T) Cost: \$445

#### NEW SOUTH WALES

##### Audio Education Centre

Level 2, 432 Kent St  
Sydney NSW 2000  
T 02 267 9795  
F 02 264 2397  
Contact: **Scott Christie**  
*AEC Part Time Audio Course*: includes modules of studio fundamentals; recording & mixing techniques; advanced concepts & applications; solid state logic mixing console workshop.  
Duration: 44 weeks, 6 hours per week  
When: Tuesday evenings 6.30-9.30pm + practical on different weeknight  
Cost: \$3700 (10% less for full payment prior to commencement)  
Start: 22 August 1995  
*AEC Full-Time Audio Course*: has the same modules over shorter time frame  
Duration: 13 weeks  
Contact hours: 10am-5pm, 4 days per week  
Cost: \$2950  
Start: 14 August

##### Australian Film Television & Radio School

PO Box 126 North Ryde NSW 2113  
T 02 805 6444  
F 02 887 1030  
Contact: Student Centre  
Various full-time courses available as well! AFTRS conducts ongoing industry short courses across a wide range of media; radio, sound, TV, video.  
Some new courses now available include:  
Small Studio Post Production Sound  
Digital Sound Production  
Sound and Music Software  
Lighting of Commercials for Television  
*Stereo Sound Post Production (TV Audio)*

##### NRS Training School

PO Box 68,  
Barker Centre, ACT 2603  
T 06 295 0162 F 05 295 9448  
Contact: **Sonia Lees**  
*Certificate in Media production and communications*: Media public relations; occupation health; radio production; sound recording; video & TV production; audio production; radio and TV news and current affairs production; advanced video and TV production. When: February, July 1996 Duration: 6 Months full-time, Cost: \$4995  
*Video & Television Production*  
When: Full-time every month (except April, June, Sept.) 1995/1996; Part-time; March, July 1996  
Duration: 4 weeks (F/T) 20 weeks (P/T)  
Cost: \$1295  
*Advanced Video & Television Production*. When: February, September 1996  
Duration: 10 weeks (P/T), Cost: \$640  
*Introduction to Video Production*  
When: 11 October 1995; April, July, October 1996. Duration: 10 weeks (P/T). Cost: \$495  
*Television Stage and Special Effects Make-up*. When: October 1995; March/June/October 1996. Duration: 10 weeks (P/T). Cost: \$445  
*Sound Recording*  
When: February, July 1996  
Duration: 20 weeks (P/T) Cost: \$1295  
*Advanced Sound Recording*  
When: February, July 1996  
Duration: 10 weeks (P/T) Cost: \$640  
*Live Sound Production*  
When: February, June, September 1996 Duration: 10 weeks (P/T) Cost:

1995

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Cost: From \$500 to \$2400

### AVS Presentations

PO Box 139  
Burwood NSW 2134  
T 02 744 8245  
F 02 747 3579  
Contact: Kevin Hammond  
*AV Experience:* intensive introduction to all facets of AV presentation industry from audio, lighting, video and staging.  
Duration: Five days, 8.30am-5pm  
When: 18-25 September  
Closing date: Friday 8 September.  
Cost: \$995

### The Australian Institute of Music

17-51 Foveaux St  
Surry Hills NSW 2010  
T 02 212 2333  
F 02 212 2520  
Contact: **Athalie Hodge**  
*Certificate in Music:* has audio engineering units and entertainment industry majors

within course.  
Duration: 1 year F/T  
When: February  
Cost: \$4500 per semester.  
*Bachelor of Music-Entertainment Management Major*  
Duration: 4 years F/T

### Illawarra Institute of Technology, Goulburn

Verner Street  
Goulburn 2580  
T 048 231838  
F 048 218 706  
Contact: **Michael Barkl**  
New Certificate Courses for 1996 in Contemporary Music  
*Certificate II & III:* Suitable for year 10 leavers; music technology modules, set up, operate, trouble-shooting, live sound systems.  
Cost: \$150  
*Certificate III:* additional tuition in set up of simple recording studio, studio basics and MIDI.  
Cost: \$150  
*Certificate IV:* Technology modules include; operation of lighting equipment and multi-track studio.

Cost: \$150  
*Diploma:* students apply multiple MIDI based devices in relation to film, video, multimedia  
Cost: \$490  
*Certificate II in Community Radio Broadcasting:* practice and theory of radio production.  
Cost: \$150  
Application/Enrolment: October

### JMC Academy (formally Academy of Audio Engineers)

Level 3 Cooper St, Surry Hills, NSW 2010  
T 02 281 8899  
F 02 212 4801  
Contact: **Kylie McKenzie**  
*Certificate in Audio Engineering:* (F/T or P/T) Structured for beginners in mind; MIDI, theory of sound, digital formats, 8 & 16 track recording studios.  
When: Full-time 23 October 1995; Part-time 22 February 1996.  
Duration: 40 weeks  
Cost: \$3500  
*Certificate in Multimedia*

*Production:* (F/T or P/T) Designed for beginners in this field, subjects include DOS and Windows, sound cards, CD ROM, graphics, animation, video capture and editing.  
When: January/February  
Duration: 19 weeks F/T 48 weeks P/T  
Cost: \$4500  
*Advanced Certificate in Applied Audio:* (F/T) Practical classes and projects in professional analog and digital 16 & 24 track studios. Studies include tape machine alignment, video SMPTE lock, new technologies. Equivalent to General Assistant in studios, TV, Radio  
Duration: 16 weeks  
When: 16 October 1995  
Cost: \$3500

### KvB College of Visual Communication

99 Mount st North Sydney NSW  
T 02 922 4278  
F 02 922 7862  
Contact: June London  
*TV Production Advanced Certificate:* provides specific

skills in all areas of video production, editing, camera techniques, lighting  
When: February/March  
Duration: Full-time 1 year, Part-Time 2 years.  
Cost: Full Time \$11,023; Part-time \$4198  
Also available is a range of Diplomas, certificates in graphic design and multimedia, photography.  
*Multimedia Certificate* (F/T and P/T)  
Duration: 1 year  
Cost: \$6936  
Batchelor of Arts (Visual Communication)  
Duration: 3 and 4 years  
Cost: \$15,643 1st year, 16,425 2nd year, 17,656 3rd year

### Metro TV

Paddington Town Hall, PO Box 299 Paddington, NSW 2021 T 02 361 5318 F 02 361 5320  
Contact: **Julie Wiggins**  
Metro has available a wide range of short courses in their training program including; Video Production, Camera and Lighting, Production

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Write in Reader Service number: 141

Management, Audio Visual Non-Linear Editing, Proposal Writing, Location Sound. Metro conducts courses for the Australian Film Television and Radio School. When: July-December 1995 (Jan-June 1996) Duration: range from single days to weekly duration. Cost: From \$15 per day for one-off seminars; up to \$680 for short technical courses. Discount on proof of Metro membership. DEET/CES options also Applications: Close two weeks prior to the course commencement date.

**National Institute of Dramatic Art (NIDA)**

215 Anzac Parade Kensington NSW 2052  
T 02 697 7695  
F 02 313 6590  
Contact: **Daniel Ballyntine**  
*Stage Management* (3 years full-time): lighting, sound, props, sets, theatre crafts, production management  
*Open Program Short Courses*  
**Sydney Program:** (General admission)  
Duration: 4 Sundays, 10am-4pm  
Cost: \$260 each  
Upcoming courses include: *Production for Film & Television; Costume Arts; Design for Film and Television.*  
*Stage Management*  
When: 17 September — 8 October  
*Props Making*  
12 November to 3 December  
*Industry and Conversion Program:* (Pre-requisites)  
*CAD for Technical Theatre and Production Design:*  
Groundwork for computer aided design for TV, theatre  
Duration: Seven weekdays, 9-12pm  
Cost: \$500  
When: 14 August- 25 Sept. or 20 Nov. -28 Nov.  
*Sound Studio:* Practical experience in digital audio, project based in NIDA Studio  
Duration: 9-5.30pm  
Cost: \$500  
When: 5 to 8 December and 11 & 12 December.

**RAMPS**

38 Campbell Avenue  
Dee Why 2066  
T 02 982 8266  
F 02 981 1875  
Contact: **Andrew Scott**  
*Digital Recording & Signal Processing*  
Duration: six eight hour days.

Cost: \$895  
*Small Studio Design & Installation*  
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Duration: four eight hour days  
Cost: \$650  
*MIDI & Computers*  
Duration: 4 x 8hr days  
Cost: \$650  
*Multimedia Basics I*  
*Multimedia Basics II*  
Duration: three eight hour days. Cost: \$895  
Enrolments: February

**SAE (School of Audio Engineering)**

There are five Australian locations of the SAE  
NSW: 68-72 Wentworth Avenue, Surry Hills NSW 2010  
T 02 211 3711  
F 02 2113308  
Contact: **Tom Meisner**  
*Audio Engineer Diploma:* gives a solid grounding in all aspects of studio and multimedia combining practice and theory  
When: Part-time: 19 February 1996, 20 August 1996 Full-time: 12 September 1996, 19 March 1996, 17 September 1996  
Duration: 18 months part-time or 9 months full-time. Cost: \$6505 (P/T), \$7435 (F/T)  
*Studio Sound Certificate:* is suited to studio assistants, home studio owners, professionals who require more technical skills or information. Split into monthly modules covers MIDI, mixdown procedures, live sound to copyright and job preparation.  
When: August 1996  
Duration: 6 Months (P/T)  
Cost: \$1335  
*Advanced Studio Production:* offers additional studio experience in specialised areas. Guest lectures by international professionals  
Duration: 3 months part-time.  
Cost: T.B.A.

**The University of Sydney, Department of Architectural and Design Science**

Wilkinson Building  
NSW 2006  
T 02 351 2686  
F 02 351 3031  
Contact: David Bartolo  
Postgraduate Audio Program  
*Graduate Diploma* (2 years P/T)  
*Master of Design Science in Audio* (3 years P/T) The audio program provides a cross-disciplinary approach to audio

through the Departments' of Physics, Music and Electrical Engineering.  
Subjects covered include; acoustics, electronics, audio production, loudspeaker design, audio and multimedia.  
Masters' program available either course-work or research.  
Cost: Contact Co-ordinator  
Pre-requisites: Tertiary degree; TAFE qualification; Certificate from accredited audio course)  
Short Courses:  
*Music 1*  
*Audio Acoustics*  
*Loudspeaker Design*  
Duration: 13 weeks, evenings between 6-9pm  
Cost: \$1000 per course

**Western Sydney Audio Academy**

Unit 4/3 Anvil Rd, Seven Hills, NSW, 2147  
T 02 624 4484  
F 02 838 8964  
Contact: Robert Zimola  
*Certificate in Multitrack Music Recording:* starts with the basic elements of sound and gives an in depth knowledge of sound production, with an emphasis on engineering skills, studio, live sound reinforcement, editing, recording and mixing.  
When: February 1 to August

31, 1996  
Monday/Tuesday 6.30 to 10.30 pm  
Duration: Approximately 7 months. Cost: A registration fee of \$345

**VICTORIA**

**Abbey Sound**  
5 Heversham Drive, Seaford VIC 3198  
T 03 786 4211  
F 03 786 4710  
Contact: **Ross Nichol**  
*Live Mixing Course:* practically oriented and structured to train newcomers and semi-professional persons in the operation of a single three way P.A. system for a live venue.  
When: 4-5 courses per year.  
Next: February 1996. Classes; Wednesdays 6-9pm  
Duration: 8 weeks  
Cost: \$400

**Audio Visual College**

PO Box 4215 Richmond VIC 3121  
T 03 428 8812  
F 03 427 7079  
Contact: Christopher Butler  
*Audio Diploma:* practical course in sound music production; audio post production, location recording, sync. sound for film and video. Suitable for those with no previous experience

When February, August each year  
Cost: \$260 per month (discount available for full up front payment)  
*Live Sound and Lighting Certificate:* designed for those interested in sound system operation in live applications.  
When: February/August  
Duration: 12 weeks, one 3 hour class per week  
Cost: \$400  
*Visual Diploma:* designed to develop creative students in professional fields of video and film production  
When: February/August each year. Duration: 45 weeks  
Cost: \$260 per month

**Australian Audio College**

763 High St Preston, Melbourne VIC 3072  
T 03 478 2153  
Contact: **Rod James-Hume**  
*Audio Engineering Diploma:* starts with the fundamentals of sound, recording, and progress to production and digital audio. When: February  
Duration: 50 weeks, either day/evening, 300 hours of individual practice time.  
Cost: \$2075 concessions available for full time students or registered unemployed.

**C'est Ca Audio Visual Services**  
PO Box 319



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Fitzroy VIC 3065  
T 419 1506  
Contact: **Norman James**  
An intensive full-time hands-on audio course for one student in a 24 track dedicated studio. Student also receives professional placement assistance  
When: Flexible. February usually. Duration: 10 weeks.  
Cost: \$2500

**Open Channel Co-operative Ltd**  
13 Victoria St, Fitzroy VIC 3065  
T 03 9419 5111  
F 03 9419 1404  
Contact: **Jeanti St Clair**  
*Certificate of Video Production*: total video process using single camera, covers hi-band and lo-band equipment and production techniques. When: early 1996  
Duration: 14 weeks full time.  
Cost: \$3000  
**Short Courses** also available over the year. Similar to Metro TV listing in NSW section. Some subjects include; Video, Screenwriting, Production

Management, Location Sound Recording, Camera and Lighting. When: Throughout year. Duration: from 1 evening to 12 evenings  
Cost: from \$230-\$640; less for members of Open Channel Co-op.

**SAE (School of audio Engineering)**  
2nd floor, 14-16 Fitzroy Street, St Kilda, VIC 3182  
T 03 9534 4403  
F 03 9525 3542  
Contact: Michael Pollard  
Same courses as outlined for NSW but slightly different pricing structure. See main entry under NSW for courses and dates.

**Sound Serious**  
PO Box 210  
Belgrave VIC 3160  
T 03 9754 5122  
F 03 9754 8102  
Contact: **Ken Pell**  
*Basic Audio Course*: with an emphasis on live applications; suitable for beginners and industry people  
When: February/April/June/

August/October each year  
Duration: 16 weeks  
Cost: \$75 per class.

**Recording Technology Training Centre**  
165 Bank St  
South Melbourne VIC 3205  
T 03 9696 4117 F 9696 2520  
Contact: **Vyt Karazija**  
*Advanced Certificate in Sound Production*: one year full-time with studio training at Metropolis studios. STB accredited; Austudy approved. Twenty week part-time course also available.  
When: February/July  
Duration: 4 terms of 10 weeks, 21 hours per week  
Cost: \$7680 full-time (paid in instalments)

**Royal Melbourne Institute of Technology**  
GPO Box 2476V  
Melbourne VIC 3001  
T 03 660 4426 F 03 662 2525  
**School of Engineering**  
*Certificate In Electrical/Electronics (Radio Trade-Audio Stream)*: Basic

electronics to mid level to audio stream in 3rd stage  
When: early year  
Duration: Three years, 40 weeks. Cost: \$565 per year  
Department of Creative Media  
*Advanced Certificate in Sound Production*: from electronics to live, studio mixing  
*Associate Diploma of Engineering (Audiovisual Technology)*  
*Advanced Certificate in Audiovisual Technology*  
Training on a wide range of audio visual equipment.  
*Advanced Certificate in Corporate Video Production*  
All Courses. When: February 1996. Full-time closing date 29 September 1995. Must apply through VTAC 03 9690 7977; Part-time closing date 31 October

**SOUTH AUSTRALIA**  
**SAE (School of Audio Engineering)**  
18-20 Deeds Rd, Camden Park SA 5038  
T 08 376 0991 F 08 376 1867  
Same courses as outlined for NSW but slightly different pricing structure. See main entry under NSW for courses and dates.

**Queensland**  
**Academy of Film-Video Production**  
PO Box 611  
Spring Hill QLD 4004  
T 07 831 5193  
F 07 3832 7512  
Contact: Brian Benson  
*Film-Video Production Course*: offers training in the theory and techniques of all aspects of film and video production; practically oriented with a wide range of professional equipment available for students' use  
When: February 1996  
Cost: \$2400 plus \$120 registration  
Duration: 40 weeks  
**SAE (School of Audio Engineering)**  
22 Heussler Terrace, Milton, QLD 4064  
T 07 369 8108 F 07 367 0143  
Contact: **Michael Quinn**  
Same courses as outlined for NSW but slightly different pricing structure. See main entry under NSW for courses and dates.

**Vandersound Studios**  
202 Hein Rd Buccan Brisbane, QLD 4207  
t 07 5546 8100  
F 07 5546 8866  
Contact: **Eric Vandersound**

Comprehensive one to one hands on audio engineering and MIDI sequencing course  
VETEC certification pending.  
Full-time or part-time  
When: On application

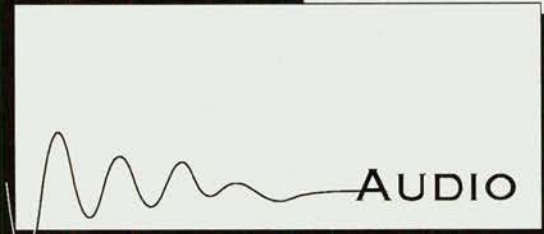
**West Australia**  
**SAE (School of Audio Engineering)**  
42 Wickham St, East Perth, WA 6000  
T 09 325 4533 F 09 221 4401  
Same courses as outlined for NSW but slightly different pricing structure. See main entry under NSW for courses and dates.

## SUPPLEMENT


The following Universities and TAFE Colleges also have audio, theatre crafts, radio, video, film studies as either core units of longer undergraduate and post graduate degrees. as music or humanities programs; Journalism. Closing dates for the following academic year usually at the end of September with late applications October. advise contact each.

- NSW**
- The University of Technology, Sydney. Faculty of Humanities
  - The University of Western Sydney, Nepean
  - Southern Cross University, Lismore
  - Charles Sturt University, Faculty of Arts, Wagga and Bathurst campuses.
  - University of Newcastle, Department of Communication and Media Arts
  - New South Wales University, College of Fine Arts, Paddington campus
  - The University of Sydney, Sydney Collage of Art, Balmain campus
- VIC**
- La Trobe University, Music Department
  - Monash University, Faculty of the Arts
  - University of Melbourne, Faculty of Music
  - Swinburn Institute of Technology  
Wangaratta collage of TAFE
  - Northern metropolitan collage of TAFE

- QLD**
- Southbank Institute of TAFE
  - Queensland University of Technology
  - University of Queensland
- TASMANIA**
- University of Tasmania, Centre for Performing Arts.



## AUDIO



**UNIVERSITY OF SYDNEY**

**GRADUATE DIPLOMA & MASTERS DEGREE**  
(COMMENCE 1996)

**AUDIO ACOUSTICS SHORT COURSE**  
(24-28 Nov. 1995)

Sydney University's programs in Audio, the **Graduate Diploma of Design Science (Audio)** and the **Master of Design Science (Audio)**, have been created in response to an increasing demand for audio practitioners with a broad audio education. The programs provide a study path for those wishing to explore audio as a profession, the chance for practitioners of audio to gain a qualification and the opportunity for research into Audio.

Subjects may be taken individually as required, or as part of the Graduate Diploma or Masters Degree programs.

**ENQUIRIES**

**DEPARTMENT OF ARCHITECTURAL & DESIGN SCIENCE**

University of Sydney  
Ph: (02) 351 2686  
Fax: (02) 351 3031  
email: dads@arch.su.edu.au

# BUYERS GUIDE

## Microphones

### Condenser Mic's

**AKG** from AWA Distribution (02) 898 7666

**C1000S** Cardioid condenser, phantom power or 9 volt battery, versatile small diaphragm for studio or live. \$640.00

**C3000** Switchable cardioid/hypercardioid large & small diaphragm for vocals and instrument in studio or on stage. \$795.00

**C414BULS** High quality studio mic, large diaphragm, 4 pattern, bass roll off, 10dB attenuation. \$2390.00

**C12VR** High quality valve mic, c/w flight case, power supply & pattern selector, cable, shock mount & pop filter. \$7630.00

**ASTATIC** from Horwood Australia P/L (02) 585 1011

**CTM-827** Miniature Electret condenser microphone available in both 13 and 17 inch gooseneck lengths. \$289.00/\$309.00

**CTM-18** Superior low noise electret condenser microphone featuring the "INR" shock mounting system. \$329.00

**CTM-910** Microphone featuring natural, transparent sound quality on either a 10, 15 or 20 inch gooseneck. \$409.00

**CTM-900** An excellent overhead microphone for use with choirs, orchestras etc. Available in black or white. \$409.00

**AUDIO TECHNICA** from Yamaha Music Australia (03) 9699 2388

**AT4033** Unidirectional condenser - mic large diaphragm, pro recording. \$1099.00

**AT4050** Multi pattern condenser - large diaphragm pro recording - optional shockmount available. \$1449.00

**ATM33A** Cardioid condenser mic, frequency response impedance, phantom 200 ohms, battery 270 ohms, dynamic range, phantom 113dB, battery 99dB.

**AT403** Unidirectional condenser - professional recording microphone. \$649.00.

**AUDIX** from EAV Technology (03) 9417 1835

**SXC-1** Microphone Pre-amp for SXC - capsules. \$562.00.  
**SXC-Capsules** To suit above pre-amps. \$562.00

**BEYERDYNAMIC** from Amber Technology (02) 975 1211

**MC834** Large diaphragm studio condenser with cardioid pattern, switchable LF Roll-off & pre-attenuation. \$1799.00.

**MC740** Large Diaphragm studio condenser to suit the most demanding applications. 5 Selectable patterns. \$2895.00.

**MCE86** Cost-effective short shotgun featuring very high sensitivity and low weight, phantom or battery powering. \$625.00.

**MC742** Top range stereo condenser system, features dual, large diaphragm capsules with fully variable stereo positioning. \$6495.00.

**BRUEL & KJÆR** from Sound Supplies P/L (02) 9957 5389

**4003/6** Low noise omni directional mic. \$2529.00

**4004/7** High intensity (Handles high SPL's) omni directional mic. \$2529.00

**4011/12** Cardioid mic for all recording applications \$2930.00

**4021/22** Compact Cardioid mic for recording string instruments, drums etc.

**CAD** from Australian Audio Supplies (043) 291711

**CAD92** Affordable electret condenser. Ideal for the studio or PA. 40KHz bandwidth. \$299.00.

**CADE100** Quality studio condenser 10Hz to 18kHz high SPL capability. Internal Ni CAD battery system. \$995.00.

**CAD E200** Quality multi pattern studio condenser. No interstage capacitors. Dramatically reduces phase anomalies. Comes with swivel mount. \$1695.00

**CROWN** from Bose Australia Inc. (02) 204 6111

**CM (Various)** Hand held condenser microphone - Omni, Cardioid, Differoid. From \$412.00

**COUNTRYMAN ASSOCIATES** INC. from Production Audio Services (03) 9415 1585

**EMW/Lapel** Mic. available in 4 colours. Wired & Wireless versions. 3 Freq. response versions. \$320.00 Wired/\$495.00 Wireless

**ISOMAX 2** Available in 4 different polar patterns. Miniature microphone for miking instruments, choirs, etc. \$519.00.

**ISOMAX 4** Podium microphone. Noise cancelling. Available in 12", 18" & 24" versions. \$809.00.

**EM301** Omnidirectional conference table microphone. Highly resistant to liquid spills. \$675.00.

**ELECTRO VOICE** from Mark IV Audio P/L (02) 648 3455

**CP 212/218** Gooseneck condenser microphone with XLR base, optimum gain before feedback. \$520.00.

**CH 230** Miniature handing choir/drama microphone, available in either black or white. \$520.00.

**RE 2000** Supercardioid recording/live microphone with in built heater, pop filter and power supply. \$2900.00.

**CO 100** Omni-directional condenser lavalier, broadcast quality. \$510.00.

**NEUMANN** from Amber Technology (02) 975 1211

**KM184** Miniature cardioid for studio or stage. Combines original KM84 sound with latest transformerless circuitry. \$1072.00.

**TLM193** Large diaphragm studio condenser. Cardioid pattern with ultra-low noise, 140dB SPL and 130dB Dynamic range. \$2239.00.

**U87AI** The classic Neumann studio condenser. Features 3 selectable patterns with LF roll-off & 10dB attenuator. \$3642.00

**KMR81** High-performance short shotgun, features very high sensitivity & directional efficiency. \$2098.00.

**GROOVE TUBE** from A.S.I.D. P/L (03) 416 1564

**M.D.I.** Side address valve condenser mic. Cardioid pattern. \$1399.00

**M.D.2** Gold spluttered mylar diaphragm valve mic. \$1999.00

**M.D.3** Large gold diaphragm valve mic. with sensitivity control and omni pattern. \$2899.00

**MICROTECH GEFELL** from Southbank Trading (03) 9804 0432

**UM92.1S** 3 Pattern (Switchable) true vacuum tube (VALVE) M7 capsule with gold spluttered membranes. \$5595.00

**M295** Cardioid, transformerless studio mic with 10dB per-attenuation & low frequency roll-off switches. \$1895.00

**MT71.1S** Large diaphragm Cardioid studio microphone. Suitable for studios who only need a couple of extra. \$1699.00.

**M300** Cardioid Condenser-miniature microphone with transformerless output. "Over-head Angel". \$1445.00

**NAKAMICHI** from Southbank Trading (03) 9804 0432

**CM300** Includes CP1 & CP2 capsules. \$435.00

**CM100** Includes CP1 capsule. \$289.00.

**PEAVEY** from Australis Music Group (02) 698 4444

**PVM480** Electret condenser mic. featuring exceptional flat far-field response and smooth extended bandwidth performance. Ideal for stand-mount and podium-mount vocal applications as well as being a great instrument mic. \$299.00

**VCM™ 2** Back Electret condenser; cardioid polar pattern; small, low profile design; external windscreen; 9-52 volt operation; special RF shielding. \$299.00

**PM16S** Electret condenser podium mic with cardioid response, slender inconspicuous design; excellent feedback rejection, readily powered from a 9-52 volt phantom power source; full RF shielding. \$329.00

**PVM 357** Miniature electret condenser mic. with 5-band graphic EQ equipped pre-amp. Designed for instrument pickup at very high levels; wide range response for close miking. Standard equipment includes: external foam windscreen, snare or tom mounting clamp, bass drum clamp for preamp. \$499.00.

**RAMSA** from Ramsaudio P/L (02) 477 7377

**WM-P40** General purpose, 40/18kHz, Battery or phantom power, 99dB Dynamic range. \$385.00.

**WM-P50** Instrument Pick-up, 30/18kHz, Battery or phantom power. 125dB Dynamic range, Tone switch. \$479.00.

**SANKEN** from Audio Sound Centre (02) 9901 4455

**CU-44X** Output transformerless, unidirectional, double-condenser high performance microphone specially designed for digital audio recording. \$4500.00

**CU-41** Unidirectional, double-condenser microphone specially designed for digital recording. \$4825.00

**CS5-5** Shotgun stereo with mono-stereo compatibility, non-proximity effect, fits standard Rycote windscreen. \$3535.00

**CU-31/CU-32** Unidirectional and Right angle condenser mics particularly good for high pressure sound like trumpets and drums. \$1485.00.

**SHURE** from Jands Electronics (02) 516 3622

**Beta 87** Premium Grade supercardioid condenser vocal microphone, low impedance, phantom only. \$739.00.

**EG4.0** Cardioid condenser instrument microphone with switch, low impedance, phantom or battery powered. \$399.00

**BG5.0** Cardioid condenser vocal microphone with switch, low impedance, phantom or battery powered. \$399.00

**SM91A** Half cardioid boundary-type condenser, low impedance, phantom power only. \$639.00

**SONY** from Sony Australia (02) 887 666

**C 800G** Tube microphone - suitable for vocal studio recording; very low noise & distortion, high sensitivity; selectable Omni or Cardioid directivity. \$12,000.00

**C800** Tube microphone. Suitable for critical music recording, wire dynamic range, selectable Omni or Uni-directional. \$9800.00.

**C48** Studio condenser microphone. Selectable directivity (Uni, Omi, Bi) Two way powering. \$2323.00

XLR. \$149.00.

**ATM63HE** High energy - unidirectional dynamic. \$359.00.

**AUDIO TELEX** from Audio Telex (02) 647 1411

**AMX003** High quality vocal microphone, with switch, cable and clip. \$123.00

**AMX002** Vocal Microphone. Suited to both entertainment and speech applications. \$85.00

**AMX60** Slimline gooseneck microphone, with switch and XLR connector (dynamic). \$67.00

**AUDIX** from EAV Technology (03) 9417 1835

**OM-3** Very low mass (VLM) Type B. Transformerless high output capsule - wide natural response with vocal presence. \$346.00.

**OM-5** VLM Type B capsule with very high output, smooth response with exceptional vocal clarity. \$467.00

**D1** VLM Type B instrument microphone for snare, toms and a variety of high SPL instruments. \$306.00.

**D2** VLM Type B instrument microphone for toms, kicks, sax and a variety of high gain instruments. \$306.00

**BEYERDYNAMIC** from Amber Technology (02) 975 1211

**MO1** New low cost vocal series with classic Beyer performance, Supercardioid, On/Off switch & rugged construction. \$189.00

**TG-X40** High performance vocal microphone with very high output, Hypercardioid pattern & heavy duty construction. \$399.00.

**M700** TG Hyper Cardioid vocal microphone featuring wide freq. range, high output and very tight pick-up pattern. \$575.00.

**M88TG** Widely used for both vocal & instrument applications, the M88 offers very wide freq. resp. & high SPL capability. \$759.00.

**CAD** from Australian Audio Supplies (043) 291711

**CAD 89** Pro vocal mic. with INR™ shock mount for minimal handling noise and extra strong grille. \$289.00.

**CAD 88** Pro instrument mic. Extra rugged construction. Two year unconditional guarantee on all CAD mics. \$269.00.

**CAD 28** Affordable dynamic cardioid extremely durable. Ideal for schools, hire. Two year warranty. \$159.00.

**CAD HMSOVC** Crystal harmonic mic with volume control. Classic vintage styling. As used by many famous players. \$159.00.

### Dynamic Mic's

**AKG ACOUSTICS** from AWA Distribution (02) 898 7666

**D3500** Cardioid instrument mic for toms, guitar amp, acoustic guitar, high SPL, Bass roll off. \$350.00.

**D3700** Hypercardioid vocal mic. Neodymium magnet high output, extended frequency response. \$260.00.

**D3800** Hypercardioid vocal mic. Neodymium magnet unique MMS handling noise system. \$345.00.

**D112** Kick drum & Bass mic, overload proof, Hum compensation coil, cardioid pattern. \$470.00.

**ASTATIC** from Horwood Australia P/L (02) 585 1011

**CTM-21** Budget priced microphone featuring the sound quality and characteristics required by the professional. \$89.00

**CTM-28** Vocal microphone featuring clean transparent sound reproduction at a very reasonable price. \$165.00

**CTM-27** An excellent, rugged and versatile microphone for use in vocal and instrument applications. \$145.00

**CTM-89** Professional vocal microphone including the "INR" shock mount system to minimum handling noise etc. \$320.00.

**AUDIO TECHNICA** from Yamaha Music Australia (03) 9699 2388

**MB1000L** Vocal mic, neodymium dynamic, magna lock switch, XLR low impedance. \$115.00.

**ATM29HE** High-energy pro instrument mic dynamic N-DYM floating system. \$229.00

**MB3000L** Vocal mic, rich mid range, neodymium dynamic, magna lock switch,

# BUYERS GUIDE

## Microphones

**ELECTRO VOICE** from Mark IV Audio P/L (02) 648 3455  
**AN 680** Cardioid, speech/vocal with On/Off switch, heavy duty construction with sprung steel headshell, 2 year unlimited warranty. \$109.00.  
**N/D 157** Cardioid, speech/vocal with On/Off switch, H/D construction with Neodymium magnet, 2 year unlimited warranty. \$210.00.  
**N/D 757B** Supercardioid, premium vocal microphone with roll off, Neodymium magnet, 2 year unlimited warranty. \$475.00  
**N/D 408** Supercardioid, premium performance percussion/drum microphone, Neodymium magnet, 2 year unlimited warranty. \$425.00.  
**FOSTEX** from Newport Broadcast Consultants (02) 9997 6689  
**M505** 250 Ohm Dynamic unidirectional top of the line high quality microphone. Cannon connector. \$261.00  
**M501** Uni directional dynamic with Cannon connector and freq. response 70-16k, 600 Ohm Switch/Off. \$216.00  
**M321** Medium cost dynamic for general use. Switch/On/Off. Frequency range in the Hi quality P.A. range. \$115.00.  
**M221** Low cost dynamic for P.A. applications. Complete with cable and switch. \$69.00  
**PEAVEY ARCHITECTURAL ACOUSTICS** from Audio Telex (02) 647 1411  
**PAA350** Vocal or instrument microphone with excellent off axis rejection. \$293.00  
**PAA250** Vocal microphone with internal shock mount. \$150.00.  
**PEAVEY** from Australis Music Group (02) 698 4444  
**PV** Dynamic, Caroid ball-type microphone with integral on/off switch and non-glare mesh windscreen. \$99.00.  
**PVM535** Dynamic Cardioid vocal mic. Featuring: twin rumble filter, cardioid polar response, excellent feedback control, ultra harsh finish and much more.... \$299.00.  
**PVM 880** Neo Dynamic, hyper cardioid vocal mic utilising a diamond coated diaphragm to provide superior response and low handling noise.  
**PVM 520** Neo-dynamic, cardioid mic. featuring titanium laminate diaphragm with neodymium magnetics: featuring excellent low-freq response control, accurate instrument reproduction and ultra-high sensitivity. \$379.00  
**RAMSA** from Ramsaudio P/L (02) 477 7377  
**WM-D55** General purpose

unidirectional. Metal Case. On/Off switch. \$256.00  
**WM-D65A** Vocal Mic. 50/15KHz, Metal case, On/Off switch. \$354.00  
**WM-D70A** Vocal Mic. 50/15KHz, Metal Case, Dual Lo-Z impedance. \$420.00  
**SHURE** from Jands Electronics (02) 516 3622  
**Beta 58** Supercardioid vocal microphone - Neodymium Magnet, high output, Humbucking coil to reduce R.F. interference, low impedance. \$499.00.  
**SM58** The industry standard vocal microphone, cardioid pattern, low impedance, available with or without switch. \$299.00.  
**SM57** Cardioid instrument microphone, low impedance, industry standard instrument microphone. \$249.00.  
**BG3.0** Cardioid vocal microphone from Beta Green series; Neodymium magnet, low impedance with switch. \$249.00  
**SONY** from Sony Australia (02) 887 666 Rod Sammut  
**F710** Multi purpose dynamic microphone Suitable for voice and instrument applications. High sensitivity, On/Off switch. \$170.00  
**F730** Vocal dynamic microphone. Low noise. On/Off switch. \$256.00  
**F-740** Vocal/Musical instrument dynamic microphone. High sensitivity. \$317.00  
**F780** High quality vocal microphone. High sensitivity, low handling noise, uni-directional. \$463.00

### Other Mic's

**AKG ACOUSTICS** from AWA Distribution (02) 898 7666  
**C407** Miniature lapel mic, omni pattern, moisture resistant 20-20K response condenser. \$260.00  
**C408** Miniature drum mic. Great for Toms & Snare. Clips onto drums, shock mounted capsule - condenser. \$330.00  
**C409** Miniature wind instruments mic for Brass or Woodwind. Clips onto bell; shock mounted capsule - condenser. \$350.00  
**C410** Headset mic, condenser, continuously adjustable mic arm, pop filter 20-20K response. \$540.00

**ASTATIC** from Horwood Australia P/L (02) 585 1011  
**CTM-901** Surface-mounted boundary microphone for use on altars, conference tables or even overhead applications. \$409.00.  
**877L** Omni directional desk top type microphone for industrial and commercial paging applications. \$219.00  
**119L** Heavy duty gooseneck microphone with rugged die cast body on a 19 inch gooseneck. \$219.00.  
**552** Industrial microphone for use in high temperature, dust and corrosive environments, virtually indestructible. \$275.00.  
**AUDIO TECHNICA** from Yamaha Music Australia (03) 9699 2388  
**ATM25** Bass drum microphone hypercardioid dynamic, high SPL handling. \$389.00.  
**AT8316** Lapel microphone unidirectional miniature condenser for rejection of noise or feedback, battery/phantom power, belt mount pre amp mounting hardware for instruments. \$399.00  
**ATM35** Guitar/saxophone mix. Miniature instrument mic with mount, uni condenser, sax, drums etc. \$529.00  
**ATM73a** Headset mic. Very light frame, flexible gooseneck. \$399.00  
**AUDIO TELEX** from Audio Telex (02) 647 1411  
**PH21** Headset Electret microphone suitable for entertainment and speech applications. \$230.00  
**PH23** Aerobics microphone, complete with headband. \$250.00  
**HM303** General purpose headworn microphone electret. \$60.00.  
**AUDIX** from EAV Technology (03) 9417 1835  
**ML-10** Lavalier Microphone \$180.00.  
**VEM-81S** Cardioid shotgun set. \$543.00  
**ST-2** Stereo Microphone. \$256.00.  
**BEYERDYNAMIC** from Amber Technology (02) 975 1211  
**TG-X5** Miniature "clip-on" instrument microphone. Supplied complete with flexible gooseneck & full variable clip mount. \$249.00.  
**TG-X50** Dedicated bass instrument microphone. Hypercardioid pattern, high SPL and exceptional gain before feedback. \$499.00.  
**TG-X35** Lightweight headset system, Low-profile cardioid capsule, fully flexible gooseneck and "over ear" spectacle type de-

sign. \$599.00.  
**MPC-65** Cost-effective boundary microphone, semi-cardioid condenser. Very compact, low-profile design. Available in black or white.  
**BRUEL & KJÆR** from Sound Supplies P/L (02) 9957 5389  
**4035** Headset microphone. Omni directional high SPL capsule mounted on boom arm for attachment to most headphones. \$2375.00  
**DPA8010** Hydrophone for underwater or hostile environment recordings. Phantom powered. 10 Metre lead. \$3850.00  
**CAD** from Australian Audio Supplies (043) 291711  
**M6115** Electret condenser gooseneck microphone. Low noise, cardioid pattern, solid centre gooseneck. \$299.00.  
**M6120** As per the M6115 20' model. \$329.00  
**CM100** Hanging gooseneck choir mic. Electret condenser with 20m of cable included. \$329.00.  
**ST100** Electret condenser boundary mic. Ideal for television, stage, conference etc. \$329.00  
**COLES** from Audio Sound Centre (02) 9901 4455  
**4038** Studio Ribbon - classic BBC design, bi-directional polar response, exceptionally flat and substantially constant. \$1458.00  
**4104** Commentators Fibbon-BBC design for reproducing high quality commentary speech from noisy surroundings. \$848.00.  
**COUNTRYMAN ASSOCIATES** from Production Audio Services (03) 9415 1585  
**ISOMAX HEADSET** 20Hz-20Kz. Available in Omni & Hypercardioid patterns. Wired & Wireless versions. \$595.00.  
**TYPE 85** Active Di Box, Battery or Phantom powered. \$519.00  
**BATTERY POWER SUPPLY** Optional battery power supply powers Countryman microphones. \$235.00.  
**CROWN** from Bose Australia Inc. (02) 204 6111  
**PCC (Various)** Phase coherent cardioid microphone - Typical applications: Stage floor, Alter tables, Board rooms, Conference tables, Teleconferencing. From \$523.00.  
**PZM (Various)** Pressure zone microphone - Typical applications: Pianos, Background ambience, Conference tables, Security systems, Boardrooms. From \$133.00

**LM (Various)** Lectern microphones. Typical applications: Lecterns, Table tops, Boardrooms, Conference tables, Pulpits. From \$489.00.  
**CM 311/312** Head worn differoid microphone. Typical applications for Touring Sound, Aerobics, Broadcast. From \$352.00.  
**ELECTRO VOICE** from Mark IV Audio P/L (02) 648 3455  
**CS 200** Cardioid condenser lavalier, broadcast quality. \$675.00.  
**RE 27** Cardioid Dynamic Neodymium element, low proximity microphone ideal for voice-over/on air radio (can also be used in kick drums). \$1225.00.  
**RE 50 NDB** Neodymium version of industry standard hand held interview mic. No handling noise; supplied in black. \$398.00.  
**RE 45** Dynamic short shotgun with Neodymium element. Ideal for stage and interview application. \$822.00.  
**FOSTEX** from Newport Broadcast Consultants (02) 9997 6689  
**T40** High quality. Enclosed RP Dynamic. \$297.00  
**T20** High quality. Semi open RP Dynamic. \$281.00  
**T-7** Dynamic headset for music applications. \$205.00.  
**T-5** Semi open headset for music and other. \$161.00  
**MICROTECH GEFELL** from Southbank Trading (03) 9804 0432  
**MK301** Measuring mic cartridge designed for acoustic research & development (5 Hz to 100kHz, 165 dB) \$1999.00  
**MK222** Condenser measuring capsule designed for infrasonic measurements down to 0.5 Hz. \$2599.00  
**NK63** Nose cone for use in high air flow velocities & reducing propagation constant dependence (freq.) \$499.00.  
**5001** Mains-independent pistonphone for calibrating microphones and Sound Level Meters. \$2599.00  
**NEUMANN** from Amber Technology (02) 975 1211  
**GFM132** Boundary-layer microphone with hemi-spherical pattern, unique geometric design eliminates angle colouration & comb filter effects. \$2699.00.  
**KU100** "Dummy Head" system for exacting stereo recording as perceived by the human ears. \$9250.00.  
**PSC** Audio Sound Centre (02) 9901 4455 Geoff Grist  
**HEADSET** Mic - minimalist design, noise cancelling, powers from radio transmitter or

optional power supply. \$305.00.  
**RAMSA** from Ramsaudio P/L (02) 477 7377  
**WM-S1** 50Hz/18kHz, Instrument mic. All accessories included. Battery or phantom power. \$520.00.  
**WM-S2** 120Hz/15kHz Instrument mic. All accessories included. Battery or Phantom power. \$464.00  
**WM-S5** 70Hz/16kHz Instrument mic. All accessories included. Battery or phantom power. \$520.00  
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**SANKEN** from Audio Sound Centre (02) 9901 4455  
**COS-11** Ultra miniature lavalier mic popular with stage shows. Powers off transmitters or optional power supplies. \$501.00  
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**WH10** Headworn dynamic cardioid microphone, low impedance. Comes with 6.35mm Jack, XLR or tiny QG connector. \$245.00  
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**VP88** M-5 Stereo condenser microphone, phantom or battery, stereo width control, 100Hz filter. \$2199.00  
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**SONY** from Sony Australia (02) 887 6666  
**ECM-77** Omni Directional Lavalier microphone. Miniature capsule, high performance, 2 Way powering. \$585.60  
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## STOLEN

**INDEPENDANT PA HIRE, OF** Weston ACT has had a large theft on the evening of July 21, 1995: including a Mackie CR1604 mixing console (SN:A57863, C26508)Peavey 115H Speakers (SN: OE-04673016, OE-04673025 writ-

ten on inside of box),1 x Peavey 112HCBW Wedge (SN: 00-59266576 or 00-5926539,2x Jands SR-3000 amplifiers.1 x AM-1600 (SN: C-1916).1 x Peavey DPC-750 (SN: 00-06033118). 1 x Dod R-530 Graphic equalizer (SN: 15303). 1 x Peavey VSX crossover (SN: 00-05631635). 4 x EV N'Dym 257 Mic's. (SN: 9318835038, 931735191, 931835052, 93173525). 2 x EV N'Dym 308 Mic's (SN: 924330605, 924330323). 4 x Shure Beta-57,1 x Shure SM-57, 1 x AKG 112 Egg Mic.2 x Soko DI boxes (Yellow). 1 x Dod DI. 1 x SKB 4u rack case. MOST OF THE ABOVE EQUIPMENT HAS THE LETTERS "IPAH" AND "015 634 668" WRITTEN ON IT or IN IT. Any assistance in the recovery of the above equipment would be most appreciated. REWARD OFFERED! Please Ph. Martin at Independent PA Hire - Phone : (06) 288 0851 or 015 634 668

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## ASIA

Natalie Apostolou visited Singapore for Connections recently.

### Disco Mall Fever

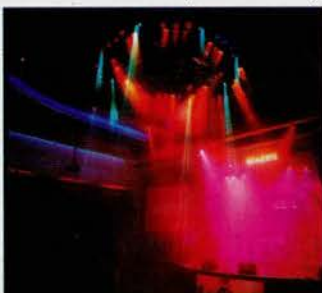
The Nova Leisure Group of Entertainment is arguably one of Singapore's largest club orientated companies. Their reputation was etched out of the remarkably successful FIRE chain of clubs throughout Asia. Their niche lies in that their venues are entertainment complexes rather than 'clubs', catering to the Asian desire for variety.

The initial **Fire Singapore**, opened in 1989 in Orchard Plaza covering 30,000 sq feet. Thereafter a Fire club of similar proportions was opened yearly in a different Asian destination, including Jakarta, KL, Surabaya etc. Malaysia, Indonesia and China are the next spots for openings. Fire on Orchard Rd, is spread over three levels and caters to every sector of the population. The disco plays a mixture of Asian pop and techno as well as overseas hits.

Fitting in with the sheer magnitude of this club is their flying lighting rig, that resembles a Batman craft. The Pub, is where an inhouse band plays rock and ballads for an older crowd while KTV features 12 private Karaoke rooms for a family affair. Fire also has regular international artists such as our own Peter Andre and Indecent Obsession.

With such a pedigree in traditional styled clubs, Nova eventually branched out with Canto, a sprawling canto-pop complex for

*(continued over)*



## LA STYLE HITS CAXTON STREET

**Hotel L.A.**  
Cnr Caxton St and  
Petrie Terrace  
Brisbane

By Natalie Apostolou

Brisbane's Paddo Barracks, a legendary drinking haunt, has undergone a costly yet effective transformation. Renamed Hotel LA, club owner Peter Austin and his company Venues Unlimited has infused \$1.2 million towards total refurbishment's.

The initial stage of renovations, developed by Tom Kovac of Kovac Architecture in Melbourne and Geoffrey Parker of Cottey Parker Architects in Brisbane, commenced in January this year and took 12 weeks to complete. The interior walls and ceiling were stripped back to reveal the buildings brickwork, with contemporary fixtures inserted into the existing structures.

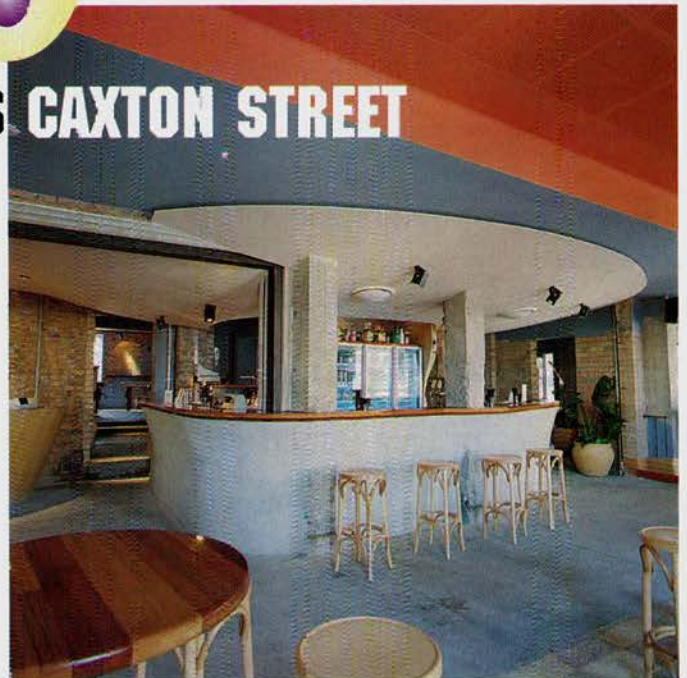
Mr Austin and partners Paul Barrett and David Roberts felt that the hotel's new design and features creates a fresh, contemporary feel to appeal to patrons while maintaining the buildings history and heritage.

"Previously the pub was like a rabbit-warren, just a series of adjoining rooms," Mr Austin said. "By removing all the walls to reveal the actual structure, we have increased patron capacity, heightened visual access to the room, and made the place more exciting and functional as a social venue."

The venues appeal is aimed at young sophisticated clientele looking for a stylish haunt with a laid back, modern atmosphere in which to wine, dine and socialise.

By all accounts they have hit the spot, with a huge pool room, boutique bottle shop and 100 capacity restaurant framed by impressive decor and an irresistible club feel.

Contact: Venues Unlimited on 07 221 1511 or 018 747 211.



## DJ's in Trouble

*continued from page 4*

\$25 each, and he pays full royalties. In addition, he claims over 30,000 vinyl singles are imported and sold each month with zero royalties paid.

In the course of preparing this story we spoke with a Melbourne based DJ who was very nervous. He claimed he had been threatened and wouldn't talk. He was aware of the claims we put to him, and his identity was confirmed by several other sources. The club and mobile DJ market is prone to rumours, however some of the stories we heard in researching this story were almost bizarre. More than one person stated that a defamation action was pending against at least one party. People within the copyright industry have spoken of multiple phone calls bordering on harassment from some disco operators.

We called a Club source who usually likes to talk. "Yeah, Connections ... great!" His staccato delivery faltered when we put to him that the trade was under the copyright spotlight. He got downright hostile, in fact. "Well the record companies should realise

we are making hits and thus pay for them. They cut off free vinyl some years ago and now this. No body had better come looking at my operation". Our source would not be named, and his indignant plea that mobile and club DJ's are responsible for breaking musical acts was repeated by several other DJ's.

Sources in the mobile disco industry have confirmed the practice of bulk duplicating CD's on mini disc and CD burners is prevalent, and that PPCA (Phonographic Performance Co or Australia) licenses are not sought. A PPCA license costs around \$100 per disco unit, and is legally required of every disco unit - mobile or fixed - operated here.

The music industry as a whole is very active in protection of intellectual property rights. Bootlegging actions before the courts can see penalties as high as \$200,000 plus jail terms. Connections has anecdotal evidence that AMCOS have settled some similar cases such as these before resorting to court action.

• PPCA (02) 267-7877.  
• AMCOS (02) 9954-3655.

# ABSTRACT

## FUTURESCAN MK III



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## SPARKS (continued)

sprawling canto-pop complex for traditionalists and Sparks, the largest club in Singapore set in the largest shopping mall in Asia. Covering 35,000 sq feet and holding 3000 Sparks is impressive due to size alone. Its decor and equipment only furthers its massive proportions. Featuring marble pillars, frosted glass and sculptures it is classy and timeless.

Spark's Marketing Executive, Wendy Leong showed me around the mammoth club. While there the rehearsals for the Miss Singapore finals were well underway. Which exemplifies its versatility. Also appearing that night would be Rick Price, who is incredibly popular among the female population.

Sparks has three main clubbing rooms, aside from the main that features a dazzling light show and sound system which can go full boar due to the lack of sound pressure levels in Singapore. Attached is the Jazz Room, a relaxed piano bar styled room with ornate decor and cool jazz resounding, on the other end if the spectrum is the World Music Bar, a dugout of international music.

Inevitably Sparks is also equipped with 18 KTV rooms which are immensely popular 7 days a week. The rental for a full nights use of the KTV room is \$120-\$220(Sing). Cover charges for Sparks is \$25(1 free drink) for Saturday's & public holidays, \$20 for Friday and \$15(1 free drink) for Sunday-Thursday. Open from 5pm to 3 am.

• Sparks: Level 7 Ngee Ann City Shopping Centre, 391 Orchard Rd.



## The GATE

Ph: 65 735 6133 Fax: 65 737 5852

### Fact List

**Audio contract**-Electro Systems Singapore

**Lighting Design** supplied by Magnetopulse Singapore  
**SPARKS SPEC LIST**

**Lighting** 22 Martin Roboscans, 1220's, Robozaps; 4 High End Multirays; 2 SGM Octo's; 2 Alpha Units; 16 Geni Strobes; 5m Motorised laser screen (attached to lighting rig); Panasonic WJ AV7 mixer; 2 Sharp 14" monitors

**Audio** FOH Mixer: Midas 40 channel desk; 3 Technics SL1200's; Dennon Dual CD / Cassette; Rane MP 24 Mixer/ ME 30 EQ; Crown Amcron Amps; Nexo Speakers

**Mirror Systems in Jazz and Cantopop Rooms** 2 SL 1200's;

Dennon DN2000; Rane MP2X; Crown Amps; Nexo PS10's/LS500; Martin centrepiece/8 Pro 218's Stage and Instrument Kit Shure SM57/58 (vocals & instruments); AKG D112 (lead vocals); Telex Wireless System

**FOH**-Allen & Heath GL3; Yamaha SPX 900; Digitech TSR-24; Klark Technic EQ; Drawmer Gates & Comp/Limiters  
**FB Renkus Heinz SMS 121; Studio Master Desk**

### Singapore Gothic

Orchard Road is every shopaholic's most prurient fantasy. Mall after mall is devoted to dishing out the worlds finest commodities of excess, with the thought of too many options being your only quandary. Clubbing on Orchard Road is much the same. With every hotel comes a club, some excessive some boutique style yet all packing in locals and travellers every night despite exorbitant drink prices and cover charges.

There are roughly two styles of club one being the traditional Asian style canto-pop/karaoke bar, featuring local music and the other more heavily western influenced clubs. **The Gate** falls directly into the latter category.

This gothic decor styled club, is run by a troupe of ex-pat Brits that have conceived to bring the best of British club land to Singapore.

General manager David Fierstone did his run of London nightlife and tells me that his "latest state of the art lighting system and powerful sub-bassed sound system should come with a government health warning." Toted as an exclusive members only London club, its more intimate size and cavern like aspect, beneath the Orchard Hotel, brings in a mid-20's + crowd. The decor is sumptuous, with faux rock, flaming torches, brocade fabrics and an impressive wrought iron gate greeting you.

Cover charges vary from \$15(Sing) for Tuesday/Sunday, \$18 Wed/Thurs 'Bongo Mania and Soul & Lovers Rock night', to \$25 for the heavy Friday/ Saturday night 'Hard Core Dance' crowd. Nightly 9-3am.

• **The Gate** 442 Orchard Road  
Orchard Hotel Singapore  
Phone: 65 734 0745

## NEW 2

### Get Ready To Rotate

A sense of mystery and a degree of aloofness is essential to seize and hold one's inquisitive ways. Capatilising on this are **TwoSixEight** the purveyors of a mysterious fax alerting all and sundry to their plans for offensive club assault over Summer. The compelling **TwoSixEight** are apparently a team of party and club organisers who hit the haunts when time is of the essence to 'encourage a positive deviation'. A host of new inner city venues have been plucked for **Rotate's** monthly outings starting in November. Fruit platters, top DJ's and a light hearted approach are all assured.

### Spotlight Queensland

**Aztecs** in Brisbane, is now hosting a Thursday night grunge evening., which features live bands.

The Empire Hotel (cnr Anne & Brunswick streets The Valley) has launched a new club night named **Liberty**. The promo team Outer Limits are responsible for this endeavour. Liberty is a house and garage night with many interstate DJ guests.

Sydney's finest DJ's shook off the chill by invading Brisbane's club scene through August. The cavalcade of names included Jumping Jack, Joe 90, John Ferris (at Soho), Pee Wee Ferris (at Eternity).

The gang at that glamour den **Grand Orbit**, have been experimenting with new entertainment formats to great success. Every Thursday night features a dinner show with guests through September like Margaret Ulrich, Evermore and Tall Order. Tuesday nights turn into the laugh lounge with



FIRE 'BATRIG'

guests such as George Smeilovich and throughout September watch for the SOHO fashion/dance spectaculars and some impressive art exhibitions.

#### Meanwhile in Melbourne

Kiss-FM in conjunction with Dance-Net have released their first compilation album, reflecting their on air diversity. "Kiss-FM-Serious Rave Anthems Volume 1." Features the fave tunes by DJ's and includes Legend B, Quazar, Lazonby to name a few.

Changes are in the works at **The Church**. Manager Adam Allison has enlisted the help of promoters Rohan Davis and Ravi plus DJ Dean Cherry to vamp up Friday nights. The existing **Booty Juice** night will be incorporated into something huger.

The ever happening **Alcatraz**, an establishment not renowned for double entendres, launched "**Club F--k**" on August 18. The weekly club night is in the capable hands of Richard Masters (Mr Hellfire) and the Razor Crew.

The **Town Hall Hotel** in Richmond, suffered a small blaze recently. Damage was kept to a minimum and bands are still playing.

#### In Adelaide

The Berri Hotel's **Vines Disco** on Riverview Drive has undergone serious revamping courtesy of BSS Light and Sound Innovation.

North Adelaide has an enormous, new club to revel in. The **Gekko's Complex** on War Memorial drive. The two storey club features a restaurant and bar downstairs and a bar and disco upstairs. Opening early September it promises to be a feature in Adelaide night life.

## ZOUK. Singapore's Underground Swing

The French-Caribbean translation of **Zouk** means 'village party'. An evocation of the primal element, a purging of inhibitions and expression. An ironic task in a country that preaches restraint.

Yet Zouk's club culture, like any cities is a microcosmic state temporarily out of bounds to the Orwellian vibe outside. Well almost.....the now folkloric 'drug bust' which closed the main Zouk room down a few months ago now allows restricted operations. In reality Zouk's future hangs in the balance of a slightly skewed set of scales. But I'm sure Zouk will be around for a while longer. Interlude with an Ex-Pat 'What's a nice kid like you?'

Upon trekking off to cover the infamous Zouk I was unaware of the strange ties it had to Australia. Its constantly inspirational to see our expertise and visions solidified on foreign ground, especially when they are touted as landmarks in their field.

Exhibit A- **Andrew Ing**. I found it quite perplexing to be greeted as 'the girl from Epping', by the manically cool Mr Ing who soon confided that he was in fact 'the boy from Eastwood' (Connections neighbouring suburb), that had attended Sydney Grammer and the Uni of NSW. Which begs the question of what a Chinese-Australian commerce/marketing graduate is doing running one of the most progressive clubs in Asia?

His answer was mixed with tales of experiential luck and cunning foresight. While avoiding getting

a real job in Sydney he was enveloped in the Oxford st/Darlo thing. A promoter of scrts involved with Soho amongst other clubs, Andrew soon realised the turf was a bit too insular so he headed for Hong Kong. Which took him on a wild ride from barman, to promoter/DJ, to taking care of artists like Paul Simon's Asian tours. Opportunities were seemingly everywhere and was promptly offered a managerial position at Zouk, helping to culminate its global influences. Although waveringly homesick, the tantalising perks of the ex-pat lifestyle in Singapore have kept Andrew happy. Featured in Singapore's **Cleos**- Batchelor of the Year issue and occupying a demi-God position in Sing's club land, Andrew isn't complaining.

#### Lou Reed's Play Pen

The primary point of dance floor action is now restricted to the **Velvet Underground** room. Before the 'bust', this was aimed at an older crowd, with 250 capacity it was more intimate and less frenzied than the main room and functioned as a large members bar.

Watching this floor in action could only satiate ones appetite for Zouk in its full force. With beauties perilously grooving on podium's and non stop dance euphoria abounding on a cluttered floor of Singapore's beautiful people and stray vagabonds. The DJ's were in primed form spinning a progressive mix and select tracks that have yet to hit even our shores!

Zouk maintains close ties with British club life, with their DJ's

being sent habitually to the UK for re-orientation jaunts. While the cream of the UK are regularly flown over for an Asian style junket, courtesy of the Singapore Trade Commission. Paul Okenfield, Sascha, Danny Rampling, Nicky Holloway et al have enjoyed the de-tox n'tan tour.

Exceeding the pedestrian expectations of a club, **Velvet Underground** seems more like a sub-cultural mausoleum Wall to wall velvet and gold fixtures highlights its opulent feel. The carefully chosen art work is from the owners private collection and features a Keith Haring original-'The Healing Hand'(10ft acrylic), while the corridor features a kaleidoscope of psychedelic posters from 60's bohemian artist Avalon Ballroom. The arty furniture, designed by Phillippe Starck and Bauhaus designer Naguchi is a throwback to the lobby of New York's Paramount Hotel.

The watermark of any club is of course its bar and **Velvet Underground's** two strategically placed liquid pleasure points are exemplary. The cocktail list reads like a neutron bomb for your brain cells, with the simplistic yet effective mango soaked Vodka and tonic winning my heart. Andrew's insatiable travels to find innovative cocktails, often leads him back to Sydney where he swears he finds much inspiration.

• **By Natalie Apostolou.**

Designers: (from Sydney) Phillip Lakeman and Graham Oldroyd.

Over page: Spec list, Zouk pix.

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# ZOUK



## Zouk Fact List

**Owner:** Lincoln Chang

**Marketing Manager:** Andrew Ing

**Zouk Design and Construction:** M/S Businessworld Services Pte Ltd.

**Furnished:** M/S ABraxas Designs Pte Ltd  
**Lights**

1 Tiger Scan, 6 Golden Scan II, 4 Emulator, 4 Flint, 1 Moon Flower, 1 Tricono, 3 Baby Star, 10 Super Strobe(1000W), 100 Par 36, 100 Par 64, 20 Far 56, 18 Flat Spot, 8 Sound Scanner, 4 Spinner, 3 Smoke Processor, 1 Follow Spot (1K), 1 Theatrelight Showmaster Controller II, 1 Orion, 1 Mirror Ball (6ft diameter), 10 Solar 250, 8 Kodak Slide Projectors.

### Video

1 Video projector Sony VHQ 1042

2 Dalite 6' x 8' screen

4 25" Sony monitors

1 Panasonic Video Mixer WJ-MX12

### Sound

3 pairs 4785 JBL speakers

3 pairs 4755 TCB JBL speakers

2 pairs Cervin Vega Bass Bins

3 Technics SL1200 Mk2 turntables

1 Formula Sound System 2000

1 Peavey 12 channel mixer

1 Sony DAT player

3 CD player (Technics, Denon, Pioneer)

### \*Zouk Video Bar

Video: 2 Sony Multi-system video players

1 Eclair Video Mixer, 1 Tape rewriter, 12 25" Sony Monitors, 1 6' x 8' screen

Sound: 6 pairs JBL Control 1, 1 pair JBL Bass Bins

**\*Zouk Wine Bar**

Sound:

5 pairs JBL control 5, 1 pair JBL SP 5

1 Denon twin CD player

### \*VELVET UNDERGROUND\*

Lights: 4 Mini Scan, 4 Strobe, 1 Multi-Eye, 1 Esq, 3 Follow Spot, 20 Egg Strobes, 4 Baby Star, 60 Par 56, 1 Theatrelight Scenemaster Controller II, 1 Pro Twin, 20 Par 36, 2 UV

Video:

1 8' x 8' screen, 2 25" Sony Monitor, 1 Sony VHQ1000 projector

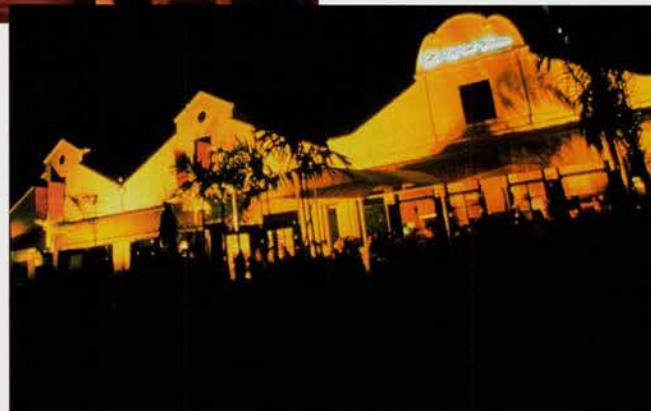
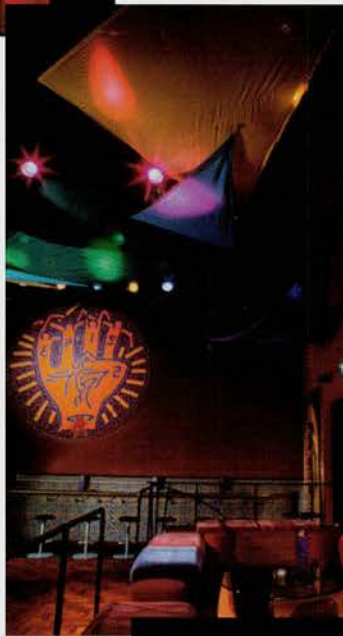
Sound:

2 Pairs 4785 JBL, 1 Pair 4719 Sub18" JBL

1 Formula Sound System 2000

3 Technics SL1200 Mk2 turntables

1 Denon CD player.



The Connections ClubLand Guide to:

## Whats Hot And Not- in Singapore

### Hot

Zouk NightClub  
Rick Price  
McDonald's Love Burgers  
Singapore Slings  
Australian's  
Mangoes  
Drag Queens(with pants)  
Train System  
Phone on every corner  
Smoking in designated zones  
The Connections team

### \* Not

\* Drugs  
\* Megadeth cover bands  
\* ChewingGum/Possesing Gum  
\* Performing felatio/Receiving \*felatio.  
\* Americans  
\* Sago  
\* Homosexuality  
\* Hailing cabs not from designated zones  
\* Phone Tapping  
\* Price of a beer  
\* Being branded sisters (we all look the same!)

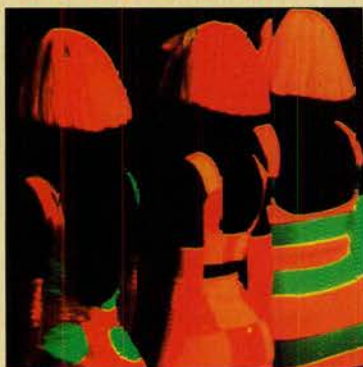


# LIGHTING MONTHLY

September 1995

Edited by Catriona Forcer

## WILDFIRE



Wildfire Inc. of Los Angeles have announced the formation of a strategic alliance with Greater Union Village Technology to distribute its line of Long Throw Ultra-Violet lighting fixtures, as well as its fluorescent paints and creative materials in Australia, New Zealand and Singapore.

Wildfire's Vice President of Marketing & Sales, Michael Friedman, said: "We are extremely pleased to finalise this agreement with GUVT. They are a leading source of professional lighting products in these markets and have an excellent reputation for quality and service."



GUVT's National Product Manager for Special Effects Lighting, Noel Bourne, stated: "Combining our extensive experience in special lighting effects, with Wildfire's state-of-the-art Long Throw Ultra-Violet technology, we expect to offer our customers highly specialised package of creative design and production services for luminescent and backlight effects."

Wildfire, established in 1989, manufactures Long Throw Ultra Violet fixtures and luminescent backlight effects materials. It is currently providing visual effects at Universal Studios, Sea World, and numerous other entertainment venues worldwide. For further info call: GUVT (07) 358 5022.

## THE MIGHTY ATOM

Following on from the success of the Axiom range of lighting consoles, LSC Electronics felt that not everyone required the extensive features offered by the Axiom. With this in mind they have developed the Atom, a simple console to use but surprisingly powerful.

Available in two sizes, a 12 channel two preset and a 24 channel two preset model, the Atom can be switched to 'WIDE' mode giving 24 channels single preset and 48 channels single preset respectively. The versatility of this small console is further enhanced with nine pages of memory for scenes or chases that can be replayed on the lower bank of preset fader. This provides up to 108 scenes or chases for the Atom12 and 216 scenes or chases for the Atom24.

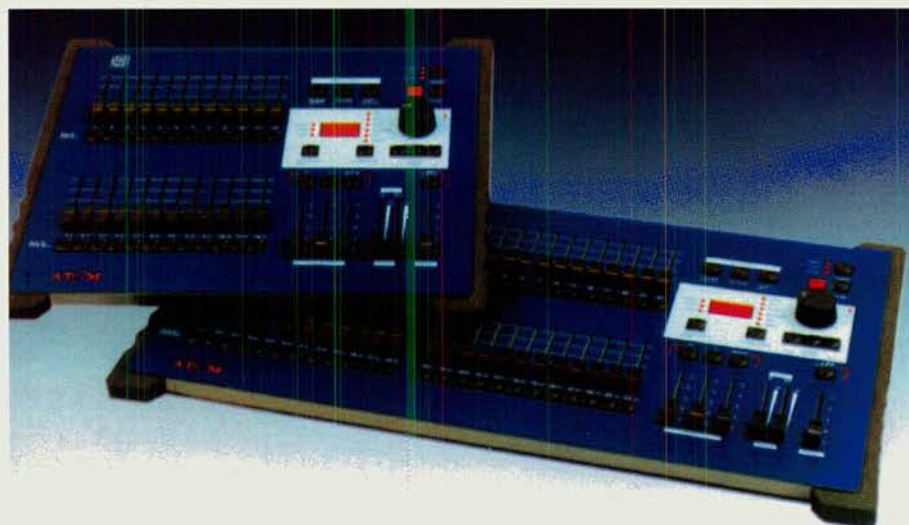
DMX512 output is standard with a RS232 port for printer or terminal and a Sound to

Light plug-in module as options. A video port allows the option of connecting a VGA monitor for the user who requires an active display of outputs, patches, scenes or chases. The user can further enhance the Atom by using the Axiom range of options such as 3.5" disk drive back up, a choice of analog output modules and a 12v Gooseneck lamp.

The main design criteria was to develop a lighting console with simplicity in operation, but offer more experienced operator extensive memories, softpatching, preview/edit functions, add/kill facilities, inbuilt diagnostics and page freeze. The Atom maintains the same styling techniques introduced by the award winning Axiom range.

Contact LSC Electronics (03) 9561 5255.

Write in 308 on Reader Service Card



## Bits

- BSS Light & Sound Innovation of Adelaide have sold 4 x LWR Trackspots and LWR Universal Controller to the Adelaide Festival Centre.
- BSS also provided the Shedley Theatre in Adelaide with 11 Prolite 1K Zoom Spot Profiles. For further info call: BSS (08) 352 8388.
- TCP in Sydney have taken delivery of a Mini Ultra Scan 2 system.
- CDA have recently sold DF-50's to NZ, GTV9 Melbourne, Innova Singapore and Image EFX.
- CDA have supplied Staging Connections of Melbourne with some Coemar Sequenzas and

Clearlight Melbourne with some more De Sisti Duccio groundrow units. For further info call: CDA (03) 9467 8666.

- Premier Lighting have added Cyberlight fixtures to their rental inventory.
- East Coast Lighting (Brisbane) have taken delivery of 24 Dataflash fixtures and Dataflash controller for their rental inventory.
- PA Productions (Dubbo) have purchased 8 Trackspots and Universal controller for installation into a Lismore nightclub.
- Fivalite have added Dataflash AF1000s to their rental inventory. For further info call: GUVT (07) 3585022.

**DATAFLASH AF1000**

The new Lightwave Research Dataflash AF1000 is guaranteed to incinerate the most resilient retinas as the xenon AF1000 is one of the brightest strobe systems available. It can be controlled from any DMX desk, by Dataflash Mini or LCD controllers.

The fixture emits up to 25,000 joules of continuous flashes at a colour temperature of 5600° kelvin and any number of fixtures can be simultaneously triggered. This delivers the high power photon emissions associated with lightning storms, making simulation of the latter easy.

Tube replacement is quick and simple and current consumption can be adjusted if desired. The AF1000 is available in yoke-mountable weather-resistant or non-weather resistant versions. By changing a chip inside, the AF1000 can become an old style Dataflash and be integrated into already existing systems. For further info call: GUVT (07) 358 5022.

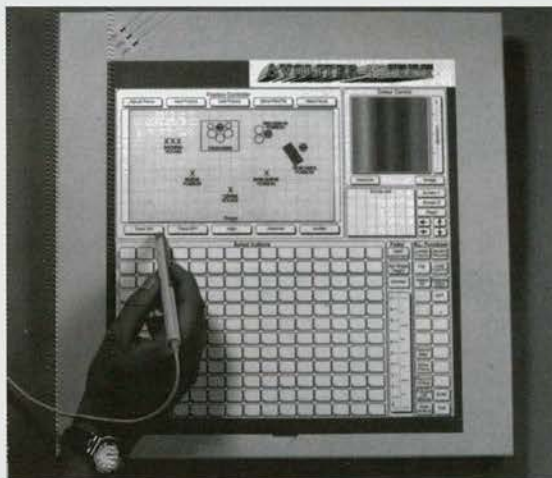
The Avolites 4D Track acts as an interactive stage plan, alleviating the need for button presses, enabling the designer to map out the stage and focus positions as desired creating time savings in the course of programming.

The XY tracking allows you to move as many lights as you wish as one - representing time savings when it comes to preset focuses.

It can also be used to follow spot performers. Apparently it has already been used successfully to track ice skaters, and Avolites believe it's only a question of time before this function becomes a commonplace 'live' asset in all types of performance.

It is also possible to select lights and adjust memories so when a performer moves off the preset focus target position, you can use 4D Track in 'nudge' mode to move the beams and pull the moving light memory back into focus on the artist.

Time can be saved in colour mixing too.



Virtually all moving lights offer colour mixing that is powerful but extremely difficult to manipulate manually. However with the 4D tablet you can build up a complete palette of colours within minutes without having to touch a wheel. This makes finding and experimenting with colours simple and intuitive.

For further info: Avolites 0011 44 181 965 8522.

**Bits**

● Following last month's release of the new **GP-12 dimmer**, Jands report that over 50 units were sold from the initial run.

"We are still running to back order with this product," said Lighting Products Manager Mike Tanner. "But production is keyed up to meet the demand and good stocks will be available from Jands dealers throughout Australia."

● Simon Garrett, Australian Market Manager for **Selecon**, must be suffering from too many sleepless nights with his new baby. Simon turned up at the airport to fly to Australia with a new demo wide angle condensor spot.

Whilst Simon was concerned about the weight of his luggage, his troubles were only just beginning. His passport had expired the previous week.

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# AUSTRALIAN MANUFACTURERS NEED TO UNITE

## The Peter Kemp column

Having just attended the PALA 95 show in Singapore I thought that it was an appropriate time to talk about the following topic.

We had two stands at the show one being for Intel Control, an Australian manufacturer of architectural dimming/energy management systems, and the other stand was for Coemar De Sisti Australia P/L - basically because CDA has the distribution rights for a wide range of products throughout the Pacific Basin and also due to the fact that CDA are gradually taking over the marketing and sales of Coemar products into these areas also. This is the first time we have exhibited at the show however a number of other Australian manufacturers were exhibiting also, these being Allocate Components Ltd, ARX, Connections Magazine, IMP Audio, Jands, LSC, Q Engineering, Techtel P/L, in addition to these companies Australian products could be found on a number of stands at the show.

The point of this article is to try and drum up some support to assist Australian manufacturers, the editor of this magazine has tried to do this before, without a lot of success however perhaps this article will encourage some people to take up the cause.

Regular attendees to most trade shows will

notice areas of these shows devoted to a country or industry association. This usually is based on some sort of government department participation in organising a trade mission on behalf of the manufacturers and ALWAYS is partially funded by the government. As an Australian manufacturer there are possible grants etc available for exporters however in order to get some assistance with trade shows we need a united body/association in order to put forward our requests etc. If we, the manufacturers, want this type of assistance then it is up to us to do something about it. Probably some of the individual companies have done some work in this area however surely as a united body we would be more successful. Through my associations overseas and the fact that CDA is a member of PLASA (Professional Lighting and Sound Association based in the UK) I am aware of the assistance etc that is derived from such associations such as PLASA, APIAD etc.

In addition to assistance re exhibitions, some of these associations are instrumental in setting standards, assisting with education for people within the industry, liaising with other associations around the world etc. I know that there has been a couple of attempts at

starting associations within Australia however I personally believe that these have not been supported enough by the manufacturers and also have not been open enough as national bodies. Once again it is up to the manufacturers and I can only urge all Australian manufacturers to get together for the betterment of the industry and to assist us in all getting our quality products throughout the world. Most people will know that such brand names as LSC, Jands etc have been very successful in exporting their products throughout the world however we must continue to push and push this type of thing further. I know from my association with PLASA that many overseas manufacturers are looking closely at the possibilities in Australia, especially with such world wide events as the Olympics in the year 2000, well we too should be looking at all the overseas opportunities for our products.

If anybody would like to contact me personally regarding this matter please feel free to do so, or perhaps we can get together through Connections to discuss this. Maybe the organisers of ENTECH 96 may like to offer some sort of forum etc for such a body/association.

● Peter Kemp is the Managing Director of Coemar De Sisti Australia P/L.

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# BRISBANE LX COMPANIES

Daniel Cole looks at two more

**Skypak** is run by Craig Fussell, Troy Quaife, and Brian Story.

Originally started on the Darling Downs, Skypak has been going for 5 years. They have been based in Brisbane city for four years now and have recently moved from premises in Fortitude Valley to Bowen Hills.

Skypak have built up a strong presence in the club and event sector of Brisbane nightlife.

"We estimate that we have supplied equipment to 90% of all dance club/events over the last year or so," Craig Fussell said.

They are exclusively a lighting company but do handle complete packages for clients as required. Their services extend into installation, tour, supply, sales, service and hire.

"Hire is certainly the strong performer for Skypak but we also look after the whole event



Skypak Lighting Showroom

or specifics if required," he said. "For instance, Skypak are supplying the pyrotechnics for 'The Makado' currently touring Australia."

They have a diverse hire department including a scientific range of theatre luminaires and a large range of effects lighting including pyro-

technics, lasers and moving lights — some of which may be impossible to roadcase. Skypak are agents for Martin and Clay Paky, so they have a good range of parts for such items.

Much of their trade is done interstate.

"We are considering opening a storage space in Sydney to cut down on crippling haulage charges," said Tony. "The thing is some effects are more likely to earn dollars in Sydney most of the year instead of sitting in Brisbane and used occasionally.

"Freight charges for some of the larger effects become to cost prohibitive for the client."

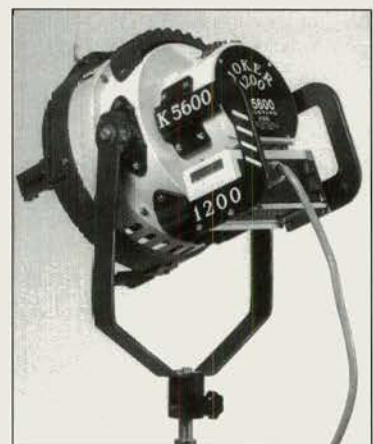
Skypak have calculated that their operation has increased approximately by a third each year.

Their full-time service technician is Harry Godley who worked for English electronics/

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\* Sun Gun option



Skypak Staff - Harry Godley, Craig Fussell, Brian Story, Troy Quaife

audio company Carlsbro. He is, according to Troy specially adept at repairs of moving lights and effect lighting.

Craig is the laser specialist for the company. He is currently travelling around the US sourcing out new trends and to train on some larger laser and lighting systems unavailable in Australia.

Skypak are also in the midst of renovating their showroom and display area. They carry a good range of lighting supply (filter, globes) and because of their experience and supply of effect lighting, they can help with any problem in this regard.

Hire Department (Selected)

Argon lasers from 2mw to 5watt; ACR Supernova; ADJ effects; Clay Paky—Astronacos to Superscans; Coemar—Comet 16 to Venus M4; Geni—Megastobes and tubes; Martin—Roboscans; Optikinetics; Satel; Tas; Fog Machines—Minimist to Jem; Teatro, Prolite, Coemar 1kw & 2kw profiles and frames; Theatrelight control; Jands & Dyalite racks, Trussing, cabling.

Contact: Skypak Lighting, 159 Abbotsford Road Mayne, Qld 4006. Ph (07) 852 2757, Fax (07) 252 8910

**Creative Lighting** emerged from the dissolution of Lightmoves, Brisbane post-Expc. They have been in business for five years.

Their showroom and factory is located in Fortitude Valley. Creative Lighting supplies services such as sales, installation, consultancy. They also have a commitment to product development and design.

"This compliments our consultancy and tendering work," said Sales Manager, Mark Ryder.

Creative Lighting employs two full-time electronic technicians specifically for this purpose.

One product constructed and designed at Creative Lighting is Touch-Tell. It is a product designed for outdoor tourist information use.

Physically, it is a stainless-steel column with a slanting top; when a hand is placed on the surface, it triggers any number of recorded information services.

It tells you things.

Optional features enables this device to also control any number of lighting fixtures or sequences.

"With an eeprom based sound recording multi-lingual messages can be replayed," says Mr Ryder. "It's multimedia capacity is through a DMX512 or Dyalite's DNet control. These are both optional features.

"They are installed on the foreshore of Circular Quay in Sydney, Brisbane's Southbank area, and Anzac Park in Townsville. Touch-Tell is a response to the problem that signage is just not being read these days — there's too much of it and it's confusing.

"The product is ideal for heritage trails theme parks. It also has increased audio message handling capacity. Touch-Tell makes sense in any situation."

Another product designed and built in-house is Showpro. It allows more control over an event such as those mentioned above.

"It is basically a theatre control desk without faders, so it's compact," Mr Ryder said. "It is designed for automated or interactive control of up to 256 shows — thousands of events. Steps and cue times can be pre-programmed.

"At its core is a personal computer. The user can access various programs through a 12-key keypad that also has security features so no-one else can tamper with your programming. For example, in a museum you may have both audio and visual changes occurring; you can program them all to run through ShowPro. There is local interest in this product—we are also selling to Taiwan, Singapore and the UK."

(\*More on ShowPro in upcoming issues.)

Although they do not run a hire depart-



Mark Ryder, Sales Manager, with a Touch Tell

ment, Creative Lighting is happy to hire out equipment 'on spec'.

"We had a full hire department set up after the name change from Lightmoves, but we sold that off," said Mr Ryder. "Our business has been channelled into other areas such as architectural dimming, installation and consultancy — Lance Stewart, the managing, is in charge of this facet of the company"

Some of more recent installations include the Aztec Club and currently under negotiation is the Institute of Sport in Canberra. According to Mr Ryder there is a number of pubs' renovating and are approaching Creative Lighting.

"Some outlying suburbs of Brisbane are turning towards local entertainment — there is now more of a population out there so pubs' are responding," he said. "Subsequently, they need entertainment supply or design. This is what we are strong at, particularly with our technical and engineering resources. We usually do audio, a/v and lighting but we do combine with other companies for larger audio installations."

Part of Mark Ryder's job is to oversee the lighting design for such installations — each project has job demarcation.

"We have an engineer on staff and Lance Stewart looks after large displays," he said. "Our operation encompasses lighting for commercial applications, special effects, disco display, garden, architectural—anything in lighting except domestic or industrial. We sell lighting spares, gels, effect lighting equipment, we are agents for Martin, Coemar, Clay Paky. We are also the Queensland appointed dealer for Dyalite."

They employ a staff of ten full-time.

Contact: Creative Lighting, 105 Brunswick St Fortitude Valley, Q 4006. Ph (07) 252 5685, Fax (07) 252 4778

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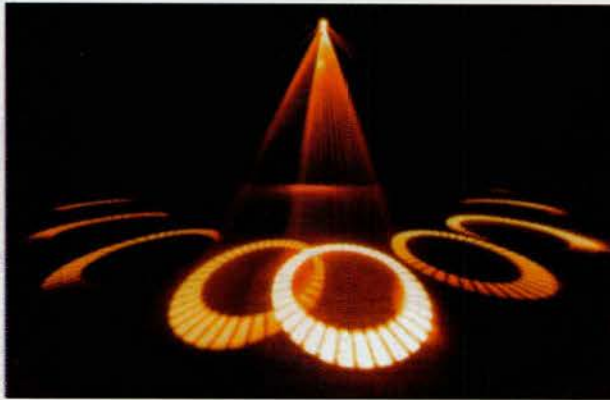
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## Three new effects from Geni

Show Technology are taking stock of some more Geni lights this month - the MRG-5 Evolution-5, the Cirrus-5 and the Fresco-1.

The MRG-5 produces a fan of multi-coloured rotating gobos from an HMI 575 lamp. 'In air' focus adds to the tunnel effect. The patented mechanical design offers control of gobo selection and rotational speed, dichroic head speed and direction, and strobe effect speed. It also has independent DMX512 control and automatic audio con-



....and it's effect

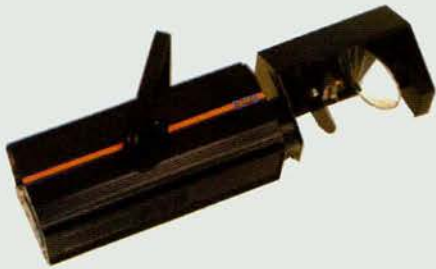
The Fresco-1's remote control diffusion lens means instant change from a hard edged spot to a soft wash effect. It's HTI 150 lamp has intense 6000K 10,000 lumen output and long life. Manual focus for sharp beams in any location. It has 10 saturated dichroic colour filters and micro-stepping control offers bi-colour beams and rainbow effect. High speed 12 flash per second shutter catches and DMX512 signal and addressing are also included.

• Show Technology (02) 898 1111.

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## MORE BATMAN

GUVT were keen to point out that, referencing the article 'Batman and Martin' published in the August edition, that Warner Bros Movieworld (Gold Coast) have purchased 15 Intellabeam 700HX fixtures for use in the recreation of the 'Riddlers Lair'. LD was Tom Ruzika of the US based The Ruzika Company. OK, anyone else out there been involved with Batman?



The MRG-5 Evolution-5.....

trol for preprogrammed sequences.

The Cirrus-5 also has an HMI 575 lamp, 7 pure dichroic filters which can be mixed to create 15 saturated colours plus 4 colour dichroic filters to offer more possibilities. Bi-colour beams and high speed rainbow effects are also available. Eight gobos on two wheels offer gobo layering for a total of 16 different combinations. Gobo scrolling either wheel opens another range of effects. The head can be manually rotated +/- 90° for accurate positioning. The Cirrus-5 utilises standard DMX512 signal and addressing.

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## NEW RANGE OF 4" COLOUR CHANGERS

Romator, the Swedish manufacturer of the Rainbow colour scroller range, have released a new range of 4 inch colour changers for the professional and educational markets.

Two models are available to fit most 500/650w luminaires including Selecons Acclaim range, ETC's Source 4 and Strands Preludes.

The Acclaim Stage 1 provides:

- 11 colours
- DMX control from your lighting desk in 10% steps
- RJ12 telephone connectors
- supplied with colour scrolls

The Rainbow Pro 4 provides:

- 21 colours
- DMX control from your lighting desk in 5% steps
- XLR4 connectors
- remote fan control

Both systems are available in September for demo, contact your nearest Selecon dealer.



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## SGM Newton Followspots

The Newton 575 and Newton 1200 followspots are manufactured by the Italian company SGM and distributed here in Australia by Ashton Admor.

It's optic system uses a twin condenser enabling more power to be obtained from a HMI discharge lamp. The standard lens can be replaced by an optional wide-angle lens for wider beam angle. The follow spots have a colour wheel with 8 replaceable standard colours, dichroic filters ensuring maximum colour uniformity. Colourchanger is fixed and intermediate positions, with 2-tone beams. Rainbow effect using variable speed colour wheel rotation.

The Newton has a strobe rate which is adjustable from 0.5 to 12 flashes per second. Mechanical dimming is by means of two blades which, moving towards the centre, enable the light output to be regulated with precision, from 100% to 0%.

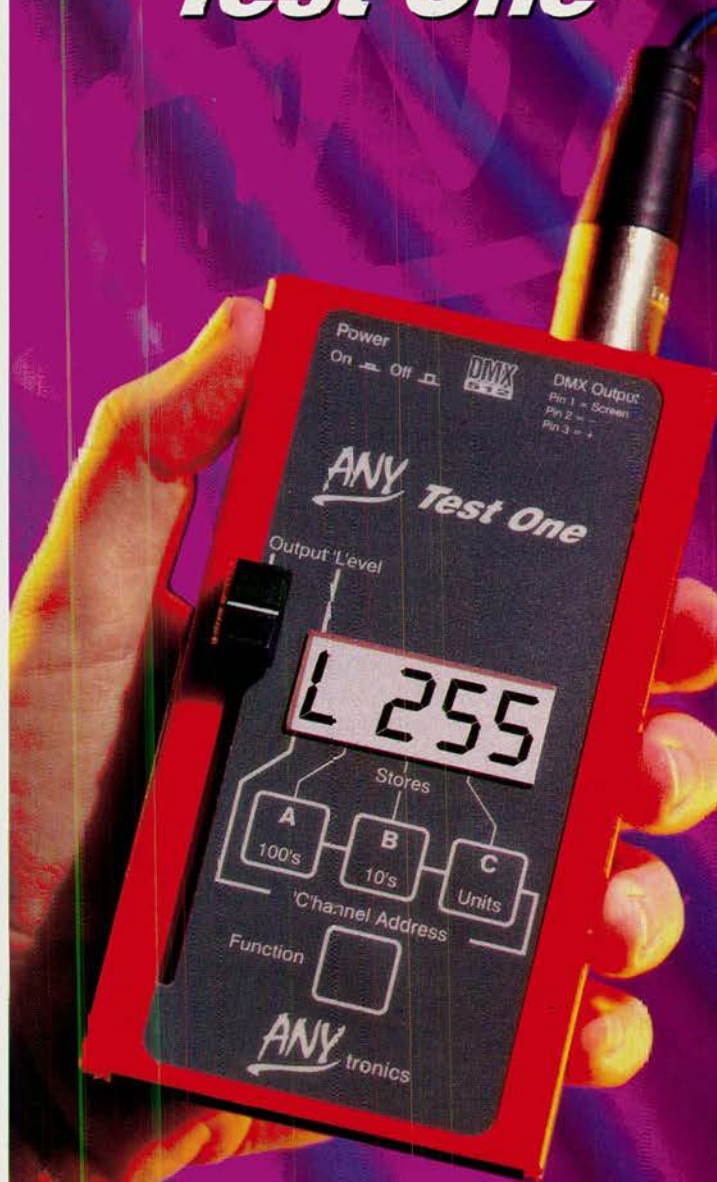
All functions are controlled using sliders and buttons on the control unit, which can be rotated round the spot (360°) and has adjustable height. The Newton can also be controlled by any desk with DMX512 digital output and programmed in sync with the rest of the lighting. The DMX512 IN/OUT connectors enable several spots to be daisy-chained and independently controlled with separate functions or programs, or in parallel, with the spot functions enabled simultaneously.

•Ashton Admor Pty Ltd (09) 478 3509.

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# INTEL CONTROL

Intel Control is a recent addition to Australian Manufacturers of architectural dimmers/energy management systems. In Australia Intel Control's products are distributed by Coemar De Sisti Australia P/L but all export sales are handled by Intel Control directly.

Intel Control have been very active in overseas sales and have in fact exhibited at two International shows over the past 12 months. At the recent PALA 95 show in Singapore Intel Control had its own stand and they selected this show to release their new 12 Channel "THE MASTER" energy management system. Apparently they came away from the show with many interested distributors for most of the Asian areas plus as far away as Spain and the UK. They are now in the process of finalising appointment of official distributors for many countries and already have agreements in place for Korea, Hong Kong and China.

At the PALA 95 Intel Control stand they showed their systems controlling incandescent, tungsten halogen, ELV, Compact Fluorescents, Rapid start Fluorescents, Electronic ballast fluorescents and Discharge lamps. In addition to this they had their Lumen X Windows based software on display that can be used for dimmer configuration.

Sales of their products in Australia have



Intel at PALA 95

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In the last couple of years alone, the range has been enhanced with many new colours, colours that designers everywhere describe as "cleaner, hotter, stronger".

With well over 100 colours and diffusers the range gives incredible freedom of expression and because Supergel colour filters tend to last longer, they are more economical.

All of which means it is probably time you looked at the better-than-ever Supergel range.

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reportedly been steady and they have recently finished the commissioning of a multi channels energy management systems for a factory in Melbourne where 80 Multi-Vapour 400W high bay fixtures are being controlled by a system with Photo Electric cells which dim the fixture when the lighting level reaches a set level. The saving in lighting running costs for this factory with this system are apparently quite staggering.

Intel Control recently released the latest addition to the Intel Control range of energy management systems.

The Master is a 12 channel intelligent energy management system, with extensive on-board features, normally optional extras on systems of this type. It is ideally suited for offices, hotels, shopping centres, cinemas and entertainment venues, anywhere in which there exists the need to control large lighting systems.

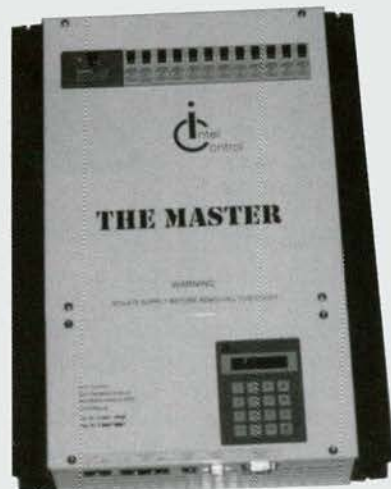
Available in a variety of configurations, The Master will control incandescent, quartz halogen, ELV, fluorescents (including rapid start, HF, electronic and Compact) as well as High and Low pressure Sodium and Mercury Vapour discharge lamps. The systems are available in 12x2.5kw, 6x2.5kw and 6x5kw, in the 2.5kw systems three channels of the rack can be upgraded to 5kw if required.

The Master features a LCD display panel on the front for ease of programming and operation. The LCD allows reprogramming to be undertaken at any stage, either pre or post-installation, offering the end user total flexibility.

Allowing input for a variety of inputs, including Photo Electric Cell, Motion detectors, and other analogue signals, The Master accepts control signal from the complete range of Intel Control Panels, from simple slider/level operation, push button presets, to optional DMX512, and the Intel Control 'Visual Lumen X' software. Installer selectable presets include functions such as panic, Fire, Security and loss of control signal.

All Intel Control systems are thoroughly 'soak' tested in the factory prior to dispatch and can be pre-configured prior to dispatch or configured on-site as required.

For further info call: CDA (03) 9467 8666.



The Master Control

**L**ast time we counted, there were about 17 brands of smoke machine on sale in Australia....all of them claiming to be better than the rest!!!

You really only need to remember one name....



*Mini 500* ■portable■off-mains capability■cannister-based  
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*Cirrus Lowsmoke* ■phenomenal CO<sub>2</sub> based low-lying fog■industry compatible adaptor■low-lying mist to "London" fog

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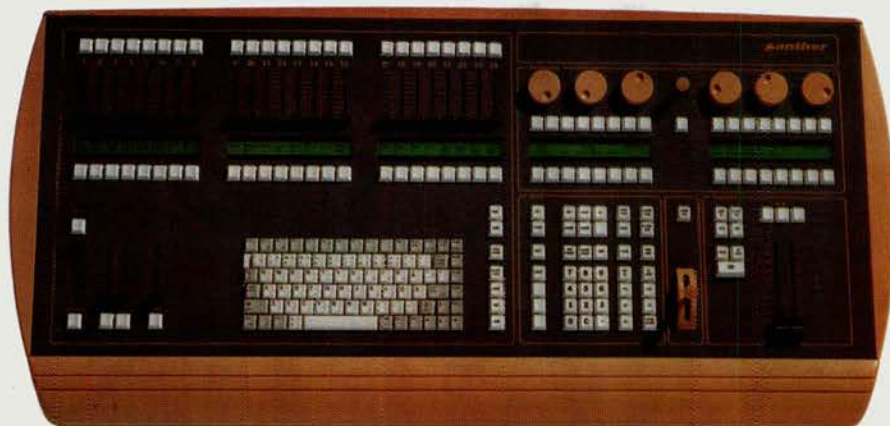
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# PANTHER CONTROL



AVAB have released the Panther VLC lighting control system. The Panther console connects to an IBM PC 486 computer and can handle up to 6000 channels. It is optimised to set attributes to moving lights, motorised luminaires and colour scrollers. Editing of the show can

be carried out from the desk or directly on the IBM keyboard. The windowing environment makes the user interface extremely intuitive. Several PC's can be networked, allowing inherent backup facilities as well as remote access. For further info call: *Bytecraft (03) 9587 2555.*

## Bits

- Dale Kennedy (Kennedy Amplifier Hire) reports the sale of 20 of the new **Selecon** 12-28 Condensor profiles to the Mackay Civic Centre for the front of house bridges.
- Entertainment Installations have supplied Bakes Bar & Grille with eight **Martin** Robocolour 2, one ADJ Astroraggi 2 and one ADJ Petal.
- Translite (Brisbane) have added additional **Cyberlight** fixtures to their existing Cyberlight rental inventory.
- Riffola of Mount Isa have recently completed an installation at the Irish Club using 12 **TAS** Mini Ultra Scans, **Coemar** Versatiles and **Leisure Lighting** Jakstars.

- **ShowCAD** also seems to be a bit rushed as Riffola from Mt. Isa have just purchased a system and another system has been supplied for a job at the old Parliament house building.
- Tim Kennard of Herkes reports an unusual sale to the quality control department of Australian steel giant BHP. It seems they are using four new **Acclaim** 150w Metal Halide Condensor profiles focused to a narrow clean blade shining across the steel as it exits the mill to pick up flaws and imperfections.
- Australia's Wonderland have placed orders for **Trackspots**, **Emulators** and **Universal Controller**.

# Cruiser

The double dichroic filters and the final mirror of the Cruiser disco lighting effect, project 6 rays with a tilt movement of 170° and a pan movement of 180°. It also has interchangeable 39mm diameter gobos.

The lamp is provided with two gobochanger wheels with a double series of 10 gobos, of which 4 are different among themselves. It has two strobe/black-out completely independent and 8 pre-programmed sequences with numerous scenes.

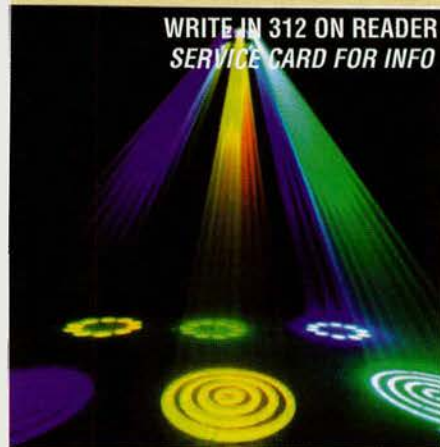


With a height of 35cm and a reversible yoke, the fixture is universally useable and an easy effect. It can work:

- in the stand-alone mode with music input
- through dedicated controller GR 0141
- through standard control desk with DMX512

Call: *Universal Lighting & Audio (075) 290 688.*

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# BLOWING OUT OF THE UK



*Cirque Surreal (Superhaze fluid)*

New releases continue to blow out of England for The Effects Company, with the advent of the Cyclone, a extra high performance machine suitable for that occasional SCG or MCG gig. With a massive 4Kw of heating, standard DMX control, and the capillary technology, The Effects Company hope this machine will become the standard for outdoor, or larger indoor, event smoke production.

New to the range is the new industry standard compatibility of the Cirrus Lowsmoke unit. This makes the Lowsmoke now compatible with many smoke machines in the market place, such as the High End F100.

Also available is a new range of fluids from the UK, compatible with many brands of ma-

chine. The range includes the HAZE and SUPERHAZE fluids which allow production of fine mists of smoke, perfect for lasers and moving lights.

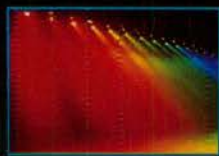
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*The Cyclone*

YOU MAY THINK YOU'RE READY TO PARTY BUT...



**B**rilliant Effects

**P**roven Crowd Pleasers

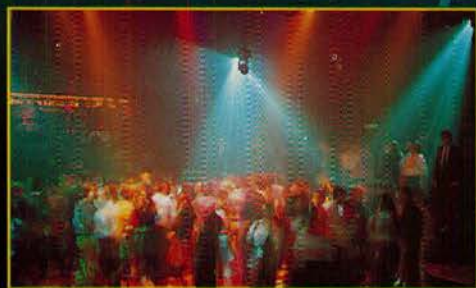
**S**uperior Engineering

**R**ugged Construction

have you checked your list?!

night  
Club  
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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.



# SHANGHAI OFFICE FOR DYNALITE

## The Gunton Dynasty Stretches to China

Dynalite didn't export anything three years ago, but today one half of its sales happen overseas. The Sydney based manufacturer of architectural lighting control equipment will turn over \$5 million this year, and has just opened a joint venture office in Shanghai.

Not bad for a one-time nightclub effects manufacturer!



John Gunton in Shanghai

John and Jenny Gunton own the firm, which was created from the ashes of Ceitex Industries, which in turn grew from the mid 1970's into a formidable manufacturer. Dynalite had a chequered history at first, ebbing and flowing with a volatile market for chasers, tubelight and production dimmers, which culminated in the first incarnation of the firm going into receivership in the late 1980's. Many people active in the industry at the time will confirm just how tight things got when the bi-centenary bubble burst! Your writer came perilously close to insolvency at that time too - a chronicle of that era must wait a little longer for some more developments!

The Guntons have the business firmly under control, when I visited the staff of 18 or so were going about their business, half of them were preparing components to be shipped out for a production run, which is handled by another firm in an adjoining suburb. "Their labour cost is \$16 an hour, if I ran assembly it'd cost \$40 an hour".

Dynalite run a planning system which can track a component back to a supplier years after a finished product has been shipped. It pays off in product reliability, and proof of this is the sparse assortment of old Dynalite products in the repairs area. "Repairs are not a crushing burden for us", John said. "Other companies go down the gurgler after six years trying to back up earlier mistakes".

It's a good example of a firm which has moved with

### ASIAN ACTION

the times. There are more computers than people, and some of those people worked in previous times in the entertainment industry as technicians. Today, like R & D guy Dave Doyle, they work towards solutions and ideas which help grow the firm. "Our 'good ideas' are what moves us forward" said John.

Typical of these is the Universal Sensor product. In energy management, which is a growing field, the need arises to switch lighting in response to need. Obviously you can arrange a timer to switch an area on or off, but this doesn't take into account natural light or traffic. Dynalite devised a sensor not unlike those found on an alarm system, which detects movement. It also detects light levels, and responds to infra-red control signals.

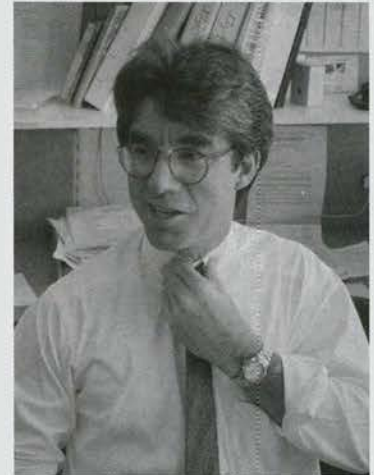
Thus a routine can be created on a PC which responds to sensors around a building. The system can be set to adjust for people moving in areas and daylight conditions. When natural light decreases below a preset lumen count it turns on some room lighting. The infra-red control signal recognition allows for the possibility that some staff may carry remote control units which can be used to override the system.

My initial thoughts were that this kind of energy management system would only suit a larger commercial environment, but John says the 'Smart House' is where many sales are at right now. "The sun goes down, the garden lights up, the kids get up in the night to go to the bathroom and the lights turn on as they move through the house".

Dynalite has installed control systems in some large houses too, like Palaces belonging to some of the more notable royalty in the world. These

jobs are subject to confidentiality agreements.

The China venture was started just a few months ago after three years of exporting to Asia. "You must be on the soil. The Chinese are very nationalistic and we wanted to establish Dynalite there so they perceive it is a Chinese



Sales Manager Guy van Holden

company with an office in Sydney. They get twitchy." To kick off, Dynalite hosted a function in the Olympic Hotel. Seven batches of 60 people came through for a two hour introduction and demo of Dynalite's technology. Some ground work had been done beforehand to ensure a good turnout of the right people, which entailed some Chinese cultural business techniques which we would consider unusual. Certain moneys were paid to the press in exchange for coverage!

The key to business in China revolves around four phases, John thinks. "First, China is all about connections. You make a connection and then seek endorsement from the top people. Then you entertain the people who make the decisions. Only then do you get down to products and prices".

Knowing the right people works in any culture, John sites Jeremy Collins at Selecon as 'a model exporter', who helped him establish his export operations. Tony Musico at TCP in Sydney has also been an ally, indeed TCP are active in China as well, and Tony's assistant travelled to Shanghai as John Gunton's translator.

• *Dynalite have recently moved to a new plant at Unit 6, 119 McEvoy street Alexandria NSW. Call (02) 564-1400.*

• **Julius Grafton**



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# ★ The Miss Saigon Opening Party ★

**No Heat. No Kitchens. No Power. Just an enormous marquee on a busy street.  
Would you hold your opening gala night here?  
Technical Productions did.**

Danny Yezerski, Director of Technical Productions was the Production Manager behind Sydney's ultimate venue transformation and party of the year, the black tie opening gala for the Sydney premiere of *Miss Saigon*.

The original brief was to hold the event in one of Sydney's most unique venues, the warehouses at Wharves 4 & 5 Walsh Bay behind the Sydney Theatre Company. However as guest numbers grew, it was agreed that this venue would be too small and so a street party concept was conceived. With permission from the authorities to close off Campbell Street, by the Capitol Theatre, for 36 hours only, it was a challenge to set up, produce the event and bump out within this time limit.

The biggest challenge Technical Productions had was to overcome the two hour turnaround. The marquee immediately adjacent to the theatre, was to form the main entrance/drive-way into the event and be decorated as a Saigon Embassy Gateway. Then as the musical commenced, this marquee was to be transformed into the party venue complete with Vietnamese theming and special effects.

The bump in started at midnight on Friday with 20 crew from Pages Hire who also supplied the 60m long marquee. A raised floor (re-enforced to carry vehicles) was installed in the marquee and layed with thick black carpet tiles. The overall design and decor concept for the entire event was created by freelance designer Robert Dein.

Guests entered via Pitt St where mock Embassy Gate walls complete with tropical foliage, cut off drums of burning wood and two Skytrackers (from Bytecraft) were positioned. Cars were encouraged to drive into the 60m structure where guests were greeted by tailed Commissioners and red carpet. At the exit the marquee was again surrounded by a jungle of foliage and another Skytracker.

The colour scheme for the musical was used inside the marquee with a 60m run of black velvet draping masking the north wall.



*The Marquee - before.....*



*.....and after.*

Upon it was hung ten, spot lit, 12ft drop banners of red and the Saigon yellow star. The ceiling was a double effect of a myriad of irregular fairy lights, over which a semi transparent black lining was placed. The entrance/south side wall was end to end bamboo.

Upstairs and into the theatre, guests were welcomed with gigantic suspended Saigon banners and enormous tropical floral arrangements.

Incorporating the theatre's two level foyers and the marquee, the party took its final shape during the two hour performance. Behind the black drapes lay a vast amount of props, decor, bar and function equipment on stand by for the turnaround. A complete new floor of Seagrass matting was rolled out to cover the black carpet. Brightly coloured Festoon lighting throughout the 60m ceiling was hung, a 30ft bamboo hut frame over

the bar was moved in and countless authentic Vietnamese old bicycles, trishaws, market stalls, foliage, vegetable and fruit displays, giant Saigon signage flats and BBQ stations complete with custom built surrounds to mask their frames.

After the performance guests entered the marquee via the west where 100m above their heads a genuine Bell 212 Helicopter that had served with the Australian forces in the Vietnam war was suspended. A request by Cameron Mackintosh to hang a helicopter lead the Technical Productions team on a long and exhausting search for this item. After countless calls and leads, the search ended at the Wagga Wagga RAAF base. The helicopter was spot lit by four high powered KHMI lights.

The Capitol does not possess a kitchen in the commercial sense and with 17 chefs hired to supply Vietnamese cuisine through the night, it became a bit of a challenge to find an area for the food to be prepared and served from. With a bit of scouting, Danny found a vacant shop down from the theatre and he managed to persuade the owners to release it for the event.

The shop was bare with no power, water or flooring. Everything had to be bought in with three phase power connected by Kennedy Taylor.

Special lighting effects were set in both upstairs and downstairs foyers. Blue wall washes against the grand staircase wall, moving lights on the all white dance floor and a moving ceiling show of helicopter gobos (us



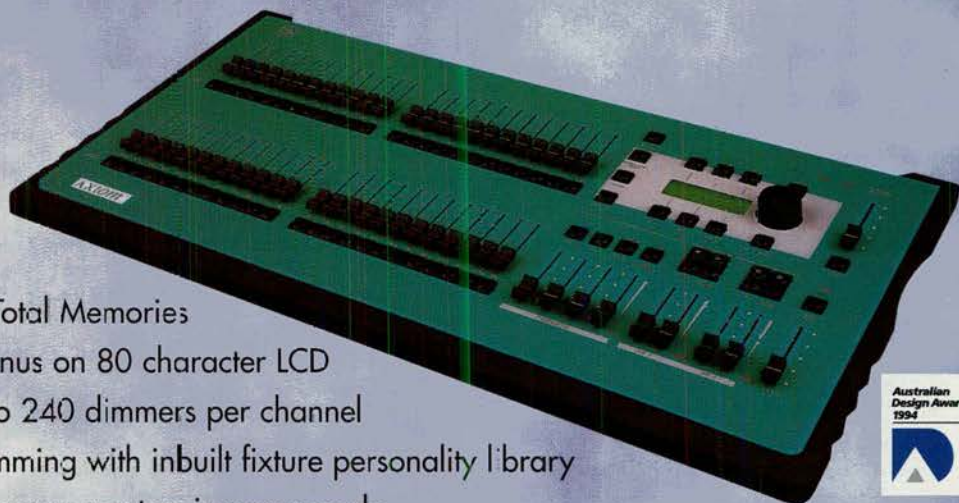
*Brigid Paton & Danny Yezerski*

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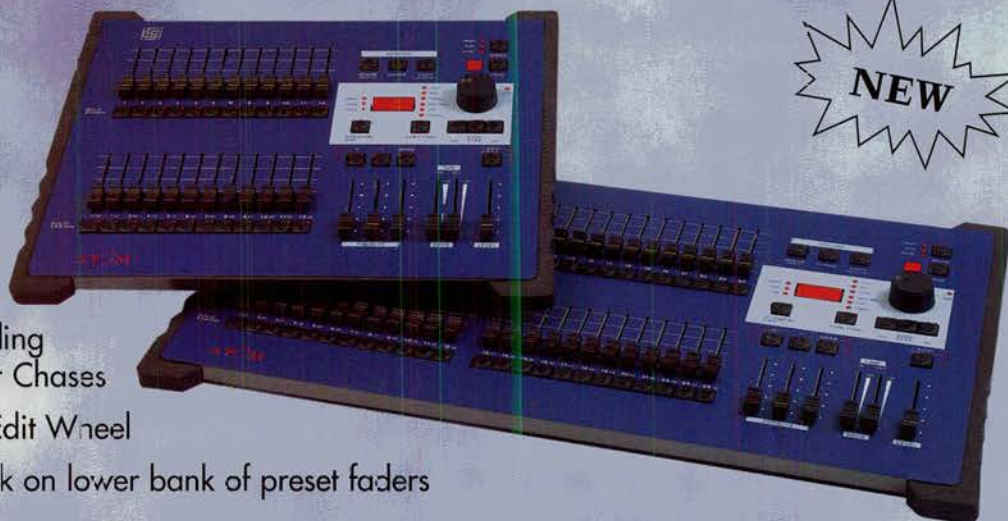
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## Miss Saigon Opening Party (cont)

ing VL6's) in the Heritage bar, were all supplied by Chameleon Lighting, under the supervision of Graham Walker.

Featured spotlights were also focused on the prop and decor items during the marquee turnaround, and the festoons hung. Chameleon also installed two 300 KVA generators to provide the enormous amount of power required to operate equipment.

Technical Productions could not find a supplier for an all white dance floor to the dimensions 7m x 10m so the parquet flooring was covered with white Shoekid, the material used on fashion parade catwalks. Onto this surface was projected the Miss Saigon logo and other major sponsors logos during intermission.

With such a large event, with many suppliers and scattered areas to control, it was



The helicopter arrives

vital to have a form of no fail communication and so Motorola MTX 838 trunking radios with ear piece attachments were chosen. Set with 3 channels, one for event management, one for technical crew and one for catering, communication with everybody was possible at the flick of a channel.

The bump out started at 4am, and finished at 12 noon that day in haste to reopen the street. A lot of weary heads hit the pillow for a well needed sleep.

● Cat Forcer

## Bits

● **Entertainment Installations** have supplied The Loft Niteclub/Palms Royale Newcastle with a 100" Australux motorised video screen, one Sony video projector and one Hi-Fi VCR.

● **Ian Dewhurst Lighting** is currently in Queensland for a major film shoot and just prior to leaving he took delivery of a large shipment of De Sisti film lighting and Doughty stands which are being utilised on the shoot. The order included: 10k's, 5K's, Magis 650w, 2K's, 1K's, 2.5K discharge single ended fresnel system with flicker free electronic ballast.

● **Araluen Civic Centre** in Alice Springs has bought a Selecon MSR1200 followspot to replace its aging tungsten spots.

● **The Australian Opera** have recently added new '15 inch plus' Rainbow scrollers to their recently purchased 2/16 system.

● **Entertainment Services** of Brisbane have just supplied some Coemar Testa 1200 followspots to a theatre in the north.

● **Whitemen Can't Reggae** have just taken delivery of some NAT PC1000 luminaires.

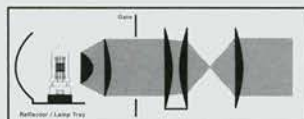
● **Beauty & The Beast** are using AF1000s, Coldflows and F-100 smoke machines with new DMX remote interfaces, say GUVT.

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QLAND East Coast Lighting Ph: 0-7-252 9583 Laser Ph: 0-7-236 2333 SA Cosmonds Ph: 0-8-410 1111 GUVT Ph: 0-8-363 0454

ACT Topstage Ph: 0-6-280 5710 WA Stagecraft Ph: 0-9-227 9000 Ashtons Ph: 0-9-478 3800 NT Top Ends Sounds Ph: 0-89-81 7744

TAS KW McCulloch (Hobart) Ph: 002-286573 KW McCulloch (Launceston) Ph: 003-431 034

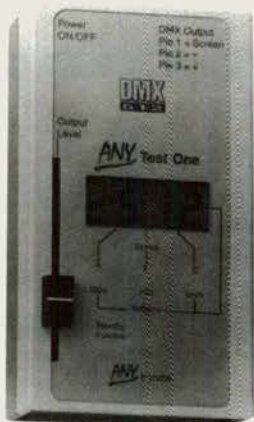
Selecon New Zealand Ltd. 26 Putiki Street, Grey Lynn, Auckland, Ph: 64-9-360 1718 Fax: 64-9-360 1719.

# SELECON



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readout of set channel and sent data. Level settings on up to three DMX channels can be memorised in the stores so as to allow testing and checking of sophisticated DMX units, such as moving lights. For instance the iris, shutter and colour could be set in memory whilst the user has direct control over the motor functions. If no control is operated for a period of approximately 5 minutes, then the unit will shut down to conserve the batteries, however upon pressing the standby switch the previous settings, both in memory and on direct display will be restored.

The small size and weight of the unit together with the use of battery power and a standard DMX connector ensure that the unit is completely portable and ready for individual use in any situation in installation or test work.

Each unit comes supplied in a protective pouch with a 1 metre 5 pin XLR male to 5 pin female lead and batteries.

RRP \$361.00 (inc tax).

For further info call: GUVT (07) 358 5022.

## TEXAS LX MASSACRE

A fax just in: "Austin-based High End Systems Inc., views the recent press release announcing the Vari\*Lite initiated law suit as an unprofessional marketing strategy aimed at discrediting High End's integrity. Vari\*Lite filed the suit without the usual courtesy of giving High End any notice.

High End stated that it would not knowingly infringe a valid patent of any other

party, and therefore, the Intellectual Property Department of High End is fully prepared to defend the company's position regarding any alleged infringement.

It is High End's position that both companies would benefit the lighting industry better by turning their resources and energy toward advanced product development."

Sounds very brutal to us!

### CDA expand facilities and announce new dealer

Those of you who have been asking what all the noise is in the background whilst talking to CDA over the phone will know that they are expanding with the addition of a large new office space upstairs at their Bundoora headquarters. The new office line-up will include a purpose built software display area so that they can continue to show their lighting and control software to Australia, and a dedicated training area for product training, seminars etc.

CDA are happy to announce the appointment of **Entertainment Warehouse** as Victorian Retail Preferred Dealer for TAS and Leisure Lighting equipment. Whilst their many Victorian colleagues are still able to stock their hire departments directly through CDA, Sam Christou and the crew at Entertainment Warehouse will be handling all retail sales of TAS & Leisure Lighting products in Victoria. Interstate distribution of TAS & Leisure Lighting products remains unchanged.

For further information call: Coemar De Sisti (03) 9467 8666.

### A Note from Jands re: Beauty & The Beast (August Connections)

Further to Will Burston's article on Beauty & The Beast, I feel that some clarification on Andre Branda Pawlaczyk's comments on the ETC Obsession lighting console used on the show, specifically the use of the riggers or RFU (remote focus unit) need to be made. Yes, the designer can change things in the console via the RFU, however the Obsession does have a 'Multiuser' mode of operation that will allow two persons to access the console on a priority basis. Multiuser allows multiple devices to be connected to the Obsession via ETCnet, these devices may include: designers consoles (a cut down version of the Obsession), Designers Digitiser tablet (a graphic interface for designers), remote touch screens, remote video outputs, remote keyboards and RFU (remote focus units). Devices may be labelled as User 1 (priority on live output) and User 2, with remote focus units being able to set to 'phantom' mode in which their control of channels/dimmers is limited.

• Mike Tanner, Lighting Products Manager, Jands (02) 516 3622.



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# BUYERS GUIDE: Fresnels

Model	Watts	Lamp Type	Beam Spread	Typical Throw	Weight(kg)	Length	Width	Height	Price
<b>CCT</b> From: Rosco Australia Ph: (02) 990 66262 Contact: Ian Baseby									
Minulette	650	T26/27	8/57°	Spot 41000 Candela	2.2	305	200	258 Incl. stirrup	\$240
Starlette	1K/1.2K	T19/T29	6/57°	156000 CD	8	310	285	250	\$615.00
Starlette	2K/2.5K	CP92/CP91	6/50	295000 CD	12	440	350	520	\$1035.00
<b>COEMAR</b> From: Coemar De Sisti Australia P/L Ph: (03) 9467 8666 Contact: Peter Kemp									
Corto	300/500	GY9.5 base	11° to 40°	3-9m	2.8kg	225mm	204mm	156mm	\$192.00
Solar	300/500/650/1000	GY9.5, GX9.5 base	9° to 28°	5-15m	3.2kg	295mm	223mm	175mm	from \$241.00
Passo	650/1000/2000	GX9.5, GT16	8.5° to 52°	5-20m	6kg	435mm	290mm	240mm	from \$324.00
<b>DE SISTI</b> From: Coemar De Sisti Australia P/L Ph: (03) 9467 8666 Contact: Peter Kemp									
Magis	300/500/650	GY9.5	7° to 51°	3-12m	2.5kg	203mm	175mm	180mm	from \$575.00
Leonardo	1000 to 20,000	G22	7° to 58°	Miles!!	from 6kg	from 290mm	from 290mm	from 307mm	\$600.00
<b>PULSAR</b> From: Show Technology Ph: 1800 646 666 Contact: Emmanuel Ziino									
Pulsar	650	T/27	68°-8.5°		3.0	235	150	160	\$244.00
<b>SELECON</b> From: Herkes Ph: (02) 319 3133 Contact: Wayne Kellett									
Acclaim	500/650	M40, T27, T18	6-60°	58000 CD	2.4	280	200	150	\$250.00
Arena 8 200mm	2000/2500	CP72, CP91, CP90	7-60°	330000 CD	8.7	400	365	297	\$780
Arena 10 250mm	2000/2500	CP72, CP91, CP90	8-60°	383000 CD	10	400	365	297	\$1080.00
Compact 6 150mm	100/1200	T29, T19	7-50°	165600 CD	4.6	320	280	224	\$370.00
SF1200 175mm	100/1200	T29, T19	7-56°	228939 CD	5	320	280	224	\$560.00
<b>STRAND LIGHTING</b> From: Bytecraft P/L Ph: (03) 9587 2555 Contact: Durham Ritchie									
Quartet F	650	T26	10°-40°	6m	3.1	286	243	288	\$207.00
Prelude F	650	T26	9°-40°	8m	3.5	225	230	270	\$296.00
Cantata F	1200	T19	7.7°-50°	15m	5.8	300	322	340	\$434.00
Alto F	200/2500	CP92/CP91	7°-57°	20m	9.7	380	360	450	\$849.00
Comma F	650	T27	9-27°	5-12	3.5	295	223	234	\$281.00
Punto F	500	T25	11-40°	4-12	2.3	225	204	255	\$264.00
Spazio F	1200	T29	8.5-50°	5-17	6.2	435	290	400	\$406.00
Tratto-2 F	1200	T29	6-35°	5-18	6.5	372	285	420	\$644.00
<b>TAS</b> From: Coemar De Sisti Australia P/L ( Ph: (03) 9467 8666 Contact: Peter Kemp									
Spot	650/1000	GX9.5	12° to 52°	4-15m	4.5kg	341mm	254mm	300mm	\$265.00
Spot	300/500/650	GY9.5	12° to 52°	4-15m	2.5kg	300mm	200mm	300mm	\$235.00
Spot	650/1000	GY16	12° to 52°	4-20m	4.5kg	341mm	254mm	300mm	\$340.00
<b>TEATRO</b> From: Lightmoves Technology P/L Ph: (02) 560 0000 Contact: J. Ciddor									
Spazio F	2000	CD72	11-52°	5-20	6.2	435	290	400	\$479.00
Acuto	2000	CP72	6-53°	6-30	10.8	462	365	550	\$1196.00
<b>WILDFIRE</b> From: GUVT (Australia, New Zealand & Singapore) Ph: 1800 773 187 (07) 3358 5022 Contact: Noel Bourne									
WF-400SF UV	400	WF-1100 UV	44° -16.5°	46	10.9' Ballast 9.5	357/305	319/210	338/180	\$5980

# BUYERS GUIDE: Floods

Model	Watts	Lamp Type	Weight(kg)	Length	Width	Height	Other	Price
<b>ABSTRACT</b> From: Universal Lighting & Audio Ph: (07) 55 329922 Contact: Con Biviano								
Scene Setter 100	100	A1/231	6	255	145	170	DMX512 Controllab e 0-100% Dimming, 7 x Colours + white, 14° lens or 22° lens.	\$520.49
Scene Setter 250	250	M33	8K	270	166	182	DMX512 Controllab e 0-100% Dimming, 7 x Colours + white, 14° lens or 22° lens.	\$679.00
<b>ADJ</b> From: Show Technology Ph: 1800 646 666 Contact: Emmanuel Ziino								
Ribalti 4 Way	4 x 500	R7	5.0	750	160	160		\$222.00
Audience Blinder	500	2 x MR16	1.8	195	90	210		\$156.00
Minulette	500	K1	3.4	230	150	240	Available single, triple, quad.	\$330
Starlette	1K/1250W	P2/7, P2/12	6	280	220	520	Available single, 4 square, 4 linear.	\$510.00

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So, if you are still using expensive, heavy and power-hungry dimmers, still fiddling about with cello tape and gel strings and still lugging around Par Cans powered via permanently tangled wiring looms, then take a look at the new Robocolour PRO400 - you'll never look back!

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# BUYERS GUIDE: FLOODS (cont)

Model	Watts	Lamp Type	Weight(kg)	Length	Width	Height	Other	Price
<b>COEMAR</b> From: Coemar De Sisti Australia P/L Ph: (03) 9467 8666 Contact: Peter Kemp								
Ribalta 1	300/500	R7s	1.3kg	205mm	205mm	145mm		\$135.00
Ribalta 3	300/500	R7s	3.3kg	175mm	505mm	170mm		\$245.00
Ribalta 6	300/500	R7s	6.3kg	175mm	1000mm	170mm		\$425.00
<b>GRIVEN</b> From: Universal Lighting & Audio Ph: (07) 55 329922 Contact: Con Biviano								
Spot 8	1000	T/19	9	370	300	355	DMX512 Controllable or 0-10 volt, 8 x Colours + Frost Filter, 14° lens - Rainbow effect.	\$1408.34
Spot 8	200	MSD200	14	370	300	450	DMX512 Controllable or 0-10 volt, 8 x Colours + Frost Filter, 14° lens - Rainbow effect.	\$1719.00
<b>SELECON</b> From: Herkes Ph: (02) 319 3133 Contact: Wayne Kelleit								
Flood 500	500/800	Linear	3	180	280	270	No Lamp supplied	\$270.00
<b>STRAND LIGHTING</b> From: Bytecraft P/L Ph: (03) 9587 2555 Contact: Durham Ritchie								
CODA 500/1	500	K1	3.75	280	210	300	Symmetric distribution; 1000w also available	\$190.00
IRIS 1	1250	P2/12	7.8	517	247	402	Cyc. light, also available as 2 or 4	\$680.00
Nocturne 500	500	K1	3.75	350	210	250	Symmetric distribution; 1000w also available	\$205.00
ORION	1250	P2/12	4.5	517	247	402	Floor standing cyc. lights, also available as 4-way	\$560.00
<b>TEATRO</b> From: Lightmoves Technology P/L Ph: (02) 560000 Contact: Jonathan Ciddor								
Diluvio A1000	1250	P2/12	3.9	360	220	305	Barndoors cut off, Double Pole, Safety Glass, Modular System	\$338.00
Diluvio A500	500	K/1	2.9	290	220	305	Barndoors cut off, Double Pole, Safety Glass, Modular System	\$310.00
Diluvio S1000	1250	P2/12	3.9	360	220	305	Barndoors cut off, Double Pole, Safety Glass, Modular System	\$390.00
Diluvio S500	500	K/1	2.9	290	220	305	Barndoors cut off, Double Pole, Safety Glass, Modular System	\$336.00
Riga A1	500	K9	2.0	250	144	220	Compact Barndoors (2/3/4 Door), Asymmetric light distribution - coloured glass available.	\$150.00
Riga A3	500	K9	5-3	750	144	220	Compact Barndoors (2/3/4 Door) Asymmetric light distribution - coloured glass available.	\$340.00
Riga A4	500	K9	7-3	1000	144	220	Compact Barndoors (2/3/4 Door) Asymmetric light distribution - coloured glass available.	\$440.00
Riga 1	500	K9	2.0	250	144	220	Compact Barndoors (2/3/4 Door) Asymmetric light distribution - coloured glass available.	\$120.00
Riga 3	500	K9	5.3	750	144	220	Compact Barndoors (2/3/4 Door) Asymmetric light distribution - coloured glass available.	\$280.00
Riga 4	500	K9	7.3	1000	144	220	Compact Barndoors (2/3/4 Door) Asymmetric light distribution - coloured glass available.	\$380.00
<b>WILDFIRE</b> From: GUVT (Australia, New Zealand & Singapore) Ph: 1800 773 187 (07) 3358 5022 Contact: Noel Bourne								
WF - 400F UV	400	WF-L101 UV	12.7	460	210	410	High intensity UV floodlight designed to powerfully excite luminescent materials at distances up to 30 metres.	\$3362.00
WF-250F UV	250	WF-L103 UV	12.7	430	190	190	The 250 series includes 90° flood model as detailed, 50° wide spot and 20° spot models with effective ranges from 3 to 46m	\$2045.00

Note: All vendors have much more than the (maximum) four products illustrated here.

Buyers Guide on the Internet: Next.COM.AU, find us in 'Magazines'. Next months Buyers Guide: Followspots



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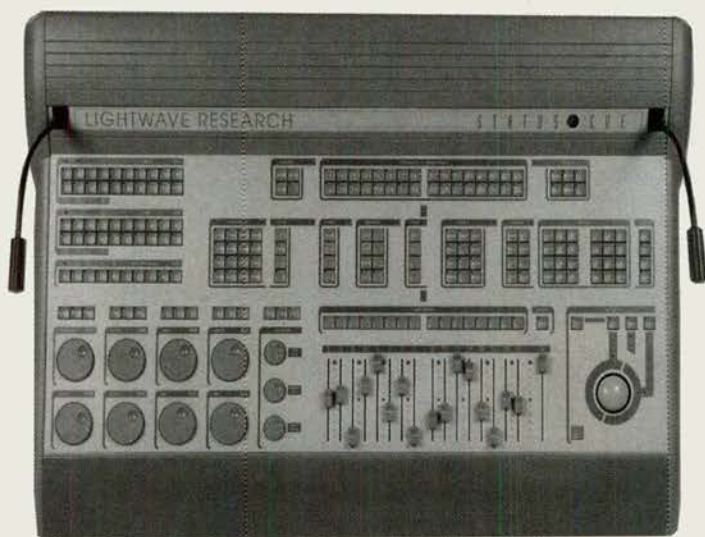
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## New Features in Status Cue release 2.1



High End Systems have now released version 2.1 of the Status Cue for Windows software. New features include:

- **Multiple Linkcards** - Status Cue now supports up to 4 Linkcards (1 master and 3 slaves) for a total of 8 possible data links. The PC should have 16 Megabytes installed for maximum speed. With all 4 cards installed up to 128 Cyberlights or 256 Intellabeams/Trackspots or 4096 DMX channels can be supported.
- **Fixture Groups** - the number of fixture groups supported increases from 32 to 128. This is implemented through the BANK button and System Keys in the same way as Palette banks.
- **Flash Keys** - fader presets can now be assigned individual momentary (Bump) Flash Keys.
- **Non-Dimmable DMX** - Status Cue 2.1 now offers non-dimming DMX channels for the con-

trol of pieces of equipment such as colour scrollers, which must not be affected by fader preset or overall dimming.

- **LED Representation** - palette and preset data is now shown on the LEDs in an improved manner. Preset LEDs now show that they have data stored under them when 'SETting' or 'GETting' and Palette LEDs do the same when 'Storing'.
- **Improved Information** - both scenes and sequences now list which Fixture Group and Palette Bank is currently selected.
- **AT Key** - the AT key can be used to instantly set any 0-100% continuous parameter to a required value.
- **Improved File Handling** - file saving speed has been enhanced and the option to produce a debugging LOG file will considerably aid High End Systems in resolving any problems rapidly.

For further info call: GUVT (07) 358 5022.

## NEW FROM ETC

ETC have released their 'Expression Offline' software package, this set of software allows operators to select from any of the Expression line of consoles (Insight, Insight 2X, Impression 2, Expression 2X or Concept) and hey presto, you have the console presented in a windows environment (including the console's monitor displays). The operator can then use a mouse to 'push' buttons on the console and record the show onto 3.5" floppy for transfer to the console.

Also released is the Expression 122 software. This package allows discs from Expression 1 line (superseded consoles) to be reformatted to Expression 2 standard and vice versa.

Mike Tanner, lighting products manager of Jands, has recently returned from the US where he attended ETC's Workshop '95. ETC (Electronic Theatre Controls), based in Middleton, Wisconsin, held a five day conference for their US and International dealers. Topics covered included sales and service issues, intensive operational and technical procedures, new products and marketing. Lee Heyward of Premier Service, Jands Lighting service agents for Victoria, also attended the conference.

Anyone travelling to LDI '95 can drop into the ETC stand to check out some of the new products from ETC that will be distributed in Australia by Jands. These include the updated Source 4 range of Ellipsoidal (profile) spots and the Source 4 Par, a unit that had its debut at Workshop '95. For further info call: Mike Tanner, Jands (02) 516 3622.

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# THE MIKADO

Young hotshot lighting designer, Gavan Swift, gets bright and colourful

Although lighting designer Gavan Swift only graduated from NIDA last year, he is already in great demand by theatre companies. In his last year at NIDA Gavan was fortunately employed by the late Roger Barratt to draw his plans and work on his transfers for shows. The day he graduated, Gavan was employed fulltime as Rogers design assistant working on shows such as *Pirates of Penzance*, *Me & My Girl* and *Hot Shoe Shuffle*.

"With Roger passing away, I ended up taking on a lot more responsibility," said Gavan who now looks after these shows. *The Mikado* is Gavan's first 'big show' he has totally designed himself. Other shows he has designed include *The Ninth Step* at The Ensemble Theatre and currently *Diving For Pearls* which has just opened at the Q Theatre. The set for *Diving For Pearls* will feature a 2 inch concrete floor and a mountain of coal. Hardly inspiring for a lighting designer but Gavan keenly told me he'll be using unusual things such as fluorescent lights and mercury vapour lamps to enhance the industrial look of the show.

Gavan was asked to make *The Mikado* as big and bright as *Pirates*.

"Lighting wise it ended up being nothing like *Pirates*," he said. "It ended up being a lot brighter and colourful. I get a lot of use out of the Colourset scrollers on the ladders at the side of the stage. I have 15 colours in each scroller and the usual tricks like colour gobos to dipple the set. All the equipment is supplied by Chameleon including 80 par cans, 56 Leko 6 per 16's, 22 scrollers, 2 GS2's and 2 Tigerscans. Also there are a range of 1K fresnels and 1K profiles just to suit the show.

"The bulk of the par cans are rigged just in front of the proscenium, a double rigged front truss purely for space reasons. You have to bring everything into the State Theatre so we have 50 5K JDMs and 84 2.5K channels of dimmers downstairs.

"There are no stage circuits on stage, there are 30 circuits front of house on the circle and 10 on each of the box boom. That's it, every other bit of cabling you have to bring in."



The cabling disappeared through a hole in the stage to dimmer land. The scans were run from on stage with a 3 phase outlet and distribution board.

The set incorporates 6 circuits of neon, 8 circuits of bud lighting and 8 circuits of Chinese lanterns. Smoke is ducted through the

bourne."

Gavan tries to alternate between working for straight theatre and the musicals. He still occasionally works for free if it's a venture he's particularly keen on. For example, he will be lighting *Bouncers* at The Harbourside Brasserie for the new theatre company Thresh-

In Sydney Barbara Williams was lighting operator and the show was run by the new ETC Insight console which Gavan is very impressed with.

"It's a fantastic desk," he said. "We're also using a ETC Expression 2X on *Hot Shoe Shuffle* and they both use the same software. They're incredible boards, they can do anything you ask them to do. I'm actually touring the board to Mel-



Barbara Williams and Gavan Swift

dragons mouths both on the throne and on the set. Smoke machines are 2 Showmists. Scrollers are also placed behind the header to provide colour.

"Because we have a stage extension, I've had to put a platform 2m high and 3m further out in the dome at the back of the upper circle for the followspots," explained Gavan. "It was necessary because once the actors walk in front of the orchestra pit the angle makes lighting them impossible."

old.

Gavan works out of Chameleon, where he has an office, and looks after their theatre work along with Tony Davies. Gavan draws all his plots with Mac Lux Pro which he describes as fantastic.

*The Mikado* travels to Melbourne, Perth, Ballarat, Launceston, Hobart, Canberra and finally Adelaide next year. The set was built in the QPAC workshops, Brisbane.

• Cat Forcer

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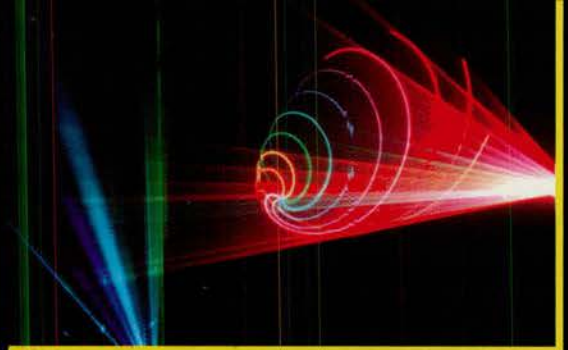
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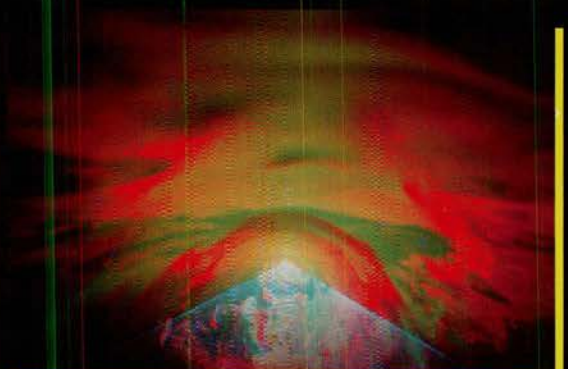
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# THE PA PAGE

## The Importance of being NEAT

Part Two in a series, by Michael Orland.

Greetings once more to all my brothers in arms who run sound systems. Last month I began a series of articles on cleaning up your act in the quest for the "user friendly" P.A., beginning with the M.O. approved method for loom-ing cables. Such looms within a system can be divided into signal or speaker type. I'll delve into signal leads next month. Now we deal with both general and specific, regarding speaker leads.

Generally, the copper wire within speaker leads should be as thick as practically possible, and the overall length should be as short as practically possible; both factors putting the least resistance between amps and speakers. Hi-fi enthusiasts have been known to spend big on boutique "monster" type speaker cable, and although I have found some of their extremes in other departments almost bordering on amusing, there is certainly substance within their "thick cable is good cable" stories. I have heard large installed systems come to life almost overnight when house soundguys, disgusted with the thin bellwire supplied by installers looking for shortcuts, have replaced same with serious grades of cable.

In looking for the shortest runs of cable, consider, where practical, using one rack of amplifiers per speaker stack, rather than one overall rack feeding one short speaker loom and one long one. Much nicer to have a "cross stage" signal loom linking your amp's inputs.

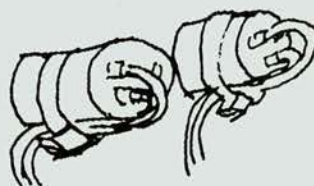
Never extend speaker leads with microphone leads. This is such a musing thing to do. Mic leads often have the thinnest cores possible in order to be as flexible as possible. It is not unusual for some of these to have resistances of between 5 and 10 ohms; a negligible addition to your microphone's impedance, but a serious one for your speaker system.

Never make a loom mixing speaker cable and signal feed cable. Even when wiring an amp rack to a back panel, where the run is only a couple of feet, keep the input signal feed down one side and the output speaker wire down the other. It is possible with all such cables grouped together for high frequency oscillation to occur (not good).

When wiring connectors on back

panels, it's good practice to leave enough length to cable tie the cable around the connector as per fig.1. This keeps the join secure during transporting, while helping achieve an overall neatness.

For some years now there has been a worldwide move away from using XLR connectors for speaker connections. For beginners, XLR is the correct term for what is often called a cannon connector. In much the same way that British



people call vacuum cleaners "Hoovers", regardless of whatever brand they may be, "Cannon" is a brand name not any specific type of connector. Try and get into the habit of asking someone to pass you that XLR to jack lead, rather than that cannon to jack lead. Now, where was I? Oh yeah, XLRs as speaker connectors. XLRs are universally accepted as THE input/signal feed connector, but have drawbacks as speaker connectors. I remember one gig where one speaker box wasn't working. I was trying to isolate the fault at the amp rack with signal pouring in from the desk at the other end of the room. Due to the tightness of the set-up, the amp volume controls were inaccessible. I unplugged the output of a ZPE 1000 and tried to jimmy it into the XLR output on its other side, in poor lighting conditions.

The sparking and crack took me completely by surprise. Fuses were instantly vaporised, and I incorrectly concluded that there were evil spirits within the amp. Later it became evident that the amp was fine, and I had simply shorted the output momentarily with the connector, something I hadn't even realised was possible. Some amplifiers can defend themselves against shorted outputs, although none actually like it, and some get downright furious.

If your amps have output relays which momentarily delay internal output connection on switch-on, then always make all your connections before switching on the amp. If your amps have no such switch on delays, and you worry about

switch on surges fatiguing your drivers, and you must plug in speakers with the amp on, then line up your connectors carefully as you go; don't wiggle them in, and NEVER plug in amps with signal going through them.

Clumsy use of XLRs make output shorts possible. 1/4" jacks practically guarantee it. So many American cabinets from usually reputable brands are landed in Australia with 1/4" jack speaker inputs. Big lose. Don't think that by plugging them in real quick, you'll always get away with using them. Your idea of real quick and your amp's may be different.

There is no reason why 15 amp 3 core mains cable can't be used as speaker cable if that works out cheaper. New cable ain't cheap, the price of copper being what it is. You may find 2nd hand lighting looms from someone who has just multi-pinned his lighting system can be successfully reincarnated as speaker leads. If you are using XLRs, I would recommend Pin 1 as negative (green), Pin 3 as positive (brown), and Pin 2 no connection (blue snipped short). I would not, as has been common practice in days of yore, put links between pins 1 and 2. This merely increases the chance of shorts.

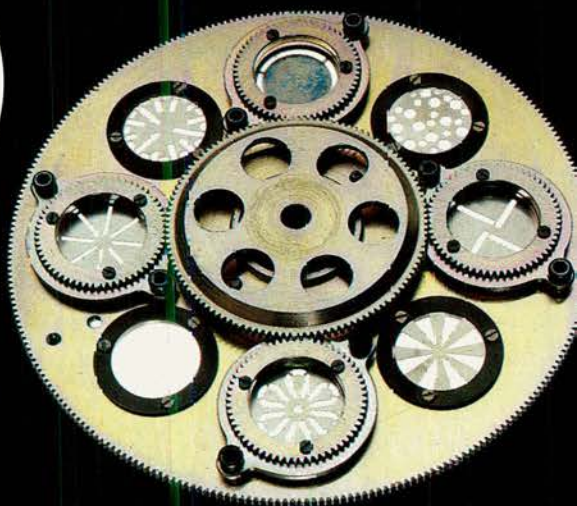
If using Bose boxes, be aware that pins 2 and 3 are linked within the cabinet. So if you tried to power a Bose box from, say, a Jands 920 (pins 1 and 2 linked) using 3 core cable with all pins connected, you are effectively putting a dead short on the amp (another not good).

It is sort of possible to run 2 way active speaker cabinets using 3 pin XLRs (Pin 2 positive lows, Pin 3 positive highs, Pin 1 common negative) and indeed I ran my foldback wedges this way for years, (due to prohibitive cost of EP4 connectors) but it can be a risky business and is not recommended. The Speakon 4 pin connector has become a cost effective industry alternative.

These days I use Speakon connectors on my Front of House boxes but have stuck with Cannon EPs (Enlarged Plugs) for my wedges. Despite leaflets implying otherwise, there is just too much plastic in a Speakon to handle being trodden on by a muso's boot.

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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