

# Connections

Entertainment Technology Trade Monthly

October 1996



**Event Producer**  
**Ric Birch tells:**  
What went wrong at Atlanta

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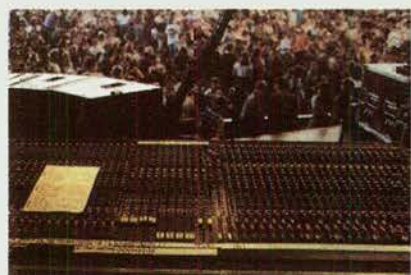


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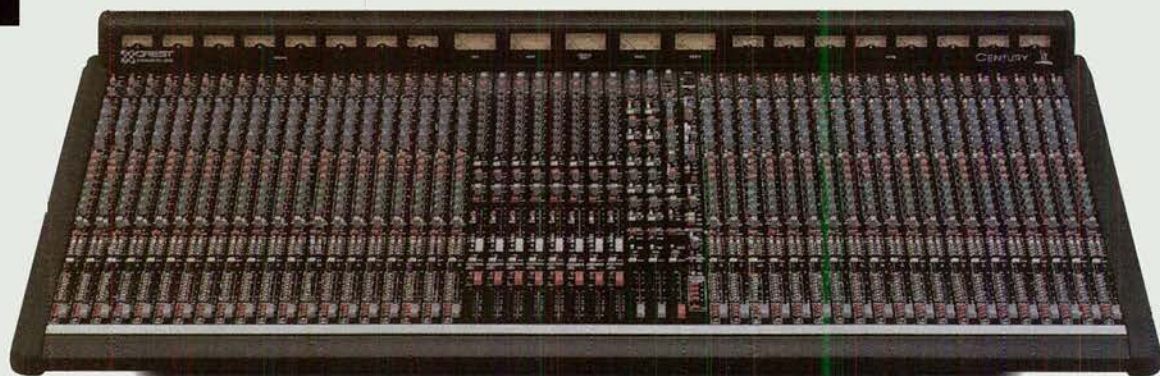
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# Connections

OCTOBER. Number 37

## DVD TO BRING PRO AUDIO UPHEAVAL

*Industry Blase as MultiChannel CD Replacement Looms*

**MELBOURNE:** Like the first splash of rain which heralds the monsoons, Digital Versatile Disk (DVD) rolls out this month in the USA. Audio industry uncertainty surrounds DVD, the replacement for CD, offering over ten times the data storage and backwards compatibility.

Convergence is the keyword for DVD, with Movie, Audio, and Data recordable versions all coming. The Audio specification is proposed as multichannel 24 bit, sampled at 96kHz. Audio CD is by contrast a 16 bit, 48kHz standard.

Issues abound with DVD, audio bit-rate reduction systems, branching, reference levels, mastering digital editing and recording. Many post-mastering and straight recording houses are not ready for the new DVD standard.

### DVD CONFERENCE

ENTECH 1997 will host Australia's first major conference on DVD and Pro Audio. All issues will be ventilated, demo's will be run, specialists will detail what is required for any authoring to DVD. New words like Branching, audio-video sync, multichannel and format problems will be detailed.

The conference is one of several one day conferences scheduled for ENTECH 1997 at the new Melbourne Exhibition Centre. It will run on Tuesday April 22nd, the day prior to ENTECH.

Presenters and firms seeking to participate as speakers at the conference are invited to contact Julius Grafton on (02) 9876-3530.

■ Tale of 2 trade shows, held simultaneously last month

## PLASA BOOMS, AS AES MELBOURNE STRUGGLES

Soft Attendance at AES

By Julius Grafton

The 6th AES Regional Convention in Melbourne last month failed to attract sufficient visitors to please exhibitors. Attendance was very soft, with the organisers unable to give Connections a figure at presstime. It compared unfavourably with the previous AES, held in Sydney.

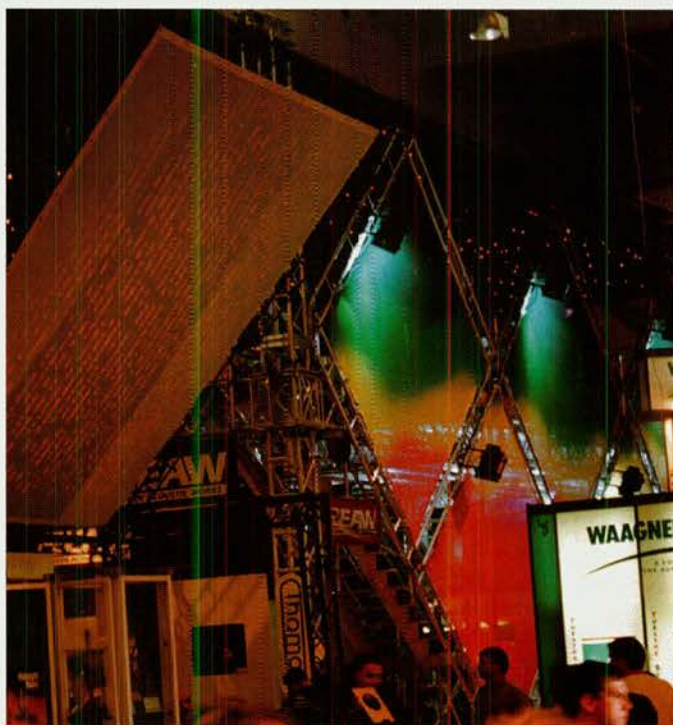
It was good news however for visitors, who had unrivalled access to the audio exhibitors and a clear run at the workshops, seminars and white paper sessions.

Some of the 45+ exhibitors, who collectively paid over \$180,000 to exhibit seemed happy. Rob Peacock from Digital Sound Systems Australia said "a lot of people we wanted to see have come". Rod McKinnon from Jands reported interest in the firms offerings as "slow but consistent". Most others were critical, but of course preferred not to be quoted, citing the need to keep AES-friendly consultants on side. Fair enough.

AES peaked at its previous showing in the World Congress Centre, back in 1993. This attracted around 1,300 visitors, the Sydney AES held last year attracted around 1,050.

The reasons for this are twofold, Connections has pointed out

*(continued on page 3)*



## PLASA : PREMIERE EUROPEAN EVENT

By Caroline Grafton

PLASA (UK) is the most exciting overseas trade event I have yet attended in the professional lighting, staging, AV and audio fields. PLASA stands for Professional Lighting and Sound Association, the show is held in London.

What makes a trade show work?

It takes dynamic exhibitors willing to invest in floor space and

often elaborate display design. It also takes an extraordinary amount of organisational planning and marketing by the promoter and/or organiser. But what really makes an event work is attracting enough visitors - critical mass - through a thoughtfully compiled and contemporary program.

*(continued on page 8)*

## Beyond the Dark Side

*Floyd Copyist's do it hard. See On Tour, page 86*

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## Connections Publishing

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**All Mail:** P.O. Box 439, Epping  
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### Our Office is at:

Century Plaza, Level 2,  
41 Rawson St, Epping, NSW.

**Phones:** (02) 9876-3530

**Faxes:** (02) 9876-5715

**E-Mail:** Mail@conpub.com.au

**Net site:** www.conpub.com.au

**Features:** Catriona Forcer  
Email: catriona@conpub.com.au

**Features:** Madeleine Murray

**Journalist:** Daniel Cole

Email: mail@conpub.com.au

**Editor:** Julius Grafton

Email: julius@conpub.com.au

**In Detroit:** Buck Freeman

**Backstage:** Nichole Moris,

Elaine Auld, Jenny Royal,

Sharon Miceli.

### Contributing writers:

Duncan Fry, Howard Jones,

Mandy Jones, Jacqueline

Molloy, Diane Okley, Michael

Orland, Geoff Squires

### Advertising:

**DIAL 1-800 635-514**

**Caroline Grafton.**

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# INDUSTRY NEWS

## PLASA (continued)

A compelling location, seminar topics and added during/after hours attractions all help.

The visiting delegates must come first, for without them there is no exhibition. PLASA '96 managed to attract approximately 15,000 delegates to the four day event, during September in London, a pleasing result for promoter and exhibitors alike.

## VISTA

On entering the 23,500 square meters of exhibition space in Earls Court, delegates were welcomed by a vista of colour and movement, performed to the rhythms of controlled audio levels.

Product from countries including, Austria, Australia, Belgium, Canada, Denmark, France, Germany, Holland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Spain, Switzerland, Taiwan, UK and the USA, were represented in displays ranging from simply designed booths, to tasteful sculptured woodworked lane

ways, with the crescendo of multi-level super structures constructed of trussing, scrimms and brushed aluminium paneling.

This year saw PLASA extend its tentacles to absorb more exhibitors from the professional audio, audio visual/presentation, staging, trussing and interior design/textile fields.

Obviously the rest of the world is in like minds to our very own ENTECH. The future of exhibitions is technology and design convergence, it is the only cost effective answer for both exhibitors and delegates. A prime example is the London exhibition 'APRS' which dealt with the hi-end audio sector. The exhibition over the years been contracting in size, in both exhibitors and visitors alike. Last year it finally threw in the towel and became 'Audio Technology', which was a little less elitist. But still this year they have had to concede to what PLASA and ENTECH both know, they have now converged with the London exhibition 'Vision'.

## AUSTRALIANS ON UK TRADE MISSION

By Caroline Grafton

**T**he PLASA '96 exhibition was the target of a trial joint initiative by PLASA and British Department of Trade and Industry (DTI). After lengthy negotiations, Connections was approached by Richard Harper of the DTI Sydney Consulate, for names of Australian power users and designers.

These persons were to be representative of entertainment and contract industries. Importers and distributors were not to be included, there was in fact a different purpose for the mission.

Connections has worked closely with Richard on other projects, so we were his obvious contact as we have an extensive data base.

From the initial list the DTI and PLASA went about qualifying and vetting potential delegates, who were fully sponsored to London and the PLASA exhibition. The aim was to introduce the final selection of delegates to British Made product including the PLASA exhibition itself.

The chosen few included myself, mostly as a cohesive agent

and minder, as I attend PLASA annually anyway.

The reaction from British Manufactures was a delight, as I saw, what I now consider my team, move through the exhibition. The technical expertise and multi-tasking ability of Australians was obvious and made me very proud.

Australia is the export target of many countries with the approach of the 2000 Olympic and Millennium and Beyond projects. The manufactures that PLASA represent want a chunk of that action. Now eight key Australian power users and specifiers are fully attuned to British products not currently available in Australia, as well as the complete ranges of products currently represented.

I know that distributors cannot carry every item out of every range from every manufacturer, but for these few people, specifying through accurate knowledge is now made easier. If you are a distributor listen to them they know what they are talking about.

Thanks to PLASA and the DTI.

• See UK reflections, on page 14

## AES

(continued from page 7)

several times in past issues this year that AES hasn't done enough marketing this time out - and indeed this was borne out by the number of Melbourne based pro audio people I canvassed just before AES who didn't even know the event was on.

The AES has failed to keep up with the times. There is a parallel here, in the UK the APRS have held a convention each year which has similarly suffered a decline of interest. AES run their Convention modelled on the USA event, with little if any local adaptation.

AES also increased the number of workshops (to 21) and technical tours (10) on offer, which would have attracted a wider audience given better promotion. A perception exists which has it that AES workshops are 'too technical', but in fact many of the 21 topics were quite mainstream. I put my head into two, the 'Multitracking with Mini Disc' session (hosted by Tascam) had 10 bodies present, while next door 'Location Sound Recording' had considerably more people in attendance - maybe 40. The workshops were in addition to 6 white paper sessions.

This AES ought to have dealt comprehensively with the forthcoming DVD technology. It affects pro audio more than any other format shift has in living memory.

The lack of meaningful promotion, allied with lack of change made the event extremely optional for potential attendees, whose presence at an event like this cannot be viewed as a certainty.

This all would not matter except that AES sells exhibition space, more than 40 firms took up space in Melbourne. To be fair to AES, they do not make any promises regarding attendance to exhibitors, who usually assume attendance will at least match, if not exceed, the previous event.

On the plus side, the exhibitors included almost every dedicated pro audio importer in Australia, and as such AES can rightly claim to have had the support of the audio industry.



• The writer is also a director of the annual ENTECH trade show.

## Dang Ugly Thang....

Is this the **Worlds Most Ugly Microphone**? Far be it for us to cast doubts on its parentage, but this Astatic handheld microphone actually has its uses. In Tanks, or places where the rough and tumble are commonplace. Like the Connections boardroom.....

• Astatic, from **Horwood Australia**.



## AES SECRETARY COMPLAINS

Connections "Biased Against AES", says Graham Haynes

Having just arrived at the 6th Australian Regional Audio Engineering Society Convention in Melbourne I went to the cafe. A short man wearing a blue AES blazer invited me to sit with his female companion and then assailed me with a monologue. I was, it seems, the barbarian at the gate.

Graham J. Haynes is the secretary and treasurer of the Melbourne chapter of AES, which hosts the regional convention. He works at TEAC Tascam Australia, where he heads up the pro audio products division. Here are words to the effect of what he said:

"You don't report us fairly. You are trying to factionalise the industry. You have something against us. Nobody is going to tell us how to run our show. We are going to run our show our way forever. New York will back us. We are taking our show back to Sydney next time. We don't own a

## PEOPLE: MOVES

◆ Pro Audio specialist **Terry Khee** has resigned from Yamaha Music Australia.

◆ Meanwhile **Dominik Plimmer** joins Yamaha Australia as assistant product manager in the Music Products division. He is pictured with **Geoff Crane** at right.

◆ **Bob Middleton** has departed AWA Distribution, and now heads up the Sydney arm of AmPower, (see story next page).



◆ **Grahame Harrison** (below) is new at audio importer Horwood Australia, joining **Ian Woodhouse** and **Cameron Dunn**.



◆ Quantel Australia has appointed **Greg Turner** (pictured below) as Regional Sales Manager for Australia and NZ. Previously Turner worked at Ampex.



◆ Ski Accident: **Bob Prosser** of Premier Lighting had a nasty fall on the slopes last month, breaking both shoulders. He was out of hospital quickly and is on the mend.

◆ Show Technology have appointed **Nicholas Cornell** to the position of Special Projects Executive. He will be working in conjunction with Show Technology's dealer networks to source new specifications for major building projects. Cornell worked previously at Miller Fluid Heats and was a lighting director at Channel 7 in Sydney. Show Technology MD **Emmanuel Ziino** says that teamed with the services of Design Quintessence, the firm's design arm, they can now offer a total service.

>>> **PEOPLE** continued over

• The Sultan of Brunei enjoys importing major American musical acts for a show or two. His pool parties are legendary. An Aussie who is very prominent in the Production Industry decided to go **shmooze** with a recent mega act from the USA who was up there for a show, and true to form arrived at the airport with little time to spare. His wife was driving and as he got out she drove off - with the boot gaping open and all his stuff still on board. Missed plane, end of trip.

• Some eyebrows were raised when the initial invitation list was released for the recent **Australian mission to the PLASA show in London**. There seemed to be one importer/distributor on the trip, which was for power users and designers. He was un-invited, but not before many other importer/distributors got their noses out of joint because they weren't invited.

• The **greatest Jewish music act** in the free world - KISS - have become the highest grossing tour in the USA this season. They made history on their last tour of Australia by multitasking - tour manager Tim Rozner was also the production manager. He got extra pay, and the band saved an airfare and hotel room. The lighting guy also rigged - likewise savings. The original members have reunited and the makeup is back on. So the recent replacements, Bruce Kulick and drummer Eric Singer who came on board just 12 years ago were sent on a years leave. Now they have announced they will leave for good, and thanked the fans. Kiss are a lot of fun.

• **It was dreadful wasn't it?** Olympic handover ceremony director Rick Birch felt that the sound in the stadium was superb, but he has been disappointed with the sound he's heard on Australian tapes. "I don't know what went wrong on the replay. It's a sensational soundtrack, it was recorded to the highest standards. It's a Channel 7 problem. I heard an NBC tape that was recorded off air in America, and the sound on that was great."

• Incredulous looks as an **audio consultant** who has recently won a job on a Sydney sporting arena was spotted on an AES technical tour of the MCG recently - taking notes.

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## COMPANY NEWS

○ **AAV** have relaunched two of its broadcast dubbing and distribution facilities and are now known collectively as **AAV Imagestream**. They are now entirely responsible for AAV's image management and distribution activities.

"Over the years two facilities have provided advertising agencies, corporate and educational institutions with a range of services from traditional videotape based methods of duplication. These methods will change so we have decided AAV Imagestream more accurately depicts our activities both today and in the future." Said Chris Berry, General Manager of AAV Digital Post Production Network.

## AQUISITIONS

○ **Haycom Staging** have acquired another Hughes JVC 335 Projector on the basis of enquires and forward bookings. The new projector was immediately used in the Imax Theatre at Darling Harbour for the launch of the Sydney Olympics 2000 symbol, for the Sydney Organising Committee for the Olympic Games (SOCOG). The projected image width was 15.3m or a little over 46ft of full-range colour, high-contrast vision. Haycom have also recently purchased four Sony 1292 data projectors.

○ West Australia's audio, lighting and vision company **AVLA** have expanded their hire department with Stratos Minibeams, Martin automated luminaires and Roboscans. New audio hire equipment includes: ARX amps, an EC-2 crossover, Micromax and Powermax subs.

*(continued over)*

## Peter Pan Fails To Fly

**MELBOURNE:** The stage show Peter Pan, featured in our last issue, has suffered a financial crisis at presstime. Opening in Perth, the musical failed to run its planned season, and it was transferred to the Princes Theatre in Melbourne.

The show was apparently cancelled before its opening date, with audio and lighting vendors citing payment areas.

One vendor who provided lighting equipment, Chameleon Touring say they had \$26,000 outstand-

ing, while Coda Audio had at least four weeks rental outstanding.

Promoter Kerry Jewell was quoted in the media as having had problems with investors, sources say the show was originally designed to open in Malaysia.

Jewell has provided at least one creditor with a letter of guarantee, and had made some undertakings to settle outstanding wages bills.

A show failure of this kind usually leads to tighter credit provisions from airlines, transport and logistics vendors.

## Ampower take on Philips Pro Audio



*Les Goding and Bob Middleton*

**MELBOURNE:** Distribution company Amps Unlimited have acquired distribution rights for Philips professional audio products. Philips professional audio products have been somewhat of a sleeper range in Australia in the past, handled by a Philips office.

Firstly, long serving AWA Distribution person Bob Middleton has joined and will operate a Sydney division for Amps Unlimited.

Amps Unlimited have a network

in formation. Nick Libertone handles Queensland, David Binge is now full time, and Mark McKinnon handles Tasmania.

Philips product range is vast, and hasn't been fully available here in the past. It also includes competitive smaller items, like a 6" ceiling speaker; with transformer, grille, and mounting brackets - for around \$42.

• **Amps Unlimited, (03) 9357-8580**

## PEOPLE: MOVES

*(continued)*

◆ The new appointments at Quantegy: **Greg Martin** (pictured below) has been appointed to the



new position of General Manager, Asia Pacific. Martin was formerly the Regional Manager and is a 20 year veteran with Quantegy (formerly Ampex Media).

**Bryen Willems** (pictured below) has been appointed Company Accountant, replacing Stephen



Dwyer who moves to a job outside the industry.

Finally, **Peter Hutt** has been appointed Sales Manager, Australia/NZ. He has been with Quantegy since 1993.

◆ **Matt Cooper** has joined Adelaide based audio visual staging company **Multivision Australia** as Senior Operator. Matt has a strong theatrical and technical background but has no passport! He needs one soon for shows scheduled for Taiwan, India and New Zealand.

### Connections News Desk:

Phone: (02) 9876-35390

Fax: (02) 9876-5715

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## ■ Why fulltime work is hard to get in 1996

### Suing the boss

*Despite election promises, Unfair Dismissal Laws are still an issue. Julius Grafton writes about a case very close to home*

**E**NTECH Publicist Danielle Hayes claimed surprise at the sudden termination of her job. Given time to get her possessions together, she then deleted a lot of files on two computers in her office. But extreme as it sounds, file deletion wasn't an issue during her court action against Connections Publishing.

Unfair Dismissal Laws hit every workplace, because under current legislation an action in the Industrial Relations Commission then can be commenced against a former employer, which must be defended or settled by employers.

The laws make it hard for ruthless and unfair employers, and the issue before the court is always procedural fairness. The prime issue is whether dismissal is harsh unjust or unfair. Other actions by employees are less significant.

Connections failed the procedural fairness test. Ms Hayes wasn't counselled three times over a period of months, nor was she given three written appraisals of her work. In defence documents Connections stated that problems in the workplace with Ms Hayes were the subject of several confrontations, discussions and one written warning some months before she was fired.

In answer to allegations by Connections that she deliberately deleted files Ms Hayes said in court documents: "Whist I was packing my belongings I removed a number of word processing files from the hard disk on the Apple Macintosh computer in my office. These files contained correspondence (letters and facsimiles) which I had sent to exhibitors, as well as a number of press releases. I then deleted an initial draft of the Connections Contacts trade directory.

I also removed a series of personal email messages on my IBM com-



*Danielle Lucille Hayes*

puter. Finally I deleted an exhibitor (data) table I had created on the IBM computer in my office".

Connections Publishing asserted that the computer files were word processing documents, press releases, emails and most crucially, a database of ENTECH exhibitor information. The files were not backed up. According to Ms Hayes however, hard copies (presumably print outs) existed, Connections disputed this.

Ms Hayes then asked for money for a taxi fare, as she had a large carton of personal effects removed from her office which she needed to get home. She was given \$20, plus two weeks severance pay.

The matter was partially heard at the Industrial Relations Court in Sydney recently. Ms Hayes demanded six months pay, plus a bonus because bumper attendance at ENTECH had passed early targets. And a reference.

The case was settled on confidential terms which included a significant payment to Ms Hayes.

## P.A. People Sell Turbo System

**SYDNEY:** In what is shaping as a significant test of the second hand market, The PA People will sell their entire concert production inventory in Sydney this month.

On Tuesday the 15th October Gray Eisdell Timms will auction the equipment. The auction is due to what the P.A. People term 'the rationalisation of business activities'. In addition to the TMS-3 turbo sound concert PA there will be major items from every aspect of concert production up for grabs from PM 3000s, AM amps, microphones to Par cans, dimmers, power distribution, video and rig-

ging equipment.

The sale is significant as the first auction of a complete, working arena sized concert PA system in Australia. It is expected the equipment will be offered in individual lots after being offered in one line.

PA People will continue to offer driveway hire from their Enfield premises.

Items can be inspected on two days: Monday, 14th October 8:30 am to 4:30 and Tuesday, 15th October 8:30 am - prior to the sale at the PA People premises, Unit 11/1 Wentworth Road North, Homebush NSW.

## NSW Workers Comp Crackdown

Any employer in NSW who is uninsured for Workers Compensation can avoid potential heavy penalties by taking out cover before 31st October 1996.

This is relevant to any employer involved in the entertainment industries, large or small.

After the 31st of October there are large penalties for exceeding insurance laws including payment of past premiums for past uninsured years, a \$20,000 fine and possible 6 months imprisonment. NSW Government sources estimate that \$20m is lost annually in revenue (often passed on to the individual) and have allocated \$10m towards the crackdown. They say that an 'unprecedented number' of investigators will be out looking for you next month.

An employer is defined as any individual, partnership, Company or Organisation who employs any person whether full-time, part-time or casual to perform duties on their behalf.

According to AIBA insurance brokers, if you employ a casual loader you are an employer, if you get a friend to operate equipment for you in your absence (in exchange for beer) you are an employer. If there is any form of remuneration involved you must comply. If in doubt call WorkCover for advice on 131 050. Alternately call your Insurance Broker.

## QUANTEGY TAKES ON 3M PROFESSIONAL TAPES

### **Peachtree City, Georgia:**

Moving to strengthen its position as the industry's sole remaining American supplier of professional audio and video recording tape products, Quantegy today announced that it has acquired the assets, intellectual properties and remaining inventory of 3M Corporation's professional audio and video tape products.

According to a joint announcement issued by Quantegy and 3M executives, Quantegy will now assume responsibility for supplying 3M customers mainly in the USA, with 3M brand tape products for as long as inventories last.

According to Quantegy President and Chief Executive Officer Jack Kenney, the acquisition of the 3M professional audio and video tape inventory and assets strengthen Quantegy's position in the worldwide professional media market. "This will help refine our own product development efforts for many years to come." As part of the acquisition, Quantegy obtains relevant professional patents regarding tape formulations, manufacturing processes, plastics, hanger shippers and tape car packages.

Quantegy's Australia/Asia division HQ is in Epping NSW. Call +61 (0) 2 9869-0600.

## AQUISITIONS (CONT)

○ **Australian Concert Productions**, Queensland, have taken delivery of a T.C. Electronic M5000 Digital Audio Mainframe for their hire department. ACP ordered the machine due to increased demand by touring acts, some actually specifying the unit. As an introductory offer ACP have reduced the rental rate of the M5000 by 25%. Valid to the end of October 1996.

## PROJECTS

○ Some of **Staging Rentals** recent contracts include drapes for the World Yoga Convention at Sydney Showgrounds and a semi full of sets (and staff) for the Coke convention on the Gold Coast. Their Seamstresses have been making more drapes and overlocking like crazy to keep up with demand. Contact: T 02 9519 6300

○ A large project for **Chameleon Touring Systems** is the production of *The Hunchback of Notre Dame* and is the first Australian production to use the new Martin MAC. The 10 MACs were specially airfreighted to Sydney for the show. Contact: T 02 9310 5222

○ A few of **Audio Solutions** recent projects include the installation of A/V systems for the Tjapukai theme park in Cairns (with Paul Van Der Ent from Wizard Light & Sound) and at the new Cairns Convention Centre a two week event for Tupperware Australia. Closer to home Audio Solutions were involved in the 1996 Australian Graphic Designers Award at the Royal Theatre in Canberra. Contact: T 06 280 6331

○ **Noisebox** have completed an installation in a gaming room for South Sydney Juniors Leagues Club with a show control software system triggering a 3032 on various jackpot levels. The system also includes Robocolour IIs, Pro 1220 and 400s together with neon and customised sound recorded on hard disk. Contact: T 02 9890 1709

## DISTRIBUTORS

○ Structural trussing manufacturer **TOMCAT USA** have announced that Jo-Anna Kamorin Lloyd will continue as the company's primary distributor in Australia after her affiliation with Showtech has ceased. Contact: T 03 9572 2303

~ Clarification ~

## BOJO in Malaysia

The Crystal Rainforest by Madeleine Murray

I must confess to being led down the rainforest path in the Malaysian story in September Connections. Proper credit was not given to the actual producers of the show, BOJO. [Phil Stafford told me several times that "there wasn't really a production company." I chased photos, details from Phil, and a crew list with dozens of phone calls to the Gold Coast. On the day before deadline, someone called Dave McCay at Entertainment Lighting Supplies told me I could put Bojo, and The Three Wise Men (Malaysia) under Production company, in the crew list. By that time I was so exasperated, I just filed the story.]

### The real story

The Crystal Rainforest show was written in '90 by Lloyd Bond, of BOJO Productions. BOJO produced and directed the show for the grand opening of the Royal Pines Resort, on the Gold Coast. 600 government officials, royalty, and executives came from Japan, Australia, and Asia.

The Malaysian Prime Minister Dr. Mahatir liked it so much, that he personally invited Bond over to create and produce the show

for seven nights. Guests would include the King and Queen of Malaysia, the Sultans, all the Malaysian Ministers, and head of the top 100 companies.

In '95, Bond set up BOJO Productions in Malaysia, and spent \$1m on offices, and production facilities.

Stephen and Lloyd Bond had already designed all the lighting and special effects scenes, as well as all the props and sets. BOJO staff and crew produced all the sound effects, voice overs, sprinkler systems for misting, aroma systems, and arranged the entertainment.

They used 200 crew on the job. The lighting, sound, and rigging equipment, and all of the set-up crew were from Malaysia. All the dancers, musicians, and entertainers were booked and directed by Bond, who also wrote the script, and called every cue for the seven shows.

On national television Dr. Mahatir called it, "the grandest theme event ever produced in Malaysia."

**MORE INDUSTRY NEWS on page 56** →

# GUESS WHO'S TURNING 20? AND TO HELP CELEBRATE

WE ARE GIVING AWAY A **FREE** SHURE WIRELESS MICROPHONE WITH THE FOLLOWING PACKAGE DEALS!

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# THE UK: PLASA REFLECTIONS

By Caroline Grafton

As reported on page 8, a delegation of Australian power user / designers attended PLASA in London last month as guests of PLASA and the UK DTI.

A sponsored trip like this can, by no means, be considered a junket. In the course of the mission, these people and myself travelled return to London; worked four, eight hour days at the PLASA exhibition; ate three meals a day together; and attended several official (but enjoyable) functions; there was a little time for play. After, I asked the following questions of the Australian delegation.

**Q1.** Have you attended an overseas international trade show before and if so which ones and where?

**Q2.** What were your expectations of the PLASA/DTI trade mission and were these fulfilled?

**Q3.** Has the trade mission changed your attitude towards British product?

**Q4.** Were you aware before the trade mission of the complete manufactured ranges of products currently available from Australian distributors. i.e. Australian distributors not carrying or advising you of all the options available?

**Q5.** Will your new knowledge of new and complete product ranges allow you to be more product specific when ordering from your suppliers or specifying?

**Q6.** What was the most interesting product you found at PLASA?

**Q7.** Do you think the trade mission improved your relationship and gave you a better understanding of your Australian industry peers?

**Q8.** Would you recommend the trade mission to potential delegates for possible future missions?

**Q9.** Will attending PLASA become a regular event on your trade show schedule?

The entire Australian delegation wish to extend special thanks to John Offord (PLASA C.E.O.) for his invitation and insight, Anna Pillow (Manager of Member Services) for her company and support, on and off the (Earls) court and Richard Harper for his humour and organisational skills in the face of bureaucratic adversity.



**John McKissock**

Clearlight Shows Pty Ltd  
Lighting/Audio Designer-  
Installer-Production

R1. I have attended several LDI shows in the USA.

R2. I expected the PLASA/DTI Trade Mission to be more structured and I expected I would be led from stand to stand - I was pleasantly surprised by the good percentage of free time to explore the show in general.

R3. My attitude to British products is as it has always been - they make very good products!

R4. Unfortunately the broad range of British products do not always get the representation here in Australia and I was surprised by the extent of some ranges that have been available for years but not commonly known of in our market place.

R5. I will most certainly be specifying some of the new products I have seen.

R6. I saw several new products at the show I thought were interesting.

- Celco Ventura Lighting Console - 1000 channel moving light desk.
- Teatro Versa Disc - colour wheel and effects wheel.

- Martin Lighting Image Scan - Slide projector with a waggly mirror.

- The complete Mad Lighting rand was also of particular interest.

R7. My relationship with the other attendees was enhanced by a better understanding of their position in the market place and of areas where we can co-operate with each other.

R8. I would recommend the trade mission to any potential delegate as the time is well spent.

R9. Having been to other major trade shows overseas, I feel that PLASA has a more diverse range of products that are available for our market and I would certainly return.



**Denis Irving**

Entertech Pty Ltd  
Architectural, Theatre Lighting &  
Equipping Consultants

R1. Yes I have, over the past years, quite a number of them. I hadn't done a PLASA before but have attended ABTT, USITT, a couple of European ones, I can't remember the names, plus Singapore.

R2. Expectations were mainly to find out the extent of product ranges of companies I haven't met before. Also to see what the newcomers in the industry were doing.

R3. No, I don't think so. I mean my job as a consultant means that I have to keep up with product availability and range as much as I can, so it means I read a lot. So, my expectations weren't effected by the visit I don't think, but I think there were more new products and a broader range here than I thought I had seen.

R4. There were things available from manufacturers here that I wasn't previously aware of.

R5. Not in terms of actually documenting product because as a consultant I am not always permitted to specify brands outright. What I can do though is specify particular features or performance capability which I mightn't have known was available.

R6. There were a number of them. Probably

- Stage Technology's machinery was a good one.

- At the other end of the scale there was a hearing (loop) unit from Clarke & Smith which will be useful.

- The new Celco Ventura board is certainly an improvement.

R7. It's a small industry.

R8. Yes, I certainly would.

R9. Usually my journeys are on the wish list, rarely on the financially possible list. Were the money to be available, I would happily go every year.



**David Bird**

Vision Design Studio  
Architectural, Theatre Lighting &  
Equipping Consultants

R1. I have attended LDI at Reno in '94, Photokina & IBC in the late '80's.

R2. I had no preconceived expectations and so I guess that they were more than fulfilled in that the exhibition covered more than just lighting and sound. There was an excellent range of suppliers with their wares on show. The relatively large presence of firms outside the UK was welcome.

R3. There appears to be a better understanding of the needs of those outside the UK and this is to be encouraged. The view of "What can we do for you in your market" was a refreshing change from the view generally shown at LDI on my last visit.

R4. I did not discover any products held "away from local eyes" during the show. However, I did see products that are not represented and others poorly represented in Australia.

R5. I found a number of key products that I did not know of and this could have a significant effect on some of our more high profile projects. In particular, stage equipment (products) were the most interesting.

R6. The most interesting products were

- Stage Technologies stage equipment control systems and stage winches.

- Howard Eaton's Stage Cue lights.

- Clarke & Smith's induction loop.

- DHA's Beam light (interesting but of limited use).

R7. The time spent as a team significantly improved my understanding of my peers and I believe lead to a better working relationship.

R8. The benefits of the trade mission are difficult to disprove.

R9. PLASA is more significant than LDI. In the entertainment industry, PLASA is the most significant overseas show for businesses in our region.



### Braham Ciddor

Lightmoves Professional Entertainment Services Pty Ltd  
Commercial/Theme Lighting Specifier

R1. Yes. Rimini '90; PALA '92 and LDI '94.

R2. My expectations of the mission was that we would be introduced to a number of British manufacturers, be taken through their product ranges and have described how best we could do business with them. Most of my expectations were met, but a lot of the people we met were not aware of actually who we were.

R3. Yes, I am now a lot more confident in some products than I was previously.

R4. No, my assumption was that the Australian distributors were representing the full range. Now I am aware that in many cases only the partial range is represented. I understand that it is not economical to carry the whole range in stock, but I think that I should at least be made aware of the entire range.

R5. Absolutely, I have already fired the first rocket.

R6. I am still trying to make my mind up.

R7. Yes definitely. The mix was very good and I know that each one of us was able to pass information on to the others.

R8. Yes, but maybe do a little research about it beforehand.

R9. I think I may consider attending every second year, but still attend LDI on the in between years.



### Mick James

Mick James Electronics  
Entertainment Lighting/Audio Consultant

R1. No, this is the first overseas International Trade Show I have attended but had planned to attend NAMM in LA in '97.

R2. As a company looking to eventually import A/V equipment, I expected to find some items of interest whilst attending PLASA. The PLASA/DTI inward mission definitely enabled my company to directly contact and deal with British companies in the audio and video sectors.

R3. No, I have always respected British product. Some brands of Audio & Lighting equipment in the nightclub market still get consistent sales through the existing Australian distributors.

R4. Yes, except for some new models etc. that were released at PLASA. In my company's use of some Audio & Lighting equipment, the present distributors only carry stock which will move, whilst some their ranges are backorder only.

R5. We cannot specify any new product unless we either can buy directly or first contact the distributor to see if they are carrying the line requested.

R6. I cannot pinpoint one product, as across the board of professional Audio, Lighting, Video Systems, rigging companies through to nightclub suppliers, they all had great new products but if I had to pick the most interesting, it would be a product by UK company Ampetronic. Their range of inductive loop systems plus the computer programs in 3D for loop placement was far ahead.

R7. Definitely.

R8. Yes, recommending the mission to other potential delegates.

R9. I probably would limit myself to two trade shows a year, alternating between PLASA, LDI, RIMINI, ENTECH etc. PLASA for me was great.



### Tony Davies

Chameleon Touring Systems  
Major Lighting Production Company

R1. Yes. LDI '93 - Dallas TX USA

R2. An opportunity to build on existing relationships and meet with suppliers and manufacturers on a face to face level. To discuss and view full product ranges as most Australian distributors only import and promote limited items of a manufacturers range. i.e. what they can make a good margin on or "perceived" needs of those of us who light shows. Networking opportunities. The opportunities provided and structure of the Trade Mission met and exceeded expectations.

R3. Yes. I now have increased awareness and confidence in products and accessibility.

R4. As mentioned above, many Australian distributors only import and promote limited items of a manufacturer's range. The focus is more on sales and installations as opposed to production companies and designers.

R5. Product is definitely more accessible and I am now aware of specialist items that will fulfil specific needs. This knowledge will be passed on to clients and staff alike hence, strengthening our market position.

R6. Products which were impressive:

- Celco Ventura Desk
- Power drive stands
- Triple E Motorised Curtain Systems

R7. The Mission highlighted the different needs of Australians represented and as a delegation we recognised our abilities to complement each other. It further reconfirmed Australia's position as a serious player in an international market.

R8. I would recommend the Mission mainly to specifiers, designers and users of products.

R9. I would like PLASA to become a bi-annual calendar event for Chameleon Touring Systems.



### Roger Rapsey

The PA People  
Audio Contracting Specifier/Consultant

R1. I have never had the pleasure of attending an international trade show, except in NZ, but have attended many trade shows within Australia.

R2. My expectations were to gather information on new technologies that have become available that are not yet current in Australia and to make contact with companies that we have done business with over many years. I managed to accomplish all the expectations that I left Australia with.

R3. We have for a number of years used British product and found quality and reliability very high.

R4. As a Company, we pride ourselves on having a good database of information on what is available in the way of products from within Australia and so outside. At Plasa, there were several products that I viewed which would be an asset if they were imported into Australia. At this stage these products are not being imported.

R5. Obviously any new information will help a Company like ours that has major project installations happening.

R6. There were lots of products that were interesting to us as a company, but there were two main products that we will find of benefit in the future. One of these products is called ShuttleCad, which is a Cad drawing program for doing presentation and as installed documentation. The other product is called ShuttleView which is a program they are developing that will basically be brochures and technical information on products on CD Rom.

R7. Most of the people that I went with to the show, I had heard of, but not met.

R8. Most definitely.

R9. I would like to think that a representative from our Company will attend Plasa on a regular basis.



### Colin Baldwin

Showcorp Australia Pty Ltd  
Corporate Theatre Production/Event Company

Colin and the team parted ways in London at the end of the mission but he did have time to jot down the following thoughts.

"This is my first visit to PLASA, one which I must say has been both interesting and enjoyable. There have been several products that have impressed me, but a few that stood out the most were :

- Glantre's spira-lift stage system - it operates on a spiral screw mechanism, in its lowered position, it only requires an under stage depth of 400mm.

- Celco & Avolites are recognised around the world as leaders in lighting control systems, especially in concert touring. Celco's new Ventura 1000 moving light console has some excellent features and appears to be a lot simpler to operate than Navigator, its predecessor. Colin Whitacker of Celco told me that Ventura will be available in Australia by November 1996. Avolites Diamond Series console, although a beautifully constructed product, seems to have limitations as a moving light console.

- Power Drive Stands, distributed by Cerebrum Lighting appealed to me for their construction quality, safety features and load and truss span capabilities. Australia has no equivalent product at this time, apart from 18' trees.

- CCT Lighting's new range of Freedom fixtures has commendable refinements, including improved optics, light output (600w = 1000w) optional light weight DMX dimmer pack that attaches to the underside.

Other UK product that was also innovative includes Electrosonic's new cube wall system and integrated multi-purpose control system. Baldwin Boxall Communication's (no relation) interactive software and control equipment. Audio Design System's compact speaker, mixer/amp combo.

# LETTERS

\*#/@/%XX-?!

## Head Transplant

Nice article - shame about the face! Thank you for printing the article I submitted on CAD lighting design, but I can't help wondering if there is some sort of retribution happening here.

The photo you printed (page 63, September issue) is actually the Lighting Supervisor at SAS 7, **Ian Linton**. It's from a group shot of the SAS Lighting crew, taken when you ran an article on our new Colortran control desk recently.

I was credited with writing that Connections article, when it was actually penned by Kim Johr, (currently working on Network 10's 'Ocean Girl'), and now Ian Linton gets his face on my article - curioiser and curioiser!

I'm left wondering if there may be some psychic revenge happening between Kim and your office, in payback for stolen writing credits? Perhaps we should call in Mulder and Scully to investigate this strange phenomenon!

In the original photo, I'm not the one you printed in the CAD article, (that's Ian), and I'm not the one with the long blonde hair, (that's Kim), nor am I the one with the long dark hair and girl-bumps, (that's Harlee), so obviously I'm the one with short dark (greying) hair, and the great head for radio. Shouldn't be too hard to recognise - maybe!

• **Peter Robins,**  
Channel 7 Adelaide.

\* We are now so confused that we are frightened to run a photo of Peter Robins for fear that anything may happen! -Ed

## Wireless Typos

The typo gremlins really screwed up the article on Wireless Mikes (Aug '96) by Russell E. Williams. I did make some sense of it after realising the decimal points had been left out of some frequencies, increasing them by factors of 10 or 100.

What I could not comprehend was the statement that "The regulating bodies have allowed 64 MHz per TV channel". No

misplacement of a decimal point explains this extraordinary claim. Television bandwidth here in Australia is 7 MHz. There are some formats being trialed overseas using wider bandwidth - but 64 MHz? Now that really would be high resolution TV!

In the table of Bands Available (page 41), the FM Broadcast Band of 88 to 108 MHz is depicted as having a power limit of 10 watts. Is this true? My information shows the limit at ten microwatts (.00001 of a watt). This power is usually only adequate for auditory assistance devices. The use of ten watts, within the 88-108 MHz band, would surely require ABA licensing as a broadcast station?

I was astounded that an article, ostensibly on frequency choice and compatibility, digressed into Phase-Locked Loops; multipath considerations; and diversity reception; which all seem unrelated to frequency selection criteria.

The article seemed far too academic for the users of wireless mikes. As a dissertation for industry professionals, I found it misleading and a chore to read.

- **Bill White, Lilyfield, NSW.**

• **Russell Williams responds:**  
*Mr White is correct. Television channels in Australia are set at 7MHz. Unfortunately he has picked up the "typo gremlin" (a problem in the email transmission of the text to Connections) in reading 64 (sixty four) MHz in lieu of 6.4 (six point four) MHz as available spectrum. The difference is because of a guard-band, in each channel, imposed by the Spectrum Management Agency (SMA). In the SMA Schedule of Low Interference Potential Devices, Item 20 addresses wireless mics and says that; "...the channel centre frequency ... must be at least 200kHz above the upper edge of the adjacent TV channel, or 400kHz below the lower edge of the adjacent TV channel ...". So of the nominal 7 MHz per TV channel, 600kHz is not available for wireless mics. That leaves 6.4 (six point four) MHz referred to in the article.*

*Re the power limit. Mr White is again correct: the power limit is*

*10 microwatts. The typo gremlin (when the text was emailed) ate the micro symbol from my text.*

*The article was written to show that wireless isn't necessarily easy - but with proper planning one can maximise the use of the available radio spectrum.*

## Hard Disk Recording

**Re the article on hard disk recording (September page 37):**

People seem to forget that a band of musicians play together at the same time to achieve a feel - and the best way to record is to have the option of some isolation, such as more than one recording room.

After recording some takes, the band can then go back to the control room and instantly see where their sounds are re-appearing on the console via the tape recorder. Now if this was an advertising project, the band would have little say in the direction in which it was going, so the need to have it laid out in front of them is not very important.

But a band playing its very own music tends to be a diplomatic arrangement and the hands-on approach is the most suitable and most desired. Hence recording studios using large consoles in good acoustic environments will always be around.

There is no doubt that ICs introduce an unfavourable twang to a recording so that's why a lot of bands and engineers tend to use old Class A electronics such as Neve, Pultec, TG EMI etc. If you think you can homogenise the electronics such as EQ, compressors and so on, don't be surprised if no-one wants to book your studio.

Even when hard disk recording is at the stage where you trust it to call in the orchestra without wondering whether it's going to work on the day (just ask Tiger Studios), it is still just another format that has a particular sound.

The flexibility is obviously far greater for editing and control but believe me, this amount of control may not even be asked for, except in the advertising world.

I feel that we are being sold something we may not need. I know that times have to change, but the direction I see at the moment is catering for something other than a bunch of musicians wanting to sound as good as they can. Any new technology will not wipe out what already exists. It will go hand in hand and this is being proven over and over.

The other issue of the large studios disappearing is the result of album sales being down and most recording budgets are nowhere near what they used to be. You can't beat good musicianship and to think that the latest piece of software is going to give it to you, I don't think you are getting off on the right foot.

Horses for courses. Dance and Techno need the latest advances. This music reflects available technology. Classical uses editing systems to join up the best takes (sometimes this gets way out of hand). Advertising must have flexibility and instant recall. Jazz needs good acoustics and great players and simple miking, so does folk and rock and vocal. Please, whatever format we end up with, I hope it is as bullet-proof as what we have been using for the past 30 years. A good acoustic room with space to fit in everyone will always have a place.

-**Guy Dickerson, Megaphon Studios, Sydney.**

## Help Wanted!

I am writing this letter to beg someone in the industry (Sydney) to grant me a part-time position (Fri, Sat, Sun). I will do anything in the industry, production especially. I am 15, willing to learn and am having a damn hard time finding a job. I work and do production at school and would like to venture into the world of the Rock Gods. I hope you can help me. P.S. I have a small amount of experience. P.S.S. Entech was fabulous!

Hope to hear from employers!! Help me.

- **Eamonn Lorraine, 19 Grazier Crescent, Werrington Downs, NSW, 2747.**

## Hard Disk Debate

Re the Recording editorial in the September 96 issue-

I had a meeting with a major U.K. A & R director on my world tour in November last year who informed me of the "horrors of semi professional studios using digital 8 tracks". The lost master tapes, no track sheets, digital drop outs and resulting waste of 30,000 pounds in recording time which had to be subsequently re-done at a "real studio". His final words, were "what you pay for is what you get". He will NEVER use a semi pro facility again. He is not alone, I assure you.

Few people in Australia are even remotely aware that the home studio "honeymoon" is over in the U.K. and the U.S. There have been innumerable disasters for many record companies over the past few years. Big studios in the U.K. and the U.S. are booked solid. I saw this with my own eyes. Comments were made by various A &

R directors that cheap home studio records don't sell and that demos are demos. This is where this technology is really at.

Q: What is the difference between a demo done in 1980 and a demo done in 1996?

A: The demo in 1996 is recorded on a digital 8 track.

This is the point that everyone is totally missing. Just because it is digital does not make it a final product ready for release. Expertise and EXPERIENCE are what's missing from home recordings today. They just do not cut it. Ask any Mastering Engineer.

All the mastering Engineers around the world that I talked to were unanimous that audio standards have dropped dramatically over the past few years. This is a direct result of inferior techniques applied by inexperienced people in home studios with poor monitoring onto digital 8 tracks and hard disk recorders.

-Jim Taig, Managing Director, Studios 301, Sydney.

## Useful Cable Info

Howard Jones' article 'Pleasure and Pain' in September's issue implied that RG59 and RG58 cables are interchangeable, and that RG58 may be used for S/PDIF interconnects. RG59 has a characteristic impedance of 75 ohms and RG58 is 50 ohms. Mismatched impedances will create reflections and can lead to standing waves. The reflected signal interacts with and distorts the desired signal.

This in turn will corrupt the data. While low data traffic levels will enable error correction circuitry to mask most problems, increased traffic will swamp the correction section and can ultimately cause lock-up of the whole system. Levels of reflection can be calculated from the ratio of the two impedances. One point five to one will create some major glitches.

At high frequencies, as typical in data communications, the char-

acteristic impedance of a cable is calculated from the inductance and capacitance between the centre conductor and the outer shield. This is the same for 1 millimetre or 1 kilometre of cable (the joys of transmission line theory). Note that this is the AC impedance not DC resistance which is dependent on cable length. Impedance will depend upon the material and thickness of the dielectric, which is the stuff between the two conductors.

RG59 is a commonly used 75 ohm cable and is available in several configurations including solid or stranded centre conductor and swerved (wrapped, which should be avoided), braided, foil or combined foil and braid shield (the outer conductor). The dielectric is usually Teflon (PTFE) or polyethylene. Some cables aerate (fill with bubbles) the dielectric to reduce material costs or improve flexibility, this can affect the resistance to crush and kink injuries. All variants have very similar outside diameters. The most suit-

# AKAI

professional

## AKAI "S" Series Samplers, The World Standard for Professional Digital Sampling—



For over a decade, in major recording studios, in post-production facilities, in project studios and in the hands of individual creative artists all over the world, the "S" Series samplers from Akai have consistently established the standard for professional digital sampling.

Now, Akai introduces three new members of the illustrious "S" family. Three new samplers that add powerful new capabilities, new ease-of-use, new expendability and amazing new affordability (from RRP \$2995) to the "S" Series.

Once again, Akai sets the standard.



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Write in Reader Service Number: 177

able construction depends on your planned usage. If the cable is for a permanent installation and rarely moved, a solid centre conductor with a foil shield is recommended. If there is a high level of RFI, a combined shield is better. If you plan to frequently disconnect and move the units, use a stranded centre conductor with a braided shield. Professional quality cables will specify the coverage of the braid expressed as a percentage of the surface area, and quote conductor sizes, material and electrical characteristics.

RG58 is used in radio systems and thin ethernet computer networks. Again, there are several types of construction available, although I am not aware of any solid core type. It is thinner than RG59 but as you all know, size doesn't matter.

There are many alternatives including ThinAx, a miniature 3 mm diameter 75 ohm coaxial cable. RG6 is a much thicker cable used for trunk lines in MATV systems. If you're desperate, hardware store antenna cable can be used, but

will not fit into crimp connectors. The most important thing to remember is to use quality 75 ohm cable.

Whichever cable you select, use good quality, correct sized crimp connectors and the right stripping and crimping tools. Push-on, solder or screw-on connectors or the wrong tools will cost time and effort and are not as reliable. Solid conductors are suitable for F type connectors, and BNCs can be used on solid or stranded centres. F connectors use the centre conductor as the pin. After tinning hundreds of ends of stranded cable put in by the electrical contractor on large project, I can assure you that F connectors need solid cores. BNC crimp plugs are available to suit solid or stranded centres, the difference is the diameter of the hole in the rear of the pin. Make sure that there are no strands of the shield cable poking out. A lot of people use rubber boots over the cable/connector join. I always wonder what's hidden underneath. If you don't have or don't want to invest in the right tools, have your

leads made up for you. A few dollars spent now will save money and time in the future. Use adaptors to go from F or BNC to RCA. It is also very important to terminate the end of the line with a resistor of the same value as the cable impedance. Plugs incorporating resistors are commonly available.....and DON'T kink the cable

While we're on the subject, both DMX512 and RS485 (Martin protocol) require data grade cable with a characteristic impedance of around 120 ohms, and a terminator. You can probably get away with ordinary mic cable on small shows, but high traffic levels will crash the system. Data cable also has the distinct advantage of generally being cheaper than the mic cable you like to use. Category 5 UTP operates at 100 Mb and costs under a dollar a metre. Flexible versions are also available. However this cable is not suitable for soldering. The insulation is extremely heat sensitive and will 'run away' from your iron. Use IDC connectors.

Recommended reading includes Circuit Theory and Techniques Volumes 1 & 2 by Hans Goodman. Tocci and Floyd both cover the topics as well. Don't worry too much about the maths, as long as you understand the basics and why it's important to match line impedances, you're ahead of the salesmen.

• Ron Polglaze, Blazon Electronics, Lawson NSW

## ONE INDUSTRY

I'm greatly impressed with the spread of your publication. I also feel an undercurrent of frustration comes through occasionally, when you refer to 'Luddites' who can't think outside their box. Clearly the 'entech' trade as you call it has, and is, expanding rapidly. I think your coverage of cinema, theatre, recording studios, media, pop concerts, discoteques and audio-visual shows all adds up. Yes, I'm in one industry - finally. Thank you Connections for drawing it all together!

-William Powell, Chatswood NSW

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Write in Reader Service Number: 115

## BUYERS GUIDES

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

**New deadline: 1st of the month prior.**

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

**March** Wireless Microphones, Video Projectors, *Moving Lights*

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

**May** Effectors, Reverbs, delays. *Effects Lighting*

**June** Live Mixing Consoles. *Profile, PC Spots*

**July** Lighting control, **NEW:** Video splitters, interfaces & 'black boxes'. **NEW:** DJ mixers and samplers.

**August** Studio Mixing Consoles. *Dimmers*

**September** Microphones. *Fresnel spots, Floodlights*

**October** Amplifiers, Samplers. *Followspots*

**November** Loudspeaker systems. *Fog Machines*

**Dec/Jan** Recorders & Recording software, DAWs. The MONSTER recording buyers guide.

Also: *Scrollers, colour changers.*

**\* TO GET A BACK COPY OF ANY ONE CATEGORY:** Send \$5 to BG, PO Box 439, Epping NSW 2121. Or call (02) 9876-3530- we fax or mail it to you.

## DOLLAR HISTORY

HOW the A\$ has fared over time.  
One Australian dollar would/will buy:

	\$US	Yen	£	DM	\$\$in
1965	1.14	403	0.39	4.46	3.25
1970	1.12	400	0.46	4.05	3.22
1975	1.33	392	0.59	3.11	3.15
1980	1.16	251	0.49	2.03	2.52
1985	0.66	165	0.51	2.02	2.10
1990	0.77	98	0.39	1.18	1.45
<b>NOW*</b>	<b>0.79</b>	<b>87</b>	<b>0.51</b>	<b>1.20</b>	<b>1.12</b>

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

**NZ\$ at publication: \$1.13**

\*At 25/9/96. All rates indicative only. Check with your bank.

## MAJOR TRADE SHOWS

• **REPLITECH ASIA.** Singapore October 22-24. Call 1-914-328-9157  
• **AES 101st.** Los Angeles Convention Centre, Nov. 8-11, 1996. (New dates!) Call +1-415-558-0391.

• **41st IES Convention,** Perth November 18-21. Fax (09) 322-1734.

• **LDI 1996,** Orlando, 21 - 24 Nov. Call +1-212-229-2965

• **NAMM 1997:** January 17 - 20, Anaheim LA. Call + (619) 438-8001

• **NAB '97:** April 7 - 10, Las Vegas. Call +1 202-775-4988.

• **NSCA 1997:** April 16 - 20. New Charlotte Conv. Centre, USA.

• **ENTECH '97:** Melbourne Exhibition Centre, April 23 - 25, 1997.  
The entertainment technology trade show and convention. Held annually, appearing in Sydney in 1998. Promoted by Connections Magazine, call (02) 9876-3530.

• **Venue Management Association Conference.** Melbourne Exhibition Centre, April 23 - 25, 1997. Held in association with ENTECH. Call (02) 876-3530 for details.

• **SHOWLIGHT '97,** Flemish Opera House, Ghent, April 28 - 30. Details from PLASA, +44 1 323 642-639.

• **INFOCOMM,** June 5 - 7, LA Convention Centre. +1 703 273-7200

• **NIGHTWAVE '97.** June 7 - 10, Rimini, Italy. +39 541 711-249.

• **SMPTE,** Sydney Exhibition Centre. *Dates changed,* now July 1 - 4. Biannual TV/Film equipment trade show and convention.

• **PALA '97.** July 14-16, Singapore World Trade Centre. +65 227-0688

• **PLASA 1997.** Sept 7-10th, Earls Court, London. Call +44 323 410-335. The world's fastest growing entertainment technology show.

• **AIMS '97.** The Australian International Music Show. Early October.

• **Vision & Audio 97,** Nov. 4-6, Earls Court, London.

### Cultural Festivals: Australia:

**Melbourne** 17 Oct - 2 November. **Sydney** 8-26 January. **Sydney Gay** and Lesbian Mardi Gras 1 Feb-1 Mar. **Perth** 14 Feb-9 March. **Adelaide** 27 Feb-15 March. **WOMAD** 27 Feb- 2 March. **Canberra** 8-17 March. **Australian Festival for Young People** 21 Mar- 6 Apr. **Darwin** 15-31 Aug. **Brisbane** September 1997.



## World Weather trend, OCTOBER

\*NOT a forecast!

Where?	Temp °C	Rain mm			
Auckland	17/11	102	Manila	31/23	195
Bangkok	31/24	255	New York	19/10	84
Beijing	21/07	16	Paris	15/08	50
Chicago	17/08	71	Perth	21/12	54
Dubai	33/22	0	Rome	22/13	99
Frankfurt	14/07	52	San Francisco	21/10	18
HoChiMinhCity	31/24	269	Seoul	19/07	49
Hong Kong	28/23	121	Shanghai	23/14	74
Jakarta	31/23	112	Singapore	30/24	208
Kuala Lumpur	32/23	275	Taipei	22/13	71
London	14/08	57	Sydney	27/19	117
Los Angles	23/14	10	Tokyo	21/13	220
			Toronto	17/07	58

## CASH!

Business Column

By Julius Grafton

Going to an overseas trade show is tax deductible for some people, and essential for others.

If in these pages we seem a little trade show obsessed, it's because we acknowledge the expense of participating in them.

A golden opportunity presents itself in November, when the 101st Audio Engineering Society (AES) convention runs in Los Angeles, from November 8 through 11th.

This is a worthwhile attend, because it is chocka with audio equipment of every complexion. It is the genuine article from which the much smaller Australian regional show is cloned.

Being at the LA Convention Centre it's damn easy for Aussies and Kiwis to visit. Leave on the 8th on a non-stop flight, you arrive at 9am on the same day (crossing the dateline), and go straight from the airport to the show. Fight the jetlag! The Convention Centre is on Figueroa street at the corner of 11th. Hotels are nearby, the Holiday Inn City Centre is nearest, followed by the Figueroa.

If you want to make a real entertainment technology study trip / holiday / possible tax break, then stay over and attend LDI 1997 in Orlando 21- 24 November. Although predominantly a lighting show, it has staging, audio and more.

This makes a really great 3 week itinerary! See you there!



## GOING to:

**AES, Los Angeles, 8 - 11 November ~ or ~  
LDI, Orlando, 21 - 24 November**

Just call Rhonda: SYDNEY 9237-2905 for travel!

# STAGE & SCREEN

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# Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH

## Very Small Audio Mixing Console

The new Folio Notepad mixer is the smallest (and cheapest) in the Spirit range. The design of Notepad aims to achieve high quality audio as a result of its surface-mount design and the use of components common to the larger Spirit consoles.

Notepad is equipped with studio quality mic preamps with 50dB of gain range, and high RF rejection assists the clarity of mixing.

The Notepad offers 10 inputs as standard, four mic inputs, two

stereo inputs, two-band EQ on every mono input.

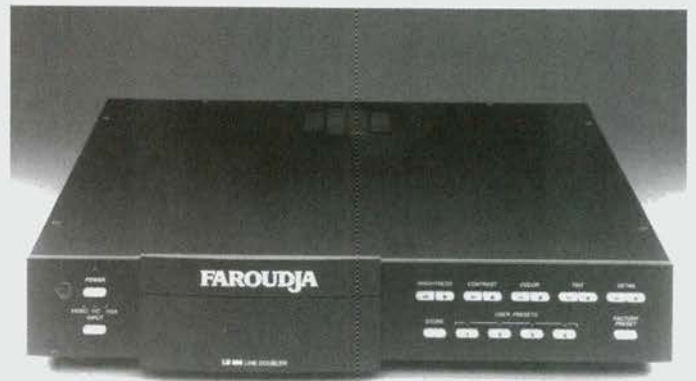
It's got a post-fade aux send on every input, a dedicated stereo effects return, global +48V phantom power, stereo inputs equipped with switchable RIAA preamps for turntables. Two-track return, separate mix and monitor outputs, peak and VU metering, headphone output, Power On indicator and custom designed rotary controls.

• \$595 through Jands.



WRITE IN 307 ON READER SERVICE CARD

## PAL LINE DOUBLER



From vision people Faroudja comes the LD200-U Line Doubler, specifically designed for high-end home theatre and corporate boardroom applications.

The technology inside the LD200-U converts standard PAL or NTSC video signals from direct broadcast, satellite, video tape or video disk sources into images that have, according to their release, the look of film.

Scan lines are removed through the Line Doubling process, patented circuits eliminate aberrations

and edge blurring and reduce noise while also improving picture detail and colour.

The LD200-U features new a housing and infrared control with on-screen graphic displays whilst new circuit board designs have reduced overall size. Combining broadcast quality circuitry and simple controls the LD 200-U Line Doubler aims to provide enhanced image viewing in a range of large viewing environments.

• \$19,700 from Trace Pacific.

WRITE IN 306 ON READER SERVICE CARD

## SL 1200 TURN TABLE TOP

IF you've got a classic Technics SL 1200 or SL 1210 turntable, then ULA have got a new top plate for you. It fits over the existing turntable. It comes in a variety of colours and textures. It's simple! The price starts at \$60. Call ULA direct on 1-800-062-828.

## Midi Time Piece AV - dang studio combo tool clock type thang

Mark of the Unicorn have devised something which is almost a wonder tool in the midi timepiece. It's a studio combiner ~ it'll get midi, your ADAT, Pro Tools and video all

sync'ed. It's a stand alone solution. This box can even network a PC and a Mac together, and will support either. It can drive ADAT's without a BRC (big remote control), has

DigiDesigns 'superclock' output, and almost any other time / sync / cludge combination.

• \$1695, from Moore Music.

WRITE IN 308 ON R. SERVICE CARD





## Portable Location Mixer

To equal the changing demands of their audio production industry, Shure has introduced its FP33 portable stereo mixer.

Designed for remote audio recording, location film production and electronic field production and news gathering, the three-input, two-output FP33 weighs 1.6kg. About the same size as a couple of video cassettes the FP33 and will operate for eight hours off two 9V alkaline batteries. The FP33 can also be powered by any 12 to 30V DC power supply such as an automotive battery, rechargeable belt pack or AC to DC converter.

With an extended frequency response of 20Hz to 20kHz and dynamic range greater than 100dB, the FP33 is equipped with efficient monitoring control, internal DIP switches for customised set-ups

(4000+), transformer balanced inputs and outputs, a wide range of input gain controls, pop-up pan pots, switchable low-cut filters on each input, and a link switch which can be used to gang inputs two and three together for use with a stereo mic.

The FP32A, the new model, features several enhancements including precision sealed input potentiometers, improved battery switching circuit, internal headphone level adjustments and durable new 3.5mm jacks.

Housed in rugged black metal enclosure, the FP33 comes complete with a carrying case, shoulder strap and mix bus cable to connect an additional FP32A or FP33.

• \$4795 for both the FP33 and FP32A. From Jands.

WRITE IN 309 ON READER SERVICE CARD

## Interfaces

ProCo make a variety of neat little audio interfaces. The AV-1 (below) will interface your film projector, tape recorder or even a dang thang phonograph to a standard low-z balanced mic input on a PA. That's the XLR one, usually. It's got an XLR output, rca, 1/4" and mini-jack inputs. \$228 from Horwood Australia.

WRITE IN 311 ON READER SERVICE CARD



## Pro Tools 4 on local release

DigiDesign have announced Pro Tools 4.0 is available. ProTools 4.0 software can share the same Pro Tools III PCI Core System hardware components as AudioVision 4.0. Pro Tools digital mixing capabilities have also increased. Also available is Audiomedia™ III for both PC and Macintosh PCI-based computer platforms. Audiomedia III provides sonic capabilities when compared to the built-in audio features of the host CPU. Audiomedia III: \$1795. ProTools 4: \$12,995 (with card). Upgrade price is about \$249.

• DigiDesign (02) 9937 1800

## Filter & Envelope

UK firm Mutronics have released The Mutator, a stereo analog filter and envelope follower.

It contains two independent voltage controlled filters similar to those found in analogue synthesisers which can be used to treat any external sound source.

Each filter can be controlled from its own associated low frequency oscillator (LFO) and/or its own envelope follower section, which extracts the envelope contour of an input signal and applies it to control the cut-off frequency of the filter.

Each envelope follower can be switched to track either the envelope of the sound that is being treated by the filter, or that of an independent external control signal. This external control system

can be any audio source, thus the envelope characteristics of one sound can be superimposed onto the filtering contour of another. Another switch on the envelope follower selects envelope follow mode or gate mode - in which the circle detects whether a signal is above a certain threshold level before switching on.

• \$1449 and \$1759 with MIDI from Shrape International.

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## RADIAN

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Build them into your own boxes (we even supply factory designs) or choose from a range of well priced, Australian made, "ready to go" enclosures.

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Write in Reader Service Number: 178

## MiniDisc Multitrackers Offer Instant Access



Sony Australia have announced the introduction of the Mini Disc Multitracker (MD-MTR).

MD-MTR brings the advantages of digital technology to the home studio-recording, mixing and editing, all on a compact removable media similar in size to the familiar 3.5 inch floppy disc.

The new Sony model is called the MDM-X4, a compact 4 track recorder with inbuilt mixing capacity. One MD-Data disc can hold 4 tracks of up to 37 minutes each, but can also be formatted for 2 tracks of 74 minutes each or one track of 148 minutes.

Various editing functions are available including song based and track based operations. These include Divide, Combine, Exchange, Copy, Insert, Delete, Loop, Move, Exchange and Erase.

Track bouncing allows for multiple passes and sumixes to be combined, providing space for further recording and mixdown.

Other features include; VariSpeed, MMC and MTC functions assure users of easy integration with existing studio equipment; a large display and Jog/Shuttle wheel.

The inbuilt analogue mixer features 10 inputs including 2 balanced inputs on XLR connectors, 1 stereo input and 2 stereo returns. There are also 2 auxiliary. 3 band equalisation is included in each of the 4 mono input channels, while the stereo input channel has 2 band equalisation. Individual outputs are provided from each of the four tracks.

• For new, FAST response write in 301 on reader service card!

The big - huge - reason anyone would want to buy one of these new MiniDisc multitrack recorders is SPEED. Being like a CD, you zoom to where you want to be. No rewinding of tape here.

The format itself offers digital recording almost as good as you'll get if you use a hard disc - but not quite. I doubt if you can actually

HEAR the difference though.

This is because MiniDisc uses compression to squeeze info onto the disc, itself a cheap tough and friendly little thing - like some of the editorial staff here!

These units are the next generation replacement for cassette based multitrack recorders - which believe it or not, still sell well!

## Yamaha MD 4: price leader

The MD 4 retails at \$1895, and the primary reason it's cheaper than the SONY is the lack of a jog-shuttle wheel.

Features vs. features we'll let you work out, dear readers.

MD 4 has most of the fruit, and

like the Sony gives you 37 minutes of 4 track or 74 minutes of 2 track. It's got a MIDI out to control synchronised playback of a connected MIDI sequencer too.

• For NEW faster response, write in 302 on Reader Service Card!

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## Quantel V6 for ZerO 1 ZerO



Sydney based zerO 1 zerO, which specialises in the production of commercials, shows and outside broadcasts, has taken delivery of a Quantel V6 Henry and will be the first post house in Australasia to upgrade to the new Quantel V8 Henry.

Henry is an integrated effects editing and post production system from Quantel. The V8 Henry was launched at NAB'96 in Las Vegas, and adds extra colour correction, keying and tracking with eight full layers adding up to

more than 100 image processing tools on line simultaneously. First introduced in 1992, it offers simultaneous multi-layering and random access using patented Dylan disc arrays.

General Manager of zerO 1 zerO, Greg Howes spoke of the system, "We need the Henry to basically complete our whole facility and we now have the full range of facilities to meet the needs of our clients. It was their feedback that helped us decide on purchasing the Henry. The arrival of Henry will complement the existing services of the facility which already houses Hal Express with Paintbox."

For info write in 303 on Reader Service Card

# MediaMatrix®

## Not Just For **Big** Jobs



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### The MediaMatrix **MINIFRAME™**



Media Matrix is firmly established in many prestige locations throughout Australia and New Zealand. From Cathedrals to Casinos, International Airports to National Parliaments, Media Matrix is the software based sound system, which has truly revolutionised sound system design and installation throughout the world.

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With the click of a mouse, Media Matrix provides a previously unachievable level of flexibility. Sound system designers & installers can incorporate just about any type of processor or audio device from the vast library included in the software.

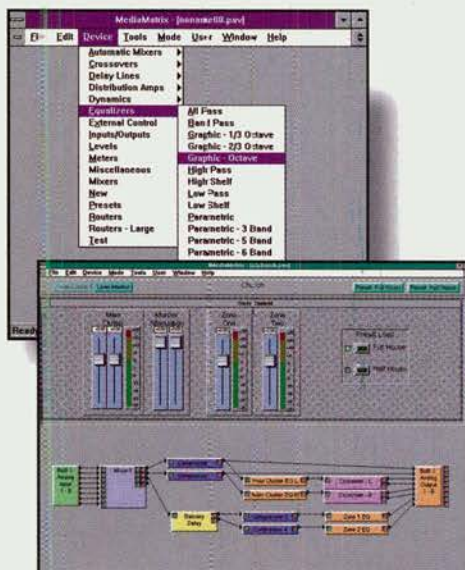
**Once selected, these devices become hardware and form an integral part of the total system.**

If you have used a standard Windows® program, then Media Matrix will present no difficulties, it is easy to use and user friendly. Add to that the wide breadth of support from Audio Telex and Peavey and you can comfortably make the transition to this revolutionary and successful format for the 90's and beyond.



And Media Matrix Miniframe is surprisingly affordable! Call us for more information about Media Matrix Miniframes.

\* Windows is the registered trade mark of Microsoft Corporation.



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PERTH (09) 356 2761; Fax (09) 356 2762  
HOBART Electronic Concepts (002) 28 6373; Fax (002) 78 1063

## Compact Codec Packs a Punch

A new generation of videoconference codec technology has been released by Tandberg AS, the European codec market leader. The codec delivers an unprecedented level of video motion handling, sharpness and colour depth by virtue of its high speed, dual video processor engine. It is the only codec on the market that offers dual processing as standard. Bundled with the Sound Control Technologies AVT-44 echo canceller, the sound quality has a natural wide frequency response, providing true full duplex speech, continuously adaptive to any acoustic environment.

Many features found as expensive options on completing systems are included, such as fully Austel-approved telephone add-on and 30 frames per second video. The data port operates as a transparent data channel for document and application sharing up to 38400 baud. The inbuilt SoftMux is optimised for ETSI ISDN and provides full call progress and network status monitoring in the form of simple English on-screen messages.

• **From Sound Control Australia**  
WRITE IN 312 ON READER SERVICE CARD FOR INFO

## ROLAND PMA

Roland's new PMA-5 is a Personal Music Assistant. It is in fact a powerful music production system for the musician, teacher, sound engineer or producer on 'the go.'

A Synthesiser, keyboard, recorder and sequencer - all in a one small and compact package that'll fit in the palm of your hand.

Roland say there's nothing else really like it. We agree, we haven't seen anything like it either.

The way it works is that if you've got a great idea, some musical phrases or song hooks that you'd like to store away for future use to avoid losing or forgetting you can do it. Here and now.

In other words, something straight out of the head and something that you want to put down fairly quickly before it's lost forever can be dumped on the PMA-5. You can write tunes or songs on the PMA-5 and then, via its serial interface, connect it up to your computer for more elaborate composing and arranging of the original idea.

Also worth noting is that to use the Roland PMA-5, you don't have to be a computer guru, says Roland.

You hold the unit in one hand, the stylus in the other, point at the icons on the screen, and your way. On the other hand, if your a



pro muso (or at least aspiring to be one), then the end result will naturally sound that much better.

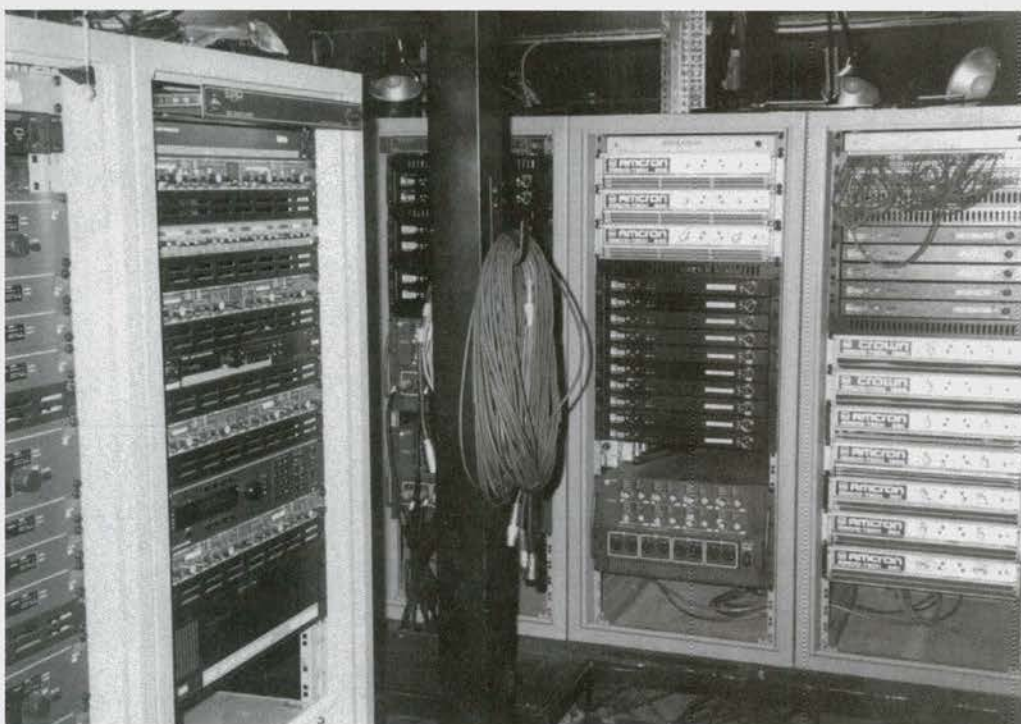
You can call up different sounds, different rhythm patterns and just let the PMA-5 transpose or change tempo for you.

It may also be used as a backing device, guitarists or other musos can program chord progressions, choose a style and jam along. The

'Ad Lib' function allows anyone to play a solo by running a pen along the 'Ad Lib' strip. The PMA will choose the correct scale for the current chord. No bum notes.

• **\$895 from Roland.**

WRITE IN 313 ON READER SERVICE CARD FOR INFO



## ~INFORMATIONAL~

### Fibre Optic cables in Martin Guerre

The new Cam-Mac mega show Martin Guerre has opened at London's Prince Edward Theatre, with sound design and system installation by Autograph Sound Recording. The system encompasses a 32 channel BEC digital fibre-optic link, replacing a large amount of multicore cabling between the stage and the mix position. This means all the FOH processing gear, EQs, effects and suchlike can be removed from the mix area to save space. The principal sound system component is the 93 input Cadac J-type FOH console, and Meyer Sound loudspeakers.

## Avid MCX press for Windows - NT

AVID MCXpress professional non-linear video editing systems for the PC has been developed specifically for corporate and educational video and multimedia producers. It features a wide range of file import and export formats including an MPEG1 encoder, broadcast quality video and CD quality audio.

Running on Windows NT version 4, the system behaves like an Apple Mac; two clicks launches the program to reveal the Project Manager. The editing interface consists of: rows of buttons, an editing timeline with two video tracks, four audio tracks and a Time code track. As well, video and audio input and output is via the supplied cables providing component YUV and composite video with the

Targa 2000 Pro or S-Video and composite with the Targa 2000.

Once captured, the clips can be renamed, sifted and sorted in the bin. The clips can be displayed as either text information including time code information.

Editing on the timeline combines both film and video editing techniques. Video and/or audio may be assembled, spliced or insert edited. Audio mixing on the MCXpress is achieved via a basic mixing panel.

The system is supplied as a complete turnkey package which includes a 166 MHz Pentium PC with a minimum of 32 Mb RAM, a Targa 2000 or 2000 Pro video capture card and Adapted SCSI card and fast 4 or 9 GB hard drive.

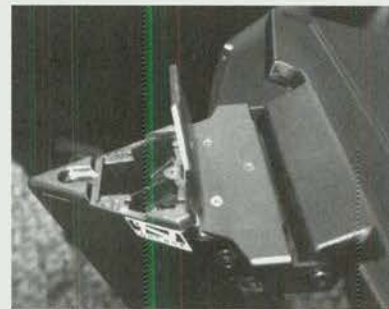
• From around \$29,000 (ex tax).

## Cool Lecturn

This device called The Traveler Port Lecturn by ANCHOR products needs few words. Suffice to say it's a portable, foldup lecturn. The gooseneck mic (included) and slightly cropped in the picture at right, can be stored in the hindey hole exposed by the pull-up cover (below).

• The price is: \$1414 inc. tax.

WRITE IN 304 ON READER SERVICE CARD FOR MORE INFO



WRITE IN 305 ON READER SERVICE CARD FOR INFO

# PHONIC

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SERIES  
POWER AMPLIFICATION

## ADVANCED DESIGN

Phonic introduce their state of the art MAR Power Amplifier range.

Featuring:

- ✓ Neutrik "Combo"™ input connectors accommodate both 1/4" TRS and XLR.
- ✓ Strong toroidal transformer, which eliminates the hum and audio problems found with less expensive transformers.
- ✓ Two dual-speed cooling fans:- this advanced design offers better control, more efficient cooling and minimises disturbing fan noise in quiet applications, such as churches.
- ✓ MAR2/MAR4 only 2 rack units, MAR6 only 3 rack units.
- ✓ Stereo, bridged mono or PARALLEL operation.



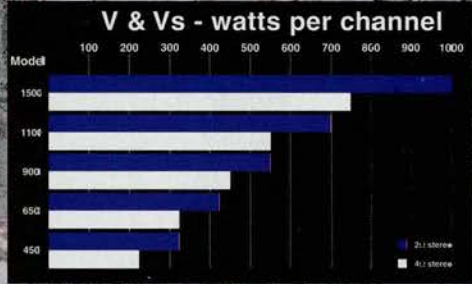
MODEL	1 KHZ 4 ohms	1% THD 8 ohms	STEREO	RRP
MAR2	230	150		\$995.00
MAR4	425	270		\$1,250.00
MAR6	650	400		\$1,550.00

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# EVENT

Events Industry News

Cover Story



## Ric Birch Bounces Back



*An exclusive interview with Events Producer Ric Birch about Atlanta*

By Madeleine Murray

**R**ic Birch is back. Beaming, confident, and unrepentant, Birch is as bouyant as one of his helium filled icons. He seems to have emerged intact from his mauling by some letters to the papers, and Bob Carr's public comments about the Handover Ceremony in Atlanta. He'll be around in 2000 as director of the Opening and Closing ceremonies.

Birch is my kind of guy, open, friendly, laidback, with a sense of humour, and a mission to enjoy himself. All these qualities will come in handy as the drama behind



Pix by Branco Gaica

Sydney 2000 deepens, over the next four years. Atlanta

In case you missed it, the handover ceremony lasted for seven minutes during the Closing ceremony of the Atlanta Olympics. The handover began with a live cross to Sydney Harbour, shown on huge monitors in the stadium. Then Aboriginal dancers from Bangarra troupe danced on a round two tiered podium. Painted inflatable kangaroos were ridden into the stadium on bikes. Waratahs and sulphur crested cockatoos danced, Bondi lifesavers made wavy patterns with shiny, translucent flags, and the Bangarra dancers moved away, throwing handfuls of ochre dust in the air. The finale was five long white tubes, slowly inflating, and rising up to form the Opera House shapes.

### The flak

Birch stayed in Atlanta, for the Paralympics. Back home, the fallout was immediate, and immense. A full page of letters in the Sydney Morning Herald were all negative. The general gist of the complaints were "tacky, vulgar, cliched, embarrassing..." Premier Bob Carr went on the 7:30 Report, to criticise. Everyone seemed to have an opinion. It became a media and talkback radio hot topic.

Over the next few days, people started writing positive letters, and basically saying, "It was fun, why take it so seriously?"

Birch was expansive and ebullient when I talked to him, high on the seventeenth floor of the stylish SOCOG offices. When the thorny issue of the Australian reaction came up, Birch said, "I've talked to journalists now from many places in Europe, as well as Japanese, and America, of course. And it was unanimous, I mean, they all loved it.

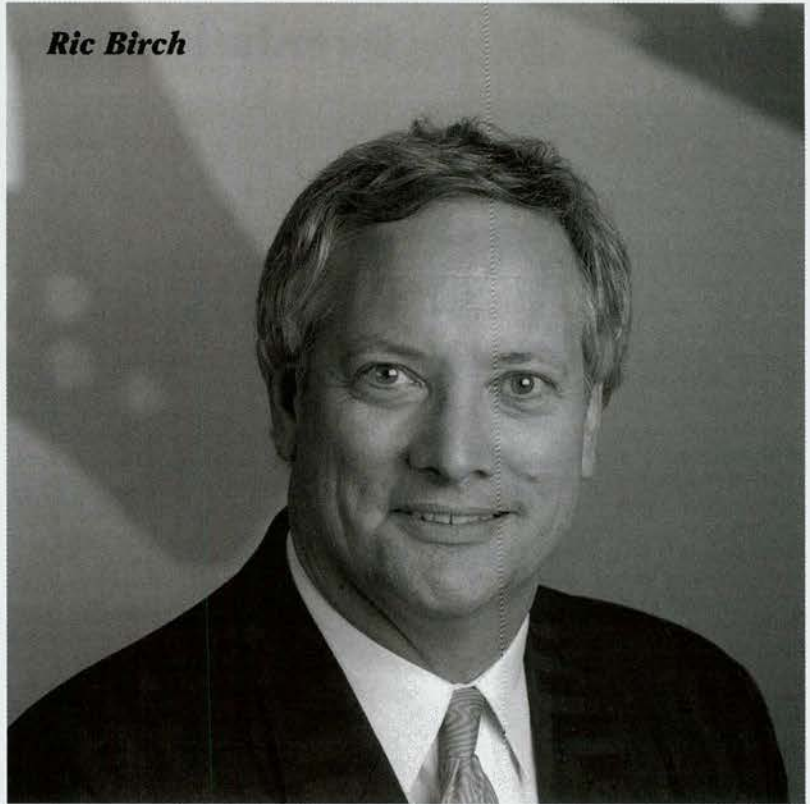
"The reaction back in Australia took me by surprise, for a while. And then I realised that Sydneysiders, in particular, are preternaturally sensitive about the way they're going to be perceived. And everyone has their own idea about how they want to be perceived.

"There were all these arguments about Australia being the clever country, that we should have shown our intellectual capacity, or our technological ability, or use holograms, or lasers. I mean, holograms and lasers are twenty years old, they were used in Montreal in '76. It's hardly the cutting edge."

Nor was Birch convinced that he should have done a more 'multicultural' show. "We have 197 countries represented at an Olympic Closing ceremony. It's pointless for us to claim we are multicultural in America, which is far more multicultural than Australia is. It's like cargo cult in New Guinea to claim we are multicultural in the middle of America's melting pot."

Birch also bristles at the idea that the handover ceremony should have been a dem-

**Ric Birch**



onstration of our technology. "Donald Horne said we should have shown how technologically advanced we are. I don't think anyone, even Donald Horne, in his wildest dreams would claim that Australia is a technological leader in the sense that America is. We've never invented the integrated chip, we don't have a space capability, we don't have computer research capability, we've never developed anything like a Cray supercomputer. To claim that we are technologically advanced, while we are producing a ceremony in America, seems to me the worst sort of cringe of all.

"What I had to come up with was a show that was unmistakably Australian in the eyes of the world. And the only things that are unique to Australia, are the flora and fauna. Our culture's certainly not unique. We are a pale shadow of European culture. Our language, our laws, our society, everything is based on European laws, and culture. And Asia hasn't had enough time here to affect our social mores.

"So in terms of the Handover ceremony in Atlanta, I felt we had to incorporate things which are truly unique to Australia, and to Sydney. And it seemed to work really well."

I thought Birch's show was good, because each element was clear and distinct. We saw the Aboriginal dancers, the waratah, cockatoos, lifesavers, and Opera House as strong, vivid elements. It was not thousands of people waving banners to form an aerial shot, or thousands of whirling shapes in wired lycra costumes. I thought he did an entertaining, and

appropriate job. The roos on the bikes have become a pop icon.

### The inflated Opera House shapes

There was virtually no rehearsal time in the stadium. The helium tubes had to be brought in from outside in the street, where there was a semi trailer loaded with helium to inflate them to 80 per cent capacity. The semi inflated tubes then had to be carried through wire fences, and narrow gateways, through the tunnel and onto the field, by the lifesavers, who had no practice at all. "There were lots of things that could have gone wrong," Birch said.

Cylinders were placed in a trench around the field, to do the finale inflation, manually connected. "None of that was rehearsed," Birch said. "It only ever happened in the show. And given that the lifesavers were not professional performers, they did a fantastic job. They behaved like seasoned professionals, waited for their cues, and did everything right."

### The roos on the bikes

A couple of kids had problems with the kangaroos catching the spokes of the wheels. Birch found out after that a zealous security guard in the tunnel had stopped the boys from getting to their position. So they arrived on the field stressed, because they had been held back.

### The dancers

Stephen Page, the choreographer, had wanted to have enough ochre on the stadium

floor, to raise dust under the dancers' feet. When they figured out it would take several truckloads, they settled for the dancers to throw up handfuls in the air. All the coloured earth was brought from Australia.

### Lighting and television

"From a lighting and television point of view, it was very disappointing for me, and for John Mischer, the TV director, and Bob Dickinson, the LD," Birch said. "The lighting instruments at the stadium were a problem, due to a long comedy of errors. This was almost unbelievable, when you think of the preparation time and the money, and the pressure to get things right for the Olympics. The lights, those big SynchroTech lights, all 110 of them were special order, special manufacture. Only 60 per cent of them worked at the Opening ceremony, and that was the first time they had worked. They weren't available for dress rehearsals, or anything.

"We had no rehearsal at all for the Closing ceremony, so the LD was never able to program the lights. The TV Director didn't have all the cameras, because at the Marathon, which came in that morning, the cameras were in a different position. They had moved the cameras during the afternoon, and the talkback connections didn't work in the new positions. So the Director was unable to talk to the cameras, and the cameras were unable to hear the Director. So it meant that he had to shoot wide in order to be safe.

"For those combined reasons, the Handover ceremony, was a lot less dramatic. It was designed to be shot very tight, and get close intimate shots, and use very specific lighting that would isolate the centre of the field, and let everything else go dark. But on the night, the whole place was illuminated like a tennis court.

"There was no mystery, there was no magic, there was no reveal. It wasn't meant to go wide until the end, when the Opera House went up. However, in the end, that moment was achieved. Certainly the international audiences responded exactly as I'd hoped they would."

### The sound

Birch felt that the sound in the stadium was superb, but he has been disappointed with the sound he's heard on Australian tapes. "I don't know what went wrong on the replay. It's a sensational soundtrack, it was recorded to the highest standards. It's a Channel 7 problem. I heard an NBC tape that was recorded off air in America, and the sound on that was great."



# The Master of Ceremonies

*Fun and games with Ric Birch : his greatest work detailed*

by Madeleine Murray

**A**s Elvis is to rock and roll, Disney is to cartoons, so Ric Birch is to entertainment technology, to high profile spectacle.

Apart from the Atlanta handover ceremony, Birch is probably best known for the '92 Barcelona Olympic opening and closing ceremonies. Thousands of dancers formed words and patterns on the stadium ground. There was opera, flamenco, and a gargantuan sea battle staged on land. Ten thousand athletes unfolded an Olympic flag 50m wide and 100m long. And most of all, the arrow of fire soaring through the air, and igniting the giant cauldron, to the exquisitely emotional song 'Amigos para sempre.'

So this is Ric Birch, an antipodean Cecil B. de Mille, whose forte is the sheer grandeur, the spectacle, the numbers, the bravado. A sense of excess and showmanship more often associated with Americans than with Australians.

The Opening and Closing Ceremonies of the Olympics Games must be the most watched event in the world, broadcast to every country in the world, and watched by over three billion people. It would be a very embarrassing place to make a booboo.

Birch produced both ceremonies for Brisbane Expo '88. The participants included 200,000 balloons, 1000 daylight fireworks, acrobatic water skiers, helicopters, Hercules aircraft, F-18 and F-111 fighter jets, and 2700 musicians.

During the six months of Expo '88, Spectak produced 140 events per day over seven venues, and had 600 staff. Three years went into the preproduction. Birch is president of Spectak, an event production partnership with News Limited. Or at least it was until Murdoch gave Birch his share in '92.

Birch was Director of Production for the ceremonies at the '84 Los Angeles Olympics. Among the grand pianos, covered wagons, and fireworks, the most striking image was the rocket man, flying into the stadium with no visible means of support. And the runner lighting the Olympic rings and huge silver torch above the stadium.

And before that, there was the '82 Commonwealth Games with the ten metre high kangaroo. Her pouch opened up, and hundreds of little joey-children came scampering out and bounced on trampolines to Waltzing Matilda.

But Birch is more about the future than the past. He has just produced the controversial

handover ceremony at the Atlanta Olympics, executive produced the Paralympics handover, and he is the Director of Ceremonies for Sydney 2000. He is also developing new shows for Dollywood, and working on the opening of the Sydney Harbour Casino.

He puts aside an hour for a journalist from a small magazine, in what must be a very busy time. Connections is not exactly the cover of Time, though we do try. And he doesn't ask that the questions be faxed first. Very civilised.

### Aesthetic

**What sort of brief do you get, or give yourself?**

To my knowledge, from the two Olympics I've worked on, a brief doesn't exist. In both cases, the organising committee were prepared to admit that they didn't know anything about how to create, produce, execute a ceremony. And they left it to people whose experience and credentials indicated they'd probably be able to do it.

That's not the case in Sydney so far, where I'm getting a huge amount of advice and directions from all sorts of willing people. Such as volunteers who take it upon themselves to write to me, and people in the community, and politicians, and the organising committee in various areas, and so on.

However, the reality is that no one can write a brief. I mean, if there was a person, including myself, who could write a brief for a ceremony, that would create the ceremony. The only instructions that I've ever had for the ceremonies, or any of the major events I've worked on, has been to do them, full stop.

Expo '88, involved over 60,000 performers, over a six month period, and we were working 24 hours a day, three shifts a day, 700 backstage staff. Bob Minniken, who was the general manager, gave me the best instructions I've ever had, which were, "Devise, create, execute, the opening ceremony, the closing ceremony, and all the entertainment in between."

And that's terrific. That really was the best way to work for me. Because as soon as anyone starts trying to give you a framework, it starts being a limitation. Producers and creative people will eventually set their own limits, so there's no point trying to corral things before you start.

So for me, the brief is, 'OK, you're doing the Olympics. Opening ceremony, closing ceremony, medal ceremonies, maybe opening the

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# EVENT

## Ric Birch: Olympic Maestro

Olympic stadium, any IOC official ceremonies.'

**What are you ultimately trying to achieve in a ceremony?**

I guess, in the simplest form, to be true to the whole city. Ceremonies have to achieve all the requirements of the Olympic charter, and the traditions. Given that the Olympic content is fixed, like the lighting of the Olympic cauldron, the raising of the Olympic flag, the speeches, the oaths taken on behalf of all athletes, the judges' oaths, and so on. Those formal Olympic traditions are incorporated in the ceremony. Outside of that, the way that you interpret the formal requirements, and also the framework in which the whole ceremony takes place, is really a reflection of the whole city, the culture, and the society, ideally.

**How do you approach the whole thing?**

Fear, trepidation, and drugs. It's one step at a time. I guess from the outside, it seems forbidding, because you see the totality, you've only ever seen the finished product. For two or three hours, you see this concentrated unfolding of massive performance logistics, so you could be overwhelmed by the sheer scale of it. But it's like everything else. I couldn't imagine doing a moon shot, but those guys started somewhere planning that.

Same with ceremonies, we start with a script. That's where it all starts, and then everything else unfolds from that.

**In 2000, will you try to create another classic image, like the arrow?**

Sure, we'll try very hard...(laughs)

**Have you got it yet?**

The lighting of the cauldron came to me very early on, when I was thinking about Sydney. It does involve some modifications to the stadium, and I've been talking to the architects and engineers about that at the moment. We have been talking for over a year now. And I

think, all being well, we may be able to do it.

That is, we'll have a way of lighting the cauldron which is totally different from Barcelona, but I hope equally memorable.

For the Atlanta handover ceremony, you worked with the choreographer Stephen Page, from Bangarra Dance Theatre. How did that come about?

When I arrived back in Australia after living in Los Angeles, I started trying to find out who the up and coming young people were. I was aware of Stephen, a number of people had told me about him. But it wasn't until I saw the Bangarra performance that night that I realised he has come up with something very special.

Stephen has actually, more than any other choreographer/creative director I've ever seen, managed to combine indigenous and western dance style into something new. That in itself is extraordinary. He has a very fresh eye, a great visual mind.

And we hit it off. I was supposed to meet him, and he didn't show up for the appointment. About a month later, I bumped into him in the SOCOG corridor. He said, "I didn't know what it was about really, and I didn't just want to show up and have a meeting."

So I said, "Let's try to do it again, one on one." We did. It was terrific. I realised he'd be someone I'd be able to work with, and exchange ideas with. It's been terrific. We went over to Atlanta, and we had a ball.

**How do you feel about technology in your work?**

I don't like experimenting with new technology at something like an Olympic ceremony, because it's live, it's happening, you've got one crack at it. And it's very embarrassing if it doesn't work. You want to use new technology, you just don't want to pioneer it.

And I think the creativity of humans, in the design, the colours, the choreography, etc is always far more impressive than technology. If you're saying, look at this gas plasma cloud lit by a neon laser

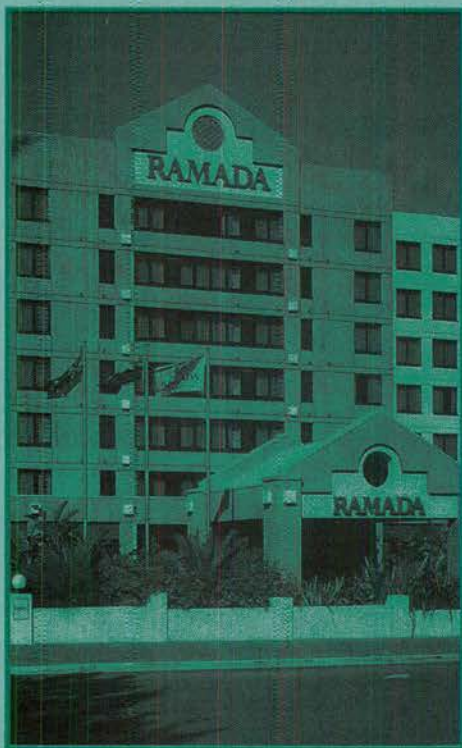
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## *The Concept*

Ramada Hotel at Parramatta needed to improve its audio system in the function areas. The five rooms are used for individual meetings or larger functions when joined together. A central foyer area is also used. Hotel function areas need to be flexible, catering to meetings by day and weddings by night. Quick change and versatile design are essential. The old style 'evacuation system' PA was not adequate, improved audio would assist the saleability of the function rooms.

## *The Problem*

With five rooms and the foyer area, the customer really needed a room combining system with smart programmable control. Wall switches would activate different preset programs on a 'smart' controller, which would activate other components like preamps and amplifiers using control protocols. But the budget wasn't sufficient! Quality audio for background music and public address was required, but the control needed to be designed without a 'smart' control system! Which was almost impossible.



## *About the FreeSpace Business Music System*

The FreeSpace 6 system comes with control electronics, and four small full range speakers. Up to 12 additional speakers can be run from one control unit, using an expansion module. Input selection and volume can be controlled from a remote wall panel. Wiring to the remote panel is twisted pair, the volume control is handled by an internal VCA in the control electronics.

A smaller system - the FreeSpace One system is also available.



## *The Solution*

Bose dealer Trevan Johns & Associates looked at the job and talked with the client. Examining the typical uses of the five rooms, it was decided that a viable system could in fact be designed using separate Bose FreeSpace Business Music Systems, combined when necessary. FreeSpace 6 utilises a clever system electronics box with amplifier, mixer and system source switching all integrated. Remote control of volume and source switching is what made FreeSpace viable for this job. The system electronics unit for each room could be switched to one source if required, with the rooms cascading from the first. Although not quite as versatile as a 'smart' system, the design would function to the customers satisfaction, with wall switches providing transparent room combining.

## *The Result*

Trevan Johns & Associates placed all the system electronics together in a control 'cupboard'. Remote microphone connections and volume controls were placed in each room. In the control cupboard are switches to separate or combine the three Marsden and two Anderson rooms or to run separately. Microphone gain control is preset with acoustic conditions in the rooms taken into account. It is also possible to link all the rooms together and to run background music direct to the foyer - 'wedding' mode. The speakers are extremely unobtrusive - FreeSpace 6 comes with either flush mount or surface mount compact speakers. Each FreeSpace 6 control unit can handle up to 16 speakers.

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## Ric Birch: Olympic Maestro

(which we've tried...) You look at it for 20 seconds, and go yeah, next.

You can put on a dance sequence or a performance sequence which will hold your attention much longer than 20 seconds. I'm not a great believer in technological entertainment, like simulator rides, and roller coaster rides, and giant films like Imax. I think they have their place, but I think you have to have live performance. Without live performance, you haven't got entertainment, as far as I'm concerned.

Technology in ceremonies, for me means lighting or audio, or maybe staging like robotics, or animatronics. But we always buy it off the shelf, or go to people who've been doing it. Lots of people come to me with great ideas for ceremonies, and say they want to do it at the Olympics. And I always say, "Well, show me where you've done it somewhere else first."

The good ones can, the mad ones can't. That's how you filter them out.

### Have you started planning Sydney 2000?

Not seriously.

### Will technology be different in 2000, as far as planning the ceremonies goes?

It's mostly lighting, and audio, and that'll be a lot more computerised. There will possibly be some infra red technology that isn't around at the moment. There is likely to be some interesting television technology around. That doesn't directly involve me, but we need to know how television's covering it, so we can adapt. There are some really interesting TV things on the horizon, such as fixed cameras that you can access remotely.

In America now, it's possible to set up 16 cameras on one transponder link on a satellite, and feed them to a control room where a director can actually control 16 cameras. And you don't have to send OB vans, and personnel out anymore. You just put 16 cameras on tri-

pods where you want them, and remotely control them.

### In an opening ceremony, how many cameras are there, and where are they?

In LA, we had about 60. In Barcelona, we had 116. They are pretty much all over the place. We had 36 that were directly covering ceremonies. Then NBC had sixteen of their own. The BBC had eight. Australia, Channel 7, had about four. NHK Japan, had four. They all have their own cameras to supplement the main host coverage.

### What about those aerial views?

What about them? (laughs) We have airship, helicopters. In Atlanta, we had Skycam, which is an aerial camera suspended from three cables. It's sort of a Y shape, so that as you shorten the cable, the camera will move towards one point. Then you add a Z coordinate, a vertical, and you can drop the camera down to a foot off the ground, or lift it to about 80 feet high.

We actually had an audition with it in LA, but unfortunately one of the cables hooked under a goal post, and pulled it out of the ground. We decided if that had been an athlete, we might have had a complaint.

FAA (Federal Aviation Authority) in the States and Barcelona also, don't want choppers because of the risk of something falling off, or the chopper crashing. And you wipe out not only the cream of the world's athletes, but 80,000 spectators as well, which might include 100 Heads of State, so it's easier to just skip helicopters.

### What can go wrong?

Nothing can go wrong! (laughs)

Well, the worst thing that can happen here is bad weather.

Hopefully, you cover your bases as much as possible. You've got big budgets, so you can hire the best people. You can rehearse properly.

I don't know if you saw the Optus television

thing [where one side of a giant TV set fell off as it was lifted into the air.] I had nothing to do with it, but the next day I had a stack of faxes from people saying they weren't involved. It turned out they hadn't had a rehearsal, because they weren't sure if they could get it back together if they opened it. For me, that's a recipe for disaster.

You try to take as many contingencies out of it as possible. So you know how it works, and it works over and over again. Things shouldn't go wrong that you control. Really there's no excuse for that. Professionals shouldn't screw up on that level.

But bad weather, people getting sick... We could have had a nightmare in Spain, if any of the opera singers had gotten sick. They get nervous.

### What happens if it rains?

People get wet.

There's no roof. LA wasn't a problem, because it had never rained in August. Barcelona was unseasonably cool, and it rained a bit, but we didn't lose any rehearsals. Expo, it poured with rain before we opened, but once we opened it didn't rain much at all. '82 Commonwealth Games, we had a thunderstorm for a rehearsal, but it was OK for the ceremonies.

Atlanta's as likely to rain as not, and Sydney too. It's very hard to know with weather patterns, which seem to be changing, to know if it's a statistical blip, or a trend. All you can do is have the performers wear drip dry costumes, and hope it doesn't rain too heavily. If it gets so heavy the cameras can't see, there's not much point continuing.

### What was the hardest production you've done, and why?

Actually the Bicentennial Wool Collection was probably the hardest. I wrote a note to myself then, that I found years later in a diary. It said, "No matter how it turns out, remember you never want to do anything like this ever again."



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There were fifteen International Designers, and that's fifteen international sized egos. All coming together in a technically complex live show. With 76 models whipping in and out of outfits backstage. The Sydney Opera House is not a fashion venue. The doors are only 6' high, and the models tend to be 6'1", with 4" heels, and big hats. They had to go down one level to dressing rooms, down a spiral staircase. It was fraught with difficulties. People were cascading up and down stairs, while the designers were tearing their hair, or other people's, hair out.

#### **What do you think is the best thing you've ever done?**

Well, I don't really dwell on things. I like to move on.

There have been moments in everything. Like Barcelona, seeing the arrow light the cauldron was a highlight, but we had done it in rehearsal over and over again. But, to actually see it happen in front of the audience, on the day, in front of world television, that was a special thrill.

Other moments, like the flag that unfolded over the athletes, that was technically a much harder thing to do. [At Barcelona, there was an aerial shot of an Olympic flag unfurled by 10,000 athletes from the middle to cover the entire stadium.] And we couldn't really rehearse it.

We rehearsed it with some volunteers, not 10,000, but about 1,000. And it didn't work particularly well. It worked a bit, but we were worried. But as it turned out, we had about 500 marshalls down below, telling the athletes what to do. People still think there was a pneumatic vacuum system in the middle of the field that sucked in, but there wasn't at all. It was all done by hand. It was very effective. Watching that was another thrill.

At Los Angeles, there was the rocket man, the piano, the audience card stunts. At Expo, there were all sorts of different moments. Like the aquacade, which was my baby. The piazza was terrific.

At the Bicentennial Wool collection, Jean Muir was my favourite. Of all the designers, she was the most professional, the easiest to work with, the most exciting. She died last

year. I'm very despondent about that. She used to watch all the Olympics, so I was looking forward to her seeing Sydney.

#### **What kind of control/communications setup do you have?**

Pretty enormous. In LA, we had about 200 walkie talkies, plus hard wired clear comm to about eight fixed points. In Barcelona, we had about 20 clear comm fixed point transmitters. And because the Spanish love talking on walkie talkies, it was the worst thing we could have done.

Everyone who had a walkie talkie had to talk, and it meant we could never talk to them. Because they were always busy saying "How's the weather where you are Maria?" And Maria's saying, "Fine, where are you, Jose?" And I'd be saying, "Guys, guys, are the performers inside yet?"

So we ended up with about five separate walkie talkie networks, trying to layer one on top of another. It was a pyramid shape, so I could scream at three, who screamed at nine. We had about 500 walkie talkies in Barcelona, plus all the backstage stuff.

Walkie talkies are difficult, because taxis, television, police, ambulances are all in those frequencies, so it all has to be coordinated.

It's something you learn. It's one of the benefits of experience. I've now got to know the walkie talkie companies, and we can put our own chips in walkie talkies, and have our own exclusive frequencies. It costs a bit more, but not a lot. Walkie talkies are still probably the best system, as long as you wear them on your belt, and have a little spike mic. People who lift the bricks up and talk, that's very inefficient.

#### **Where are you during the ceremony?**

I'm in the control room. That's normally where we pull all the communications back to. Not necessarily audio, which requires a fair bit of equipment. Audio tend to be in a truck somewhere. And normally the guy who's mixing the sound for the stadium is sitting out amongst the audience. We build a control point for him and his crew. Lighting is usually in the control room, but they take up a lot of space these days. There's typically 20-30 people in the control room for a ceremony.

#### **How do you deal with the fact that it has to work for the stadium, and for television?**

Yeah, I design it for the stadium initially. When I'm thinking of events and shows, I instinctively think of them as a camera anyway. I think of it in terms of camera shots. What I invariably do is go and sit in the venue, which is difficult to do in Sydney because it doesn't exist. I just sit, and start imagining it, and start filling up the spaces with the show, and it usually doesn't take too long.

In a day or two, I'll have the good ideas.

Then it's a question of fleshing it out. You bounce it off people. A lot of the ideas come from other people. We sit around in 'creative sessions,' nothing at all like 'blue sky' meetings in advertising agencies. I like to give the creative team a framework. They play with it, and may change it out of all recognition. But at least you have a starting point. I like to set up the framework myself, and let creative people run with that.

#### **That Arrow idea**

The arrow started because a designer came, unsolicited, into our offices in Barcelona. He had a design for the stage. The producer, a wonderful man named Pepo Sol, didn't want to tell the guy, a friend, to piss off, because the idea was hopeless. He said, "Ric, you tell him to piss off, that the idea is hopeless..."

So I went through how it wasn't a great idea, and it wasn't a great design. And my final nail in the coffin was to tell him, "You haven't allowed any way of lighting the torch. The stage is down here, the cauldron's up there, there's no staircase, there's no ramp, there's no flying fox, there's no way of getting there."

And as he was folding up his stuff in disgust, he said, "Oh, you do it like Robin Hood. You fire an arrow," and he walked out.

Pepo and I looked at each other, and said, "That's not a bad idea." And it developed from there.

I don't know how Robin Hood did his arrows, but we had a pretty high tech flaming arrow. The first prototype was a Singer sewing machine funnel on the end of an arrow, with a little turbine. So when the arrow went through the air, we could wrap the fabric around it. It would burn but the air flowed out because of the funnel. So the flame was thrown out, instead of travelling down the arrow. The little turbine evened the flow around the arrow. We refined that, and in the end, we had quite a high tech piece of work.

Eastern Aluminum, in the States, who make all the competition arrows for the Olympics, made us a special run of aluminum tube, specially built for those arrows. They made a thousand shaft, that's a different wall thickness. They were longer, and they put all the feathers in, and balanced them. They were quite remarkable pieces of mechanism.

So it was a lot more than Robin Hood had going for him. But Robin Hood was very special, obviously.

#### **Do you have a core team?**

Every show's different. I assemble a different team for every event. I've got the luxury of time. Every event I work on has a long lead time. I've been able to pick and choose what I work on. I don't want to grab every job that comes along. I'll only work on ones that I think will be enjoyable, because there's no

*(continued over page)*

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## Ric Birch: Olympic Maestro

point in working on something you hate.

I've met a lot of people in 'showbiz' who really go through agonies and anguished time. And they work for awful people who give them a hard time. And at the end of it all, I don't know why they do it. My basic starting point is enjoying it. And it must have a big enough budget to do it properly.

It's not that I need a lot of money, because I don't make that much money out of it, but I have a lot of fun. And I can spend a lot of money making sure it's done as well as it possibly can be. And that's the important thing.

### What were the budgets?

'92 Barcelona was \$US25 million. '84 LA was \$US9.3 million. 2000 is \$US25 million.

### Does the budget come first, or last?

It comes first, obviously, because the organisation has to have a starting point. But the starting point for them was they came to Barcelona, and they said, "How much is this costing, Ric?"

And I said, "\$25 mil."

And they said, "OK, that's what we'll budget."

So it's cart and horse. But at the same time, I hope that if we came up with a fabulous idea that was just so breathtaking and perfect and right, but was going to cost us another million dollars, we could do it. Then it would be my job to justify the extra million to everyone involved. If I'm a good salesman, and the idea's good enough, then I reckon we'd get another million.

### How did you do that rocket man in the '84 show?

That guy, Kenny Gibson, straps a highly volatile tank of hydrogen peroxide and liquid hydrogen to his back, and turns it on. He's got seventeen seconds of lift. He's got a little buzzer in his ear, which goes off when he's been burning for twelve seconds.

The rocket belt was designed about '56 by Jet Propulsion Laboratories in LA, and it was planned by the Defence Department to get

soldiers over mine fields, high walls, or defended positions. So that instead of dropping them out of airplanes, soldiers could suddenly, like Flash Gordon, just up and over.

It was a great affair, it can go up and over, but the big problem is that the rocket belt weighs so much that there is no spare carrying capacity left for a gun, or hand grenade, or ammunition. And it requires both hands on the controls. So you could land a battalion of troops, empty-handed, but very impressive.

### Personal

#### How do you relax?

I try not to get tense, I guess. I enjoy life a lot. The things I probably enjoy most are reading, computers, photography, and fine food and wine. I spend as much of my life as I can doing those things. I love my kids, love playing with my kids, but I don't find that very relaxing.

#### How do you feel the night before an opening ceremony?

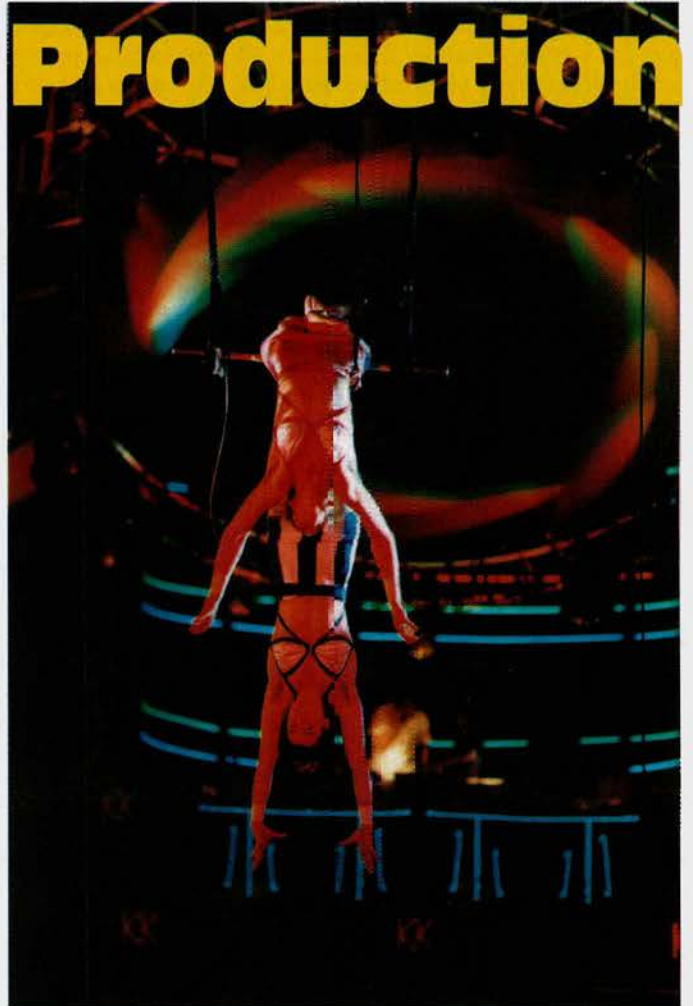
Fine. The tension is at the very first mass rehearsal, when you start bringing all the bits together. It's hard to turn back from that point, because it's been a massive process which is all coming together then with three months to go, and that's no time to go, "Oh God, the costumes look terrible..."

But it does mean that for the ceremony itself, the only tension the night before is the weather.

What is special about the big ceremonies is the adrenalin level. Not just the performers, but the backstage people. Everyone is absolutely at their 100% peak, and that's very exciting.

#### What is after 2000?

I don't know, actually. I've thought about whether I want to stay on in Australia, or do I want to go back to the US, or live in the South of France. It depends on whether or not I want to go on working. It depends on the kids, who are five, and two and a half years old. I wouldn't mind retiring. I could become the boring old fart, elder statesmen of ceremonies.



## Australian Business Theatre produce huge event in Taiwan

The Acer Global Distributors Meeting brought together 1800 Acer dealers from over 85 countries around the world to a three-day event in Taipei, home to Acer's corporate headquarters. Acer is the world's sixth largest manufacturer of personal computers and this year celebrates its 20th anniversary. It was appropriate that the celebrations were held where it all began.

Australian Business Theatre creatively developed and directed all aspects of the production and staging of two days of conference and the Gala farewell party. Another major feature of the event was a Technology Showcase Exhibition designed by Australian Business Theatre who also project-managed construction. Built in three days by a crew of over forty

and occupying a floorspace of some 1000 square metres, the exhibition was held over four days and open to the public for two.

A great deal of advance planning and co-ordination were required to keep such a large undertaking on track. Initial planning commenced fifteen months prior to the event. Melbourne Project Manager, Sally Martin, and Rachel Owens from Australian Business Theatre's Sydney office spent almost two months based in Taiwan prior to the event meeting with talent, venues, caterers and other suppliers. Most importantly they kept Acer up to date on a daily basis. Other Australian Business Theatre staff flew to Taiwan on nine separate occasions to conduct site surveys and meetings with suppliers, ca-

**Corporate  
Theatre**

# in Taipei



terers and venue operators.

Highlights of the conference included a presentation by Chairman and CEO of Microsoft, Bill Gates, a live teleconference from the home of Intel boss Andy Grove and a cultural show featuring performances by the Cloud Gate Dance Theatre of Taiwan, Taipei Percussions along with acrobats and opera performers from The Fu Hsing Academy of Dramatic Arts.

Acer took over the entire Taipei International Convention Centre (TICC) for one week to stage numerous technology seminars, press conferences and the plenary conference presentations. Opened in 1987, the Convention Centre is well positioned within a stone's throw of the World Trade Centre and the Grand Hyatt. The plenary conference presentations and cultural show were held in the 3000 seat Plenary Hall.

From the outset it was decided  
(continued over)

# interM

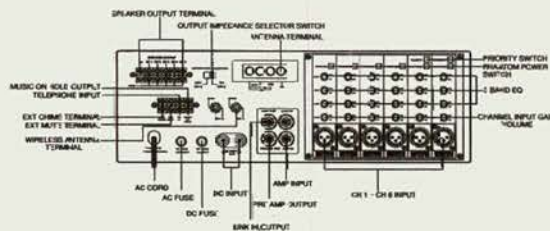
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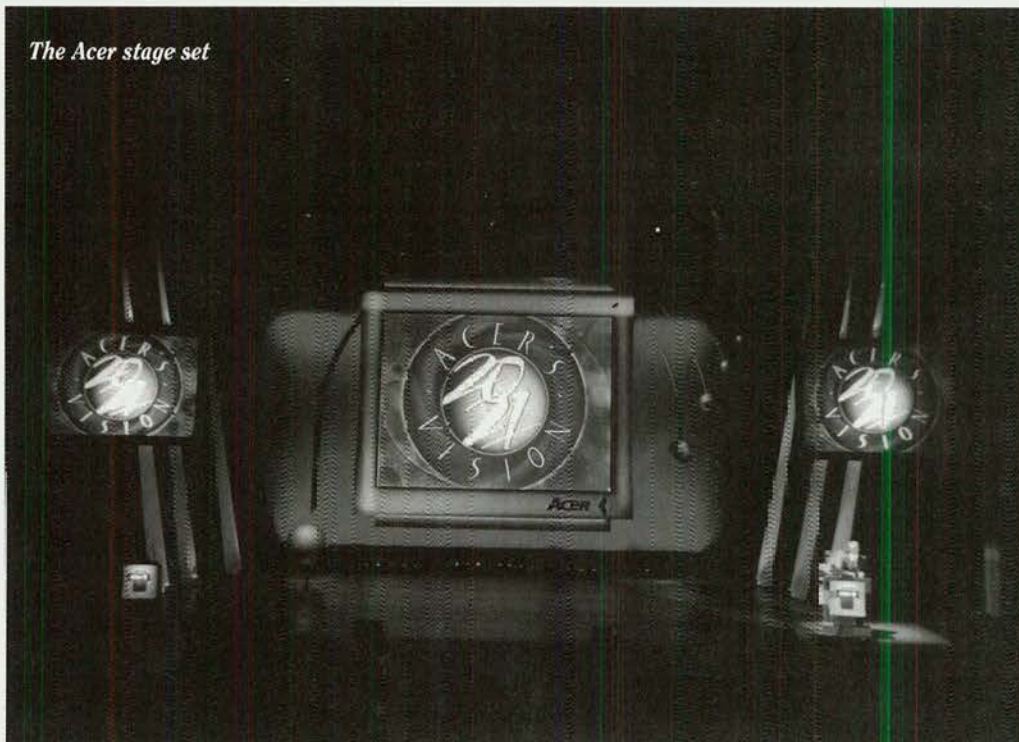


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The Acer stage set



## ABT in Taipei

(continued)

to hire the vast majority of technical equipment required locally in Taipei with the remainder flown in from Australia as baggage. This meant a large amount of research was required in Taipei well in

advance of bump-in. Nicholas Fok, General Manager of Taipei based lighting hire company Engineering Impact, proved to be a very useful contact and acted as local co-ordinator for all technical equipment and set elements.

Another major benefit of the working with local suppliers is explained by Australian Business Theatre Joint Managing Director, Peter Grose, "Successfully planning and staging a large conference event in an overseas location is not just a matter of packing your bags full of equipment and programs and heading off.

To Australian Business Theatre it is vital, to the future development of work in a region, to first establish close working relationships with not only the client, but also local staging and production suppliers. Time taken educating and thereby training the local companies is well spent in enabling future work to be carried out in the same region. It also gives them the opportunity to

show us a thing or two."

### The Video System

For the conference sessions, a complex three-screen video rig was designed. The vision distribution system had to deal with up to ten computer inputs, two live-to-screen video reinforcement camera feeds and a number of videotape rolls. To aid in flexibility and allow for smooth transitions between sources on screen, all computer outputs were scan-converted to NTSC Y/C video at each PC before being routed to the main switching system. This also helped to reduce the number of cables involved, which was important given the length of some of the cable runs involved.

The 20' x 15' central screen was covered by a JVC Hughes 315 series video projector running scan-doubled NTSC vision. The two 12' x 9' side screens used Barcovision 1600 HDTV projectors. The decision to run all vision in NTSC was based largely on the availability of local equipment and the fact that a record of event video was shot and edited in Taiwan on local equipment. This made things easier as the camera images sent live to screen were also in NTSC.

Stagecraft Corporate Theatre from Brisbane supplied the only

items of video equipment brought in from Australia; a few small Y/C video switchers and amplifiers and sixteen ScanDo scan converters, chosen for their excellent quality scan conversion, their ability to output in PAL or NTSC and their universal voltage power supplies.

### The Gala

The gala farewell party was held at the KK Super Disco, an enormous nightclub on the outskirts of Taipei. Holding up to 8 000 people, the lighting system and decor have to be seen to be believed. Rigging in the club includes twenty eight chain motors controlled by a Skjonberg motor controller system. There's even a flying saucer which flies down the length of the venue twice nightly while the pilot throws vouchers to the audience.

Entertainment for the night was provided by a dance troupe led by American choreographer and MTV VJ Charles Mack III. Also featured were Christy and Anna Shelper who make up Melbourne-based aerial performance act Airatec. Charles, who now lives and works in Taipei, as well as playing disc jockey, choreographed a work with an international flavour to reflect Acer's 'Global Brand. Local Touch' slogan. Christy performed a contortion which flowed smoothly into an aerial web act,

and later was joined by Anna for a jaw-dropping double trapeze act suspended more than ten metres directly above the audience. Tiny Goode of Showtech Rigging Australia was close at hand to make sure everything stayed safely in the air.

### Conclusion

The whole team involved had a great time and learnt a lot about staging a major event away from their usual stomping ground. It is always a worthwhile experience working on something of this size outside of your normal comfort zone.

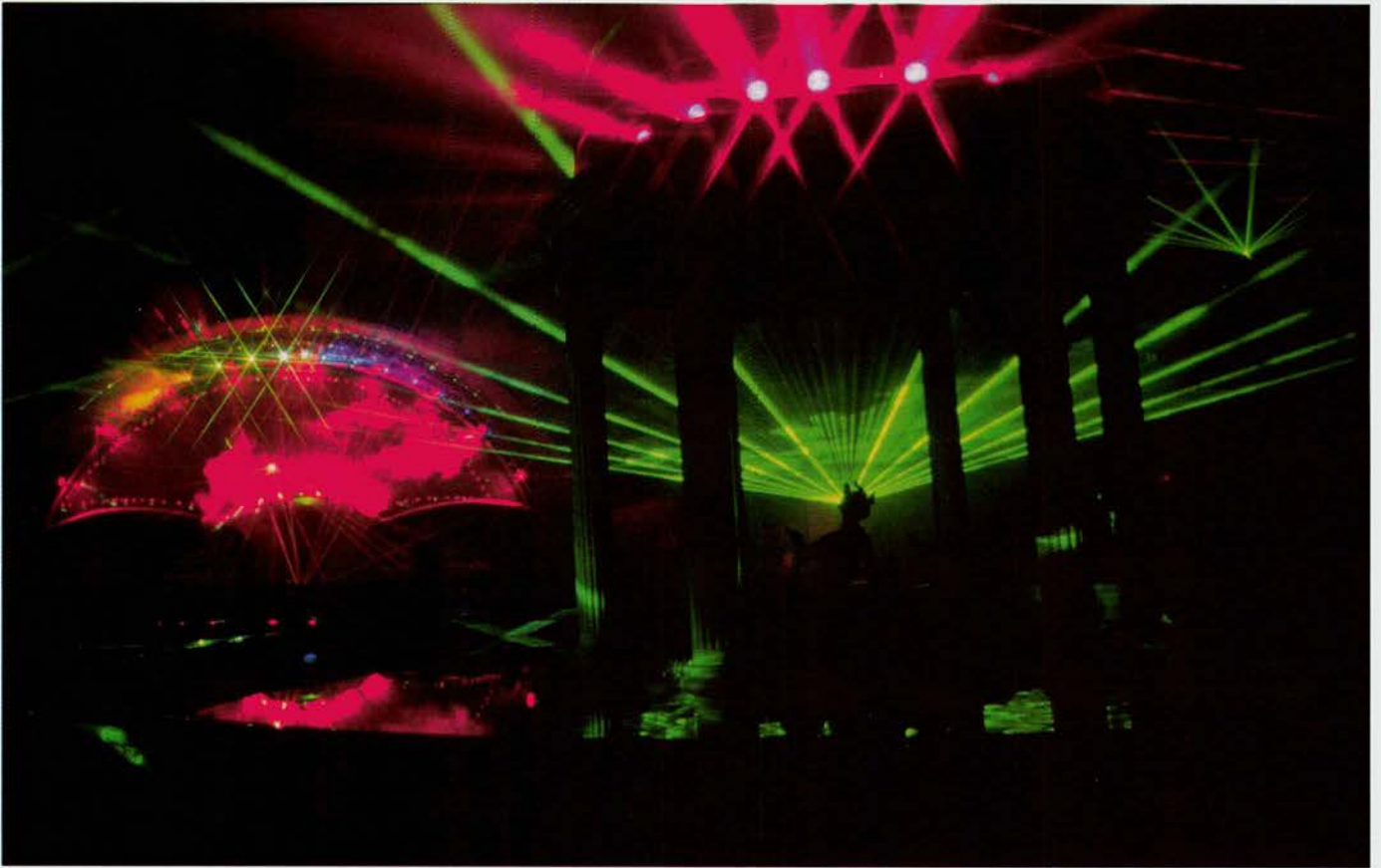
Stan Shih, Acer's Chairman and CEO, described the events as a "huge success". 1800 people dancing the night away in an enormous nightclub was a fitting end to a grand event

### The Crew

- Australian Business Theatre
- Peter Grose** - Creative Director, Executive Producer
- Sally Martin** - Project Manager
- Steve Nietz** - Technical Director
- Rachel Owens** - Record of Event Video Director / Assistant Project Manager
- Naideen Hillier** - Exhibition Designer / Construction Supervisor
- Simon Swingler** - Exhibition Graphic Design
- Lorenzo Lorefice** - Speaker Support Design and Programming
- Simon Dawes** - Speaker Support Design and Programming
- Cristina Page** - Speaker Support Design and Programming

### Contracted crew

- Phil Lethlean** (Philip Lethlean Lighting & Staging) - Lighting Director
- Herbert van Daalen** (Stagecraft) - video and data projection
- Sean Wilson** (Stagecraft) - video and data projection
- Mark Williams** (Haycom Staging Melbourne) - FOH Audio / JVC Hughes video projectionist
- Tony Routledge** (Audio Visual Image'Nation) videoconferencing and data projection specialist
- Tim Hall** (Active Lighting) - Intelligent Lighting Programmer/Operator
- "Tiny" Goode** (Showtech Rigging Australia) - Performance Rigging and Safety



# Move Over, Disneyland

*A giant Korean theme park is created - with Australia handling the ent tech!*

By Madeleine Murray

*Miraculous* is a permanent installation in Everland, Korea's largest theme park, owned by Samsung. The project was conceived by Laservision, from an original idea of Simon McCartney's. The brief was to create the largest laser show in the world, in a theme park.

The 12 minute show consists of lasers, and laser graphics, a 70mm film projected onto a giant waterscreen, fireworks, 6 channel surround sound, and an elaborate moving light rig, built around Cyberlights, and space cannons. It takes place daily, in an enclosed garden 130x200m large, within the theme park.

This garden holds 12,000 people. The park itself has a full sized nightly parade with 60 floats, a safari park and zoo, a snow park, 6 mega roller coasters, a water park, a 70mm Showscan theatre, and a motor raceway.

Laservision were the project managers. Their work included the architectural design, the civil engineering, structural analysis, electrical engineering supervision, and hydraulic supervision of the fountain, as well as the laser work.

All of the specialists were Australian, who won the contract in competition with high end international theme park companies, such as Disney World. Laservision, the principal contractor, designed, produced and managed the

installing of the show. Everything runs off the Laservision control system, housed in a little black box.

Laservision hired Andrew Walsh, of Accolade to write and direct the film, produce the soundtrack, and to design the lighting, and program it for the show.

McCartney and Walsh went up to Korea several times with presentations. They got approval in late January, and spent three intense months in Korea, working in ankle deep snow, constructing the show. The site was teeming with all the other contractors.

The huge 50x50m rear projection screen was attached in sections on to the back curved shells of a building. Laservision had to rework the structure of the screen on the building, because they were convinced that if they just laced it to the existing building, the winds would pull the building down. They got their own engineers in, and designed a truss system that would be woven into the building, and hold up the screen independently. They rebuilt the control spaces, in order to get all the gear in, and the 70mm projector.

The water screen, 25m high and 55m wide, was designed by Laservision. The water source is one jet, driven by five pumps.

Nine lasers are projected onto several different surfaces, including a waterscreen, and a building covered with rear projection material. Some of the lasers are more than a kilometre away from the garden, so there are vast amounts of cable under the ground.

Laservision make the lasers themselves, and their own hardware, and software. One Pure

Light, three 30w Argons, and three 6w Krypton make up the seven Coherent Sabre lasers. Five solid state lasers, called YAGs were used. "YAGs, a new

development, are the most powerful visible light lasers in the world now," McCartney said. "They work in quite a different way from a normal ion gas laser. Essentially they produce an enormous amount of power for not very much electricity. And they also produce it in a spectrum that is the most sensitive to the eye. This enables us to completely surround the audience in an array of criss crossing beams and effects." Laservision put a YAG on the top of both mountains, and were able to take in the whole park from these spots.

The 70,000w sound system was provided by Mark IV Audio, who are regular suppliers of large outdoor systems. Ian Johnson helped Laservision with the design.

*(continued on next page)*

**Contracting**

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Write in Reader Service Number: 130

**The film on the waterscreen**

Andrew Walsh of Accolade produced the 70mm film shot to project on the screen. Walsh wrote the story for the film. His problem was that this park didn't have an obvious theme, unlike Disneyland, which has ready made characters. "This theme park doesn't have a Mickey Mouse, so we had to create a character, and a story, and a reason for this thing to happen," Walsh said. "Most laser shows have the obligatory science fiction, but I didn't want to do that. So this story is about a Korean character called Tokibbi, a mountain God-type gnome."

Tokibbi lives in the garden, and appears 20m high, out of nowhere on the waterscreen, saying to the visitors in 6 channel surround sound, "What are you doing in my garden?" He demonstrates his power by sweeping his hand through the lasers, and lasers pour from his fingertips. He zaps the audience, and causes pyro generated explosions where he points.

Then he takes the audience on a journey through several worlds.

The first world is the plant world. Huge plants open up on the waterscreen to an emotive sound track. Then giant insects appear, wreaking havoc. Some of the footage was shot, and other reworked from stock libraries. There are enormous flies, other insects, and a vast slow motion lizard who sticks his tongue straight out at the audience. "The thing becomes absolute mayhem, the music more frenetic, and our character appears and establishes order. There's laser effects, and more pyros. Then a huge raindrop appears, which is a great effect on a waterscreen."

The next mood is rain, wind and thunder in a storm sequence. Tokibbi then brings the storm to an end, and with a sweep of his hands produces a 3D rainbow, made from multi-coloured laser, and Cyber lights. A laser dolphin dives on the screen, making splashes. "As he

splashes, all of the lasers come up, and put a green roof over the crowd, and we take the whole audience underwater. We have fish swimming around, and sharks coming in and scaring things."

The fish are projected on to the waterscreen, and the experience is enhanced by 3D laser images around the crowd. "It s a very integrated show. All the lighting fits into it. The lights appear at various times to wash things out. Instead of doing a normal dissolve on film, we'll do a dissolve by washing out the waterscreen, or lighting it, so that it changes colour, and the image dissappears in that colour change."

Tokibbi then takes the visitors off into the world of space, out through the solar system, and back to a point where they end up looking at Earth. At the end, Tokibbi tells the audience that all the forces, of beauty, power, danger, and the elements are on their home, the Earth.



**THE KOREA MEGA CREW SHOT:**

**BACK ROW - L TO R**

Rob Orf (Westrex, Canada), Steve McMahon (TCP, Australia), Chris Walsh (Laservision), Robert "Darvall" Darvall (Showtech Australia), Michael "Nitrox" Petrani (Showtech, Australia), Michael Hall (Howard & Sons, Australia) Steve Wilson (Howard & Sons, Australia), Matt Hughes (Showtech, Australia), Sally Bamford (Laservision), Bob Pearce (Showtech, Australia), Mick Pratt (Laservision)

**MIDDLE ROW- L TO R**

Mark Regel (Laservision), Ffloyd Rollefstad (Laser Fantasy Int'l, USA), Jaime Sky (Showtech, Australia), Paul McCloskey (Laservision), Ed Orman (Laservision)

**STANDING- L TO R**

John McGrady (Showtech, Australia) Greg Roberts (Lateral Linking, Australia), Christian Howard (Howard & Sons, Australia), Andrew "Heppy" Hepburn (Showtech, Australia), Paul McNeill (McNeill

Sailmakers, Australia), Wellesley "Weasle" Eicke (Showtech, Australia), Brett "Barney" Starkey (Laservision), Chris "LB" Lightbody (Laservision), Andrew Walsh (Accolade, Australia)

**KNEELING IN FRONT - L TO R**

Katheryn Mulherin (Laservision), Simon McCartney (Laservision)

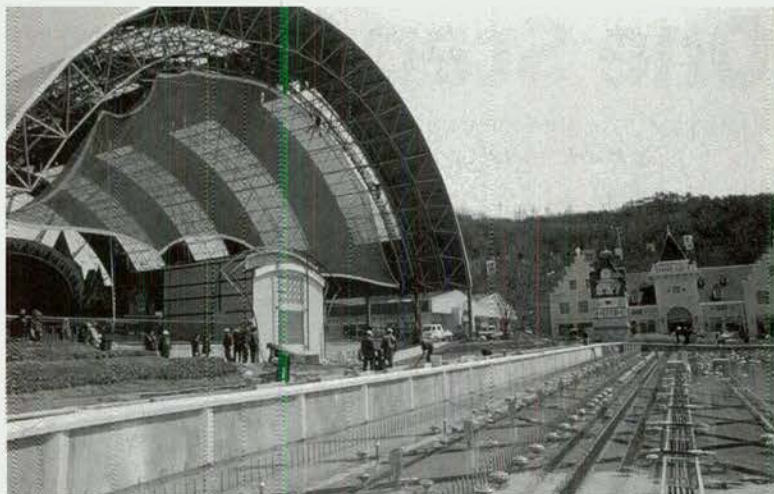
**NOT PICTURED:** Kurt Wagner (Westrex, Canada), David Carden (Laservision)

"Then there is the classic Earth rise, in the waterscreen. So the Earth actually appears, and rises in it, and hovers to music, and laser effects. Then he says, "This place is beautiful, we've got to protect it."

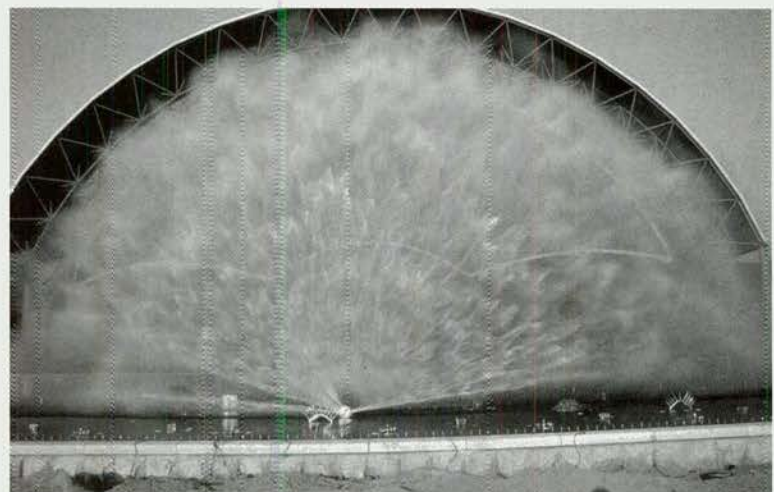
Walsh designed Tokibbi's look, and went through several draughts, including changes to the eye shapes, which looked "too Chinese." With the help of Make Up Effects Group, they built a prosthetic head.

The whole show is in Korean. Walsh wrote the story in a precis form, then sat down to work on it with a Korean writer.

"The response from the public has been huge. I mean, they've never seen anything like it, no one's ever seen anything like it. It is really hard to explain in pictures, or in words how big it is. The thing is huge, it is absolutely awesome. There are lasers on tops of the mountains. This is a remarkable use of the medium."



The waterscreen (below) is put into perspective looking at the pond and people (above). The show runs every night in the summer. The waterscreen would probably turn to snow, if it were run in the winter.



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Write in Reader Service Number: 185

# One Step Beyond

Optus takes its sales force out there

By Madeleine Murray

Just Do It!

Optus Communications have been in Australia just over four years. In that time, they have won 16 per cent of the long distance market, and 31 per cent of mobile phone customers. Their philosophy is to provide a customer focussed service, and it is obviously working.

Optus Communications chose AAV put on their national Sales and Marketing conference in August. It was held in the Blue Mountains, at the Fairmont resort. 270

**Corporate  
Theatre**

sales people came from all over Australia. The brief was to provide a whiz bang conference, two days where people would have fun, get inspired, motivated, and excited.

The brief was to stage an event which embodied the Corporate and Government Division statement. This is that, "Optus will provide specialised telecommunications solutions, on a National and Global basis, to targeted Corporate and Government customers. Our



vision is based on being flexible and responding to the needs of our customers' business today, whilst continually evolving what we do for their future, in a measured and sustainable

way."

In seven weeks, AAV Communications and the Optus team developed the theme, then AAV worked out a budget, produced the con-

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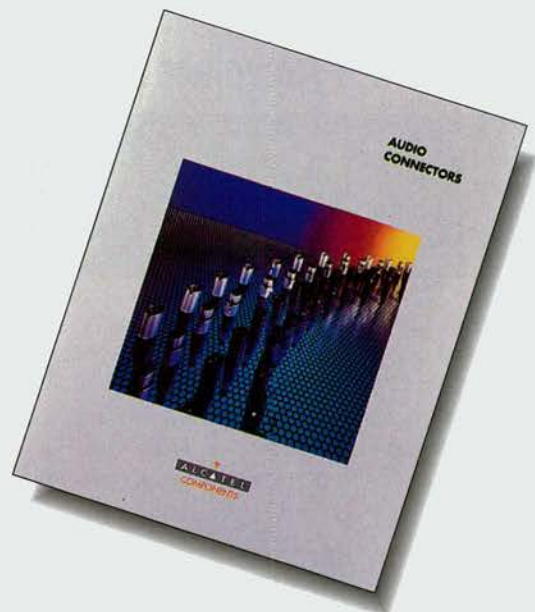
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ference, made survival kits, designed and built the sets, shot customer testimonials, and filmed and edited the guests during the stay. They also did the stage management, the technical specs, the installation, and the crewing. The theme was the quest, and the title was One Step Beyond. From the Sydney office of AAV, Graeme Westwood and Tim McMahon developed the project, and Jan Newland produced it.

"Optus wanted something that would really stretch their people, that would take them to the edge," said McMahon. "Optus really do have a strong attitude, and their sales people respond very well. They're an enthusiastic crowd, full of energy. Youthful, performance based, very positive about the future."

This was the first time the corporate and government sectors of Optus had a conference together, and the Optus team, headed by Chris Hope, were keen to see it work. "That was part of the challenge as well, to get them working together instead of in established groups, to mix them up," Westwood said. "It was very important to make sure that none of the usual clusters stuck together, but to split them all up and make them work with new people."

The Optus people were collected from the airport, and the North Sydney office. Buses took them to Bicentennial Park, where they got their survival packs. "We mixed them up right away," Westwood said. "Right from the minute they got on the bus to the Blue Mountains, there was no sitting back and relaxing. Bang, they were into it."

A 'sergeant major,' dressed in fatigues, organised them throughout the two days. Whenever they had to move between activities, the sergeant major made it happen. The guests were put into teams, with mountain names like Everest, Anapurna, K2, Kilimanjaro, and Kosioscko. There was a point system for the various activities, starting with a quiz on the bus. The questionnaire was a mix of Optus questions, and general ones. "They had to use their mobile phones to answer questions, and work together as a team to answer the questions," Jan Newland said. "The sergeant major was on a video, and that was played at the buses to introduce the Quest. He had bonus points that he could give out to the various teams. That was a great source of interest, because he was a target for bribes!"

### Three live llamas

The group went from Bicentennial Park up to the Maxvision theatre in Katoomba, where they watched the Blue Mountains/caving/abseiling film *The Edge*, on the giant screen. "We used the whole mountaineering theme," McMahon said. "There's the preparation, the climb itself, the teamwork in getting to the top. It's aspirational, it's inspirational, and we then put a lot of our speakers around that theme."

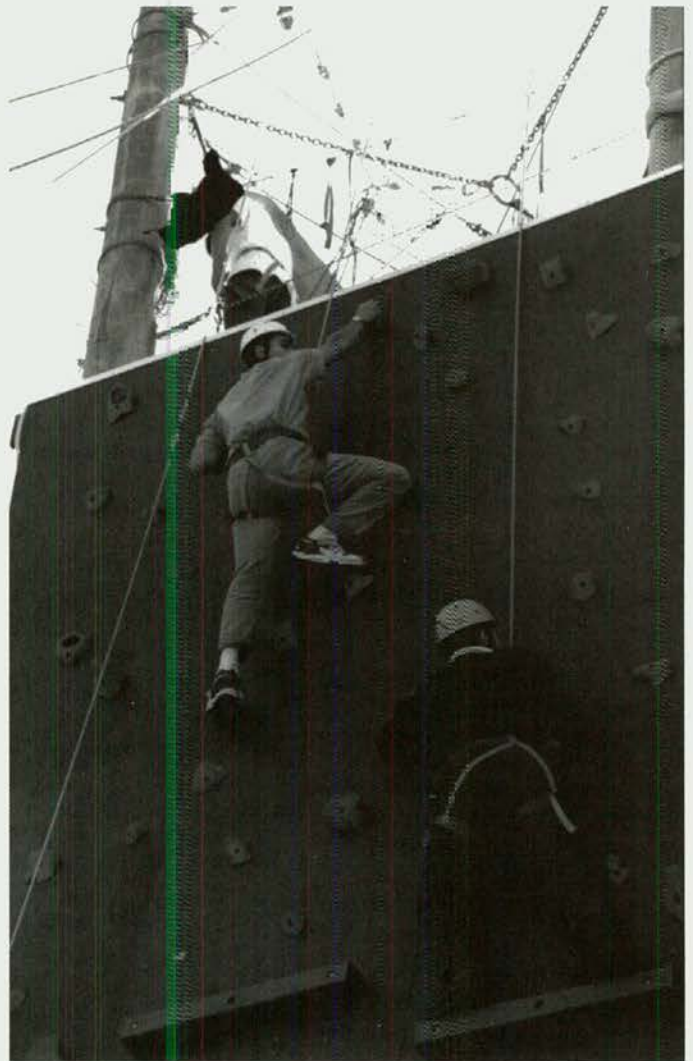
After the film, the group arrived at the Fairmont. The entrance was covered in huge banners, and mannequins slung from the roof. The foyer was decked out in a mountaineering theme. The guests were kept busy the whole time. The first night, Optus teams put on a revue. "That was to break the ice, and get people going. They weren't given much notice to pull their revue together. However, it was hilarious," Newland said. AAV provided the music, staging, decor, and production for *Don't Forget Your Llama*. The talent were the Optus team members.

A note had gone out before to the guests, telling them that anyone who could produce a live llama on the night was an automatic winner. Three live llamas turned up, and brought the house down.

The business session started at 8 o'clock the next morning. The keynote speaker was Nick Feteris, base jumper, who talked about his 6000' free fall jump from a sheer cliff in Fakistan, and showed some footage from the film. He talked about how the principles of goal setting, motivation, focus, and teamwork apply to the business world as well as base jumping.

"It's very powerful stuff, and it is inspirational," Newland said. "Nick was rivetting. He had a standing ovation at the end." Then came talks by Optus speakers on customer relations, the global village, the future of telecommunications, and the essentials of teamwork, risk, and partnership.

AAV showed client testimonials, which they had shot on video. "The clients talked about the extra effort Optus had made to obtain them as a customer, and to maintain the working relationship," Newland said. "That was good, because the delegates didn't know these things about their teammates. The morning business session which was the hardcore part of the whole conference went very well." AAV, working with Optus, handled the speaker support,



which was delivered from a Macintosh computer. AAV provided the morning MC, as well as Feteris. Optus provided specialist session speakers.

The breaks had more activities, like horizontal bungee jumping and snowboarding, with prizes. In the afternoon, everyone went outside to the Fairmont rope course, where teams had to climb with ropes and wires, go up a climbing wall, and stand on top of telegraph poles. They were all graded with points. AAV added other activities, each named after an Optus client.

"They are a crowd that likes to push themselves to the max, very high achievers, no one pulled out," Newland said. "It was frightening. I was frightened watching. The whole telegraph pole was shaking. I think with the vibration of fear. The looks on their faces was amazing. Once they got standing on the pole they had to leap over, and grab a trapeze. They were all safety harnessed. It was good to see the teamwork, women helping men, bosses helping others. They loved it, they thought it was terrific."

AAV videoed the afternoon, and showed an edited version later that night at the Black Tie

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dinner. Elliott Goblet MCed the awards, which were for sales achievements. Ziggy Zwirowski, CEO of Optus Communications spoke, and new incentive packages were introduced. The prizes for the Number One Club, the high achievers, are very motivational, like family trips to Malaysia, or Tahiti.

Goblet worked the room. "He arrived on the scene half an hour before he was to go on stage, and got to know the characteristics of some of the people," Westwood said. "He kept involving everyone, which was a key to everything. The whole two days was about involving people, so they couldn't be left out. I think that's one of the reasons it was so successful. They thought it was one of the best two

day conferences they've ever had." "We worked from the two paragraphs of the Optus mission statement, their corporate view," McMahon said. "We reflected that in everything we tried to do. There were key words, and if they went away with nothing else, except some understanding of those key words, then we have done our job."

**Some of the crew**  
**Executive Producers:** Graeme Westwood, Tim McMahon  
**Producer:** Jan Newland  
**Production Designer:** Gary Hunter  
**Show Director:** Mary Homer  
**Technical Director:** Peter Dyer  
**A/V operator:** Robbie Park  
**Video/lighting:** Alan Meadows  
**Sound:** Russell Tillot

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# Duncan Fry

## Amplifiers

*Sometimes less is more, but mainly it's less!*

One of the worst things when you're touring on a shoestring is for something to go horribly, irreversibly wrong, something you can do nothing whatsoever about. And that something is usually an amplifier! They work hardest and get looked after the least - I'm convinced that most amp maintenance is done only when one of them curls up its toes and heads off to Mosfet heaven!

And so it was on the last gig of a small country tour I once did, pre ARX days in the early 80's.

We rolled up to this club, running late of course, to be confronted with four flights of stairs, a double four way in the truck to carry up them, and a two man crew. Jim my trusty assistant and I climbed up the stairs, only to be confronted by the biggest room I'd yet done a gig in! All our hopes of maybe only having to bring up half the system disappeared before our eyes!

"Nice place" I said to the manager. I figured if we were lucky we might just be able to get the system to fill the place up.

"Thanks," he replied, "And when we get a big crowd in here we can open the folding doors!"

Folding doors? What folding doors?

He walked down to the end of the room, pressed a button and the back wall folded away to reveal another area equally as big! Jeez - the place looked like it doubled as an emergency Qantas 747 hangar.

"Expecting a big crowd tonight?" I squeaked, hoping that he'd say no this was the quietest night of the week.

"Sure am," he said "We've been booked out for weeks!"

Well, let's hope they all have extremely sensitive hearing and don't like it too loud, I thought!

We went downstairs and caught the band sneaking off to their moze.

"Right who's going to help us load in?" I asked

"Oh my back hurts Dunk"

"I've twisted my leg"

"I've got something in my shoe"

"I think I've broken a fingernail"

You get the picture? What a pack of whingers.

"OK then - but the piano stays in the truck" I said.

The piano was the infamous Yammie CP 80. Not the more common 70 but its big brother. It sounded just like a concert grand and also weighed as much as one.

The band, especially the keyboard player, was horrified.

"But we need it," they all chorused

I stood firm. "Well, if you need it then you can carry it!"

Ah, this was a very different matter, and caused much soul searching and discussion.

"Hmm. Well, maybe we could just use the DX 7 after all!"

So Jim and I left them to it, dragged the PA up the stairs and set it all up.

We called the tour manager Dick Turpin, because the tiny amount he was paying us was highway robbery. Knowing that he always stood next to me so he could tell me how to mix, I assembled the FOH bunker on the edge of the dance floor, right in front of the band so it would sound as loud as possible to him

Then I popped a tape on for a quick system check.

There seemed to be a noticeable lack of bottom end.

For front of house we were running 2 Perreaux 2000s on mids and highs, and a 4000 on the bottom end. At 400 watts this was the 'big' amp!

"Jim, can you go and wind up the big Perreaux?" I asked

"Sure" he said...then a couple of seconds later "It's already turned up."

The sinking feeling in my guts heralded a natural disaster on the scale of the Exxon Valdez.

I dashed down to the amp racks.

"Let's check the fuses," suggested Jim. No, they were OK. "Try the power switch" No, it lit up brightly "Check the speakers are plugged in - check the leads - check this - check that." It was no good - the amp just didn't want to work.

Aaaagh! The last gig of the tour - traditionally the day we'd get paid, a room that 5,000 Moonies could have got married in, no bottom end and no spare amps!

We were in deep shit.

Working on the basis that no sound equals no money, Jim and I feverishly re-patched the system so at least *something* would come out of all the speakers. One side of one 2000 handled all four horns, the other side of it did 2 of the 4560's, and the other 2000 looked after the

W's. There was no way I was going to risk anything running on 2 ohms - I wanted the system to see the night out!

I set the compressors on hard limit, and pushed up the faders on the console. Well, it was loud enough in the empty room, but I dreaded to think how it would go with several hundred drunks later on. Still, on a positive note, there was no need to turn the desk lamp on - so many LEDs on the pair of 160x's were lit up that their warm glow was easily enough to mix by!

At the show that night Dick Turpin, the Road Worrier, came and stood next to me as usual. Even with the onstage volume of the band the sound just ran to the edge of the dance floor and dribbled away into the carpet.

"Why are we so close to the front?" he asked

"Oh, I'm a bit worried by phase cancellation and reflections off the back wall in a room this size," I waffled glibly.

Fat chance! It'd be lucky to even *reach* the back wall, let alone be loud enough to bounce back! The only thing that you might possibly hear from the back would be the sound of people yelling to turn it up!

"Yes, good idea," he said, nodding his head wisely without having the vaguest idea of what I was talking about.

Dick looked around the room at the crowd, and I could see he was just about to go for a little wander. Whoops, we can't have that, I thought, so I tapped him on the shoulder.

"Can you keep an eye on things while I nick off to the dunny?" I asked. "Got an urgent delivery to make!"

"Sure" said Dick. He loved to think he could mix and by crikey I was going to make sure he got his chance.

I disappeared into the crowd, and hung around the back of the room for the next hour until the band was just finishing their last song. Then I rushed up to him

"Jeez, you wouldn't believe it - I got stuck in the dunny. The door jammed and no-one could open it. I've just banged it open now! Thank heavens you were here Dick, I don't know what we would have done otherwise. How did it go?"

Dick's ego filled the room and he tried to look knowledgeable. "It went really well...sounded great. You know, I think we ought to mix from this position every time!"

• **Editors note:** I passed up using Perreaux 2000 amps to run my ring radiators - they were just so underpowered. Duncan was clearly suffering from small amp syndrome even before the Perreaux 4000 died!

# Theatre & Cinema

## Small, but Perfectly Formed *Planet Hollywood has a cinema too*

By Madeleine Murray

The Planet Hollywood cinema is like a cozy, blue womb. The walls are curved slightly, and covered in blue velvet. You walk on the thick blue carpet, and sink into the plush blue velvet reclining seats. The whole place is a distinct contrast from the multi media, multi theme, paragon of cross promotion that is Planet Hollywood outside. The blue patterned ceiling is from the original Plaza theatre.

Record companies, ad agencies, business presenters, and the film industry are all using the cinema.

The 62 seat theatre is available for hire, at \$300 an hour, which includes the projectionist. There is facility for 35mm, and several video formats.

The projection room is spacious, and fairly quiet. There are two Strong 35mm projectors, which can

show films in academy, Wide Screen, and Cinemascope format. The screen can be Wide, 4.2x2.4m, and Cinemascope, 5.1x2.4m. There is a movable masking system.

Sound can be optical, Dolby A, SR, SRD, or DTS.

The FOH sound system is a JBL Cinema System, with left, right,

and centre channels, and 2 x 18" JBL sub bass woofers mounted behind the screen.

The six well-hidden surround

The laser disc player for the video is a Pioneer V4300. An Ampower CV8 video and audio switcher switches from the video source to the projector. You can also switch the video from the restaurant screens into the cinema.

The control system is the GUVT Multimation, which uses AMX hardware. Multimation controls all functions in the BIO box, including projector changeover. The lighting presets are set into the AMX Bio Box remote control stations, with manual override, if necessary. Everything can be controlled from the stage, with a handheld remote control.

In the screening room, five interface points in the rear, middle, and stage provide remote control spots for all video and audio functions. A Barco 1209 hangs from the ceiling, with a Farudja Line Quadrupler, which means that the video projection quality is good.

The cinema is built to THX standard. "No expense has been spared," said Al Dark, of GUVT. "It's a high quality area, with the best quality sound and video projection, and a lot of flexibility."



speakers are Krix KXS2, made in Adelaide.

Five GUVT stereo amps supply 10 channel sound, with 400w per channel.

Video can be shown in various formats. There is laser disc, NTSC, PAL, and Super VHS. And a 3/4" Sony VP7040 Umatic NTSC player.

### CINEMA NEWS By Madeleine Murray

- GUVT looked forward to August 29, the national opening of Independence Day. The cinema installers were frantically busy as so many cinemas wanted to upgrade their sound for the film.

- GUVT installed a 13x8m screen, and 16 extra speakers for Dolby digital sound at the **Regent cinema in Woolongong**.

- Greater Union's new 12 screen, 3230 seat **cinema complex at Westfield in Liverpool** will be the largest in NSW. It opened on 26 September, outfitted by GUVT, with all the latest technology.

- **Greater Union** is about to expand into the Middle East, and build a 10 screen cinema in Dubai.

- Three new screens are to be added to the **art deco Randwick Ritz cinema**, in Sydney.

- It is virtually impossible to make a living out of single screen cinemas, because if you don't have a hit, you're still locked into the product for at least a month. The **Mandolin in Sydney** closed in July, and the **Elsternwick in Melbourne** is on its last sprockets holes.

- The **IMAX cinema opened in Sydney** on September 26, with the film **Antartica**.

- **Cinema Plus, the Imax operator**, is to go public, and offer 31 million shares at \$1 each. Two thirds of the stock will go to institutional investors, and the rest to the retail market. Cinema Plus will be building in Melbourne, New Zealand, and eventually in Asia.

- **Lilac City Cinema in Goulburn** has just opened. It seats 170.

- A 5plex is part of a retail, commercial complex planned for **Queanbeyan**. The name of the cin-

# The David Williamson Theatre

By Mandy Jones

Melbourne has a brand new performing arts complex, and its literally just a stone's throw away from trendy Chapel Street. Situated at the Prahran Campus of Swinburne University of technology, the new complex was commissioned as an educational training facility to house the broad range of performing arts courses offered by the University. The complex features two studio style performance spaces, rehearsal room, gallery, large foyer and backstage facilities.

The showpiece of the complex is the main performance venue. Recently opened as the David Williamson Theatre, the theatre was named after one of Australia's most prolific and successful writers. Having had a long association with Swinburne since his days as a lecturer in Engineering, Williamson was selected as the namesake for the new venue which



will foster student performance work.

To commemorate the official opening of the theatre complex, Swinburne performing arts students presented a performance in the presence of David Williamson and invited guests. The perform-

ance showcased the offerings of the courses which will be based at the new complex. In addition to having the theatre named after him, Williamson was also made a Doctor of the University in recognition of his success and ties to  
*(continued over)*

ema operator has not been confirmed.

- **Queensland's biggest cinema centre**, built by operator Birch Carroll and Coyle, will have 12 screens. The Gold Coast project will be fitted out as an art themed movie venue. The \$12m, 12plex, with new seating configurations, and seating design, will open next Easter. It will have 3250 seats, and cover 5600 square metres.

- **Hoys' debut on the stock exchange** was even better than expected. The shares opened at \$2.40, and rose to \$2.55 by the end of the day. The \$100m float is to fund expansion in Australia, New Zealand, the US, and other markets.

- **Lend Lease** want to build a multiplex in the Penrith Plaza. **Hayden Theatres** want to add a nine screen cinema to their theatre. Both are both applying to the Penrith Council. The council will decide on 21 October.



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## CINEMA NEWS

• **Pittwater Council** has narrowly approved a plan by cinema owner Roy Mustaca to build a theatre complex near the Warriewood Sewage Treatment plant. The DA includes seven cinemas, shops, and parking.

• Columnist Frank Devine of *The Australian* thinks that the **proliferation of local cinemas** is linked to the baby boomers, who like movies, but don't want to travel downtown, and hassle for a park. This baby boomer agrees.

• The **Adelaide City Council** has criticised a proposed movie complex of three cinemas. The development at the Adelaide Fruit and Produce Exchange site has been labelled a "poor design" by the Council's development assessment chairman.

• The Media Resource Centre's plans to build a multi-screen cinema around the **Mercury in Adelaide** have been shelved. The capital works funding is not available to develop the site. The Mercury is a single screen cinema, and must add screens to keep going. News on the Mercury's future is expected in a few weeks.

• Construction began this month on the **\$3m three cinema complex in Adelaide's East End**. The cinemas will seat 590 people, and be built on the site of former basketball courts.

• The revamped **\$150m Elizabeth City Centre in Adelaide** will include a multi-screen cinema and virtual reality area. It will be completed by the end of '98.

• A new twin screen cinema, called **Heritage Cinemas**, has opened in **Maryborough's** Royal Hotel building

• **US Cinema giant Reading** has received a few setbacks in its foray into Australia. The Victorian Government planning advisory committee has recommended against a 25 screen complex in the Melbourne suburb of **Burwood**. Sydney's Liverpool council has rejected an 18plex proposal. Reading plans to press on with its target of building 150 screens, and

## David Williamson Theatre

the University.

The opening was attended by 100 or so members of Melbourne arts community and media. Proceedings started late when the guest of honour, Williamson, had not turned up. Forty minutes later, Williamson arrived and announced that he had gone to the Hawthorn campus, his old teaching campus, thinking that the theatre was there. Williamson said "I wandered around asking forlornly 'where is the David Williamson Theatre', only to be told they had never heard of it, or me". Williamson's late arrival became the butt of all jokes for the remainder of the evening.

When the newly appointed Dr Williamson addressed the audience, he spoke of his days at Swinburne, writing the first drafts of his plays on Swinburne examination booklets, and the role of the arts in the human condition.

"It's an enormous honour to have such a well designed and useful theatre named after me."

**The Complex**

All facilities within the new complex are managed by Liz Pain who acts as Technical Director/Theatre Manager. Pain has been working within the industry for 25 years, and in recent years has worked for Swinburne as a lecturer for the technical courses, as well as the community courses run through ShowBiz.

All works on the complex were completed in May this year. Pain explained "All of the works were done under a small budget, and what had to be done, to what we've achieved has been quite remarkable". The architect for the complex was Peter Bickle, and Denis Irving consulted on the technical requirements. The venue recently received an Architectural Merit Award for its overall design.

**David Williamson Theatre**

The main studio space is well fitted out and versatile. It is an intimate space seating only 119. For lighting, there are twelve winchable bars as well as fixed bars, and six booms on either side of the stage. Outlets are located on the bars on movable flexible cables. There is no patching system as such, Dynamite racks are

located on prompt side and DMX is run back to the control room.

Pain explained that as the space is primarily a training facility, all equipment and fittings were chosen with training in mind, therefore the equipment had to be versatile and relatively easy to operate. Most importantly, the facilities need to give the students a grounding in the current technology being used in professional venues.

All bars and winches were installed by Lightmoves. The desk is a Theatre Light Q-Master 120 Plus, and was chosen because of its 'user friendliness' as a teaching desk. The venue uses a Pro-light system for lighting stock, and again Lightmoves are the suppliers. The lighting stock also includes two Clay Paky Golden Scan 2's.

"It's not often as an educational institution you get the ability to commit x-amount of dollars to buy new equipment, so I thought, well we are a teaching institution, so one of the things we should have is more modern technology. By getting the Golden Scan 2's it means we'll have students who know how to use them, so in the future they can be employed at concerts or night-clubs, and they'll actually know how it works."

The Educational Resource Corporation handled the audio installation including a Mackie 24 channel desk, Lexicon digital effects processor, SM 57 and 58 microphones, CAD floor microphones, and ARX speakers, amplifiers and graphics. Pain explained that the Mackie desk was chosen because it is a high quality desk, quiet, easy to operate and versatile. DAT, reel to reel, or another CD player can be added in without hassle.

The control room is generously sized with large sliding windows overlooking the space. A walkway behind the seating and in front of the control room was designed to be large enough to be a second control position while still conforming to safety requirements.

The auditorium features two raised galleries, and a bank of raked seating. The seats are top of the range and made by the same company which won the contract for all outdoor seating at the Atlanta Olympics.

"It's a versatile space, which is the best. You can't have everything, but I think we've given it as much as you can possibly have for a venue of this type.

"Calling it the David Williamson Theatre is a great honour, both ways."

**Rehearsal Room**

Directly underneath the David Williamson Theatre is the original performance venue of the campus. Once a lecture theatre, the space was then devoted to performance and has become a second venue. One of the main benefits of the space is that it is exactly the same dimensions as the main venue so that students can rehearse downstairs knowing that blocking and sightlines remain the same once they move into the main venue.

The downstairs space has a new sprung wooden floor which was necessary for the physical theatre students who learn web, harnesses, trapeze and circus skills. It has a similar set up of bars and patching facilities, including 20 spare dimmers which can be run to the upstairs venue when required.

Further works are planned for the space including a reconfiguring of the seating area. Pain describes the space as a 'second theatre', ideal for fringe type performances.

**Backstage Facilities**

Being purpose built, backstage requirements such as loading bays, storage areas, a workshop and small construction area have all been catered for. A 'common' dressing room has been built on each level of the complex, and can seat up to twenty cast members at a time.

Other spaces such as the crossover at the back of the stage, and the 'Whitespace' used for tutorials and workshops, can be used as gallery or exhibition spaces.

The design of the complex means that two or three events can run simultaneously without interrupting the others. The University has a long-term vision for the complex and planned future works include outdoor additions to the complex such as a courtyard and maybe an amphitheatre.

CINEMA NEWS

# Looking for the Bigger Picture

She's young, female, and in charge

By Madeleine Murray

Sue Hunt is 36.

She is also General Manager of the Geelong Performing Arts Centre, one of the youngest high-powered arts administrator in the country.

Hunt has that quality usually found in very successful people. She didn't waste any time trying different jobs, she knew from an early age that she wanted to work in the theatre. A very early age. Hunt played an angel in a church play when she was three years old, made up her mind, and never looked back. "It sounds silly, but I made the decision then, and everything has been quite happily focussed on achieving these things."

Hunt's career path has an impressive clarity about it. At 27, she was Senior Theatre Stage Manager at the Victorian Arts Centre. "I concentrated on stage managing early on, because I really liked being involved with the creative process of working between director and actors. That was exciting, controlling the way the show



worked, having been in the rehearsal room."

Two years later, she was Production Manager of the Victorian State Opera. "I needed to see a bigger picture of the overall experience. That takes you out of the rehearsal room, and further forward. Working with the director and the designer, getting it built, rehearsed, and put on. It's all about looking at a bigger picture again."

After three years, Hunt became the Technical Director of the VSO. "There I learned forward planning within a company, as well as stag-

ing. And how the overall technical thing impacts on everybody else. Certainly from an administrative, management and leadership point of view, you get the opportunity to learn all those things. So the move into general management was the obvious next step, in terms of seeing the ever bigger picture across a complete organisation."

At the VSO, Hunt helped create *West Side Story*, which she describes as "a fabulous opportunity to work with the best people in the world." And a *Kiri te Kanawa*

*(continued over)*

getting 10 per cent of the market within five years. Reading is moving aggressively in the Australian market to build freestanding cinema complexes, rather than the customary place in shopping centres.

- It has been quite a saga with **Reading**. First the Victorian government welcomed them, to encourage competition. Then the government changed their mind, and decided they didn't like freestanding cinema complexes. Now a new application has been lodged for an **8plex in Burwood**, but in the shopping centre. The Australian Financial Review says that, "The cinema operator is understood to be Hoyts, which along with Sussan Corporation was one of the several major objectors to the nearby Reading plan."

- Meanwhile, **Village Roadshow** has confirmed its plans to invest \$200m building cinemas in Victoria.

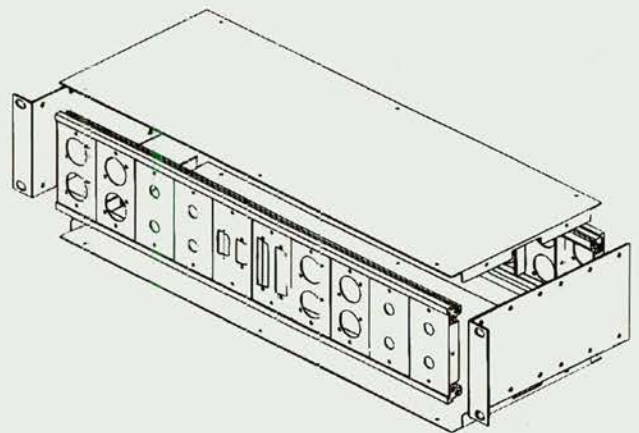
- **Reading** has proposed a \$15m theme park, with eight cinemas at the Kilkenny TAFE site, in SA. Reading has applied for the land to be rezoned as an entertainment/recreation area.

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## CINEMA NEWS

• It seems people don't want cinemas in their back yard. A **twin cinema proposal at Raymond Terrace** has been opposed at a meeting of the Port Stephens council, by residents living near the site. And the council is asking the developer to put in \$30,000 worth of parking and road works.

• A \$1m cinema, with three theatres has been approved for Oat Mill, at **Mt Gambier**.

• A \$1m twin cinema, and shopping centre has been proposed for the former coles Fosseys building, in **inner city Newcastle**. This plan should help to revitalise the CBD.

• A Development application for a **\$2.5m multiplex cinema** has been lodged by Village Roadshow with the **Wagga Wagga Council**.

• The **Mt. Druitt Hoyts 8plex** opened with three blockbusters filling the cinemas. Independence Day, Phenomenon, and A Time to Kill are showing at the cinemas, which all have padded sets, and digital sound.

• Nigel Flannigan, a lecturer in urban planning at the University of Melbourne has expressed concern that the **Southgate development** will drain life away from the elegant centre of Melbourne. South of the Yarra will be the Crown Casino, with two theatres, a 42 storey hotel, a 15plex cinema, and a complex with 20 restaurants, live music venues, and themed clubs.

## Theatre News

COMPILED BY  
MADELEINE MURRAY

■ Australia is refreshingly free from the Star demagogue system that passes for film making in America. But, talk about taking it to the other extreme. Geoffrey Rush is the man of the moment, for his brilliant performance in the film *Shine*. Rush is currently convulsively funny as the lead in *The Alchemist*, at the **Belvoir Street Theatre**. But the ads just place his

name in a line, along with the other ten actors. This is the policy of Company B, apparently.

■ Which reminds me, I once saw **Colin Friels** go into his local bank in Balmain, and the teller asked him for ID. He produced it, without any fuss.

■ The 51-year-old **Rockhampton Little Theatre** is a reasonably successful local effort. They put on four major productions a year, to over 2000 people. The Rockhampton City Council is planning to redevelop, and demolish the theatre, and clubrooms.

■ More than 2100 stars, celebs, and well connected people went to the Gala opening of **Marriner's Regent Theatre**. Melbournians seems deliriously pleased with the result, proud to have such a lavish landmark, and performance space. Following the opening, the Herald Sun ran an editorial with the heading, "This is a triumph for all of us." The article ends by stating that "The artisans whose skills helped restore the Regent can be proud. They too represent the commitment to preserving what is good about Melbourne. The city has regained a building that has a value beyond dollars."

■ Trams are coming back to some of downtown Sydney. The tracks are being cushioned with rubber where they pass the **Capitol Theatre**, so that there will be no vibrations.

■ **Maroochy Shire Council** has passed a motion, asking for expressions of interest in developing a large theatre in the shire. Some councillors feel a theatre could boost tourism.

■ The **Sydney Harbour Casino** plans have been unveiled. The complex will include the main gaming floor with 200 gaming tables, and 1500 slot machines. A 3D rock with rainforest, mist and waterfalls will be part of a bar, covered in a glass dome. The 900 seat Showroom theatre, 2000 seat Lyric theatre, 352 room hotel, 139 serviced apartments, 10 restaurants, and 10 bars will all be part of the allure.

■ **Her Majesty's Theatre, Sydney** must be looking forward to *Beauty and the Beast*, which opens there in October. The theatre has been empty for nine months. The Capitol Theatre has been a serious

competitor to the 1500 seat theatre. Her Majesty's Theatre has applied to develop an adjacent site which it owns, but could be knocked back if new planning rules go ahead.

■ **Chess, The Musical** will be moving into the **Princess Theatre, Melbourne** in February, '97. Still in Melbourne, *Jekyll and Hyde* opens at Her Majesty's later next year, and *Showboat* goes into the Regent in '98. It's been a frenetic few months in theatre. For more details, see the show movements story in the news section of this issue.

■ The replica **Globe Theatre in London**, offers the real thing. Shakespeare performed to an audience standing up, hissing, booing and shouting. The thatch and wood open theatre has no toilets, just like the sixteenth century. The original 20 sided Globe, 300m away, burned down in 1613.

■ The new **World Theatre in Charters Towers** opened on September 15. The cinema and theatre complex is housed in the renovated 105 year old Bank of Commerce.

■ A proposed **amphitheatre in Noosa** will have to have Australian look, and native vegetation, if it wants to get the go ahead from the local council. The amphitheatre would be in the Botanic Gardens. Rock concerts would not be allowed. There has been some confusion, as there is already an open air theatre at nearby Tewantin.

■ **Bankstown's new 100 seat theatre** opens on November 15 with a variety performance. The Bankstown Theatrical Society raised more than \$90,000 to pay for lights, curtains, and gear.

■ For memorabilia buffs, Dawn and Kev Neel have a huge collection of **antique music machines** in a little museum 1.5km north of the Robertson Pie Shop, on the Illawarra highway.

■ Drama at the **Victorian State Opera**. A computer problem caused part of the backdrop to droop during a performance of *Aida*. Other than that, Brian Thomson's design, and Rory Dempster's lighting have gotten ecstatic reviews.

■ Canadian actor-director Robert Lepage was unlucky at the **Edinburgh Festival**. His show had to

be cancelled at the last minute because of a breakdown in some complicated and overly ambitious technology.

■ **Tap Dogs** began their US tour with a bang. Their sound system blew up hours before they were to open in LA. A replacement was found, but got stuck in freeway traffic. The band had to do the sound check in front of the audience, and the show began an hour late.

■ **Mandurah Little Theatre in WA** is probably not going to get an extension on its lease, which expired in June. Their site is considered good for business or tourism, by the local council. The MLT will probably be relocated.

■ **Wagga City Council** is going to spend \$1m on upgrading its Civic Theatre. Work will be done on the auditorium, and the foyers. Alternative, more expensive plans have been proposed by a Melbourne consultancy company to increase the seating, and add a 120 seat theatre.

■ A proposal for a \$9m **combined leisure and performing arts centre** has been put before the Southern Highlands council.

■ The **foundations of the Ensemble Theatre** need repair. The rotted pylons will be replaced in October. The Ensemble will move to the Opera House next April while the floor and back wall are replaced.

■ The West End Theatre Co is trying to raise \$6m for a **\$12m theatre complex in Brisbane**. The theatre, which would be on the south bank of the Brisbane River, would seat 1100 people.

■ The 92 year old **His Majesty's Theatre in Perth** is being refurbished. \$590,000 is being spent on replacing carpets, reinforcing the floor under some seats, and improving the acoustics. 20 theatre staff, six carpet layers, and three workers from the company that made the seats are working flat out on the Edwardian theatre. *Who's Afraid of Virginia Woolf?* opens there on 30 September.

■ A group of fourteen **Woollongong** business people have formed a group called **Woollongong Access** to try and raise the outstanding \$12.5m needed for a **\$26m entertainment and sporting complex**.

**Sue Hunt** *continued*

concert for 13,000 people in the park, where the VSO put in the stage, seating, and corporate catering.

When Ian Roberts left GPAC to head the Melbourne Festival, Hunt applied for the job. "I needed a move, to grow, and to do something more general. This gives me an opportunity to manage right across the company, and to lead an organisation for the first time. That's why I was so attracted by it."

**Geelong Performing Arts Centre**

GPAC is a big, and very busy regional arts centre, 80km outside Melbourne. About 350 different productions a year are put on in the two theatres. The turnaround is fast. In July/August alone, three major plays were put on, as well as Bangarra Dance Theatre, three music shows, and four children's theatre productions.

The Ford theatre seats 800, and the Blakiston 325. The Shell foyer is a flexible, open plan space with

a big equipped stage area, and a bar. The Shell can hold 800 people for concerts, parties or lectures. A ticketing business, gallery, rehearsal space, conference facilities, and a bar called Othello's, mean that GPAC is a diverse, and demanding place to run.

"GPAC is also a very successful arts centre, and possibly, arguably, the most successful regional arts centre in Australia, I suppose. Though if you quote that, it might draw enormous howls from other people..." Hunt chooses her words thoughtfully, careful not to offend. And with good reason. She deals with the visiting productions, the GPAC staff, corporations, sponsors, government, arts bureaucrats, and the local community as well. Tact, discretion and good judgement would come in handy.

As would initiative, and toughness. Hunt has plans for the future of GPAC. "We hope to develop and increase the entrepreneurial program, and keep offer-

ing very good, strong quality product to people in Geelong, so they don't have to go elsewhere to get it. We want to focus strongly in the community as well, and talk to people about supporting us, both financially and creatively. I think it's obviously important to make it a strong and viable business. It's very much a leader in its field, and I want it to remain the best that it can possibly be."

Hunt sees leadership as inspirational, rather than autocratic. What does she feel she has to offer GPAC? "My performing background gives me that passion for creating things. And hopefully the ability to extend people's capacities, and to empower them to be the best that they can, because I've always been happily in the position that people have done that with me. And that was certainly a success that I had at VSO, putting together a very strong team that could create wonderful things. I hope to be able to do that here, as people learn about who I am, and

how I work. When you're new to something, it's always a challenge to get people's confidence, liking, respect, and friendship."

It's probably not easy, coming to a new town, walking in as the boss of 14 staff, 20 casuals, and a minefield of social/political/community situations.

The General Manager has several roles. There is the artistic direction of the company. Then networking, fund raising, and talking to people beyond the local arts community. Increasing the business opportunities within GPAC. Dealing with the budget. "An average day could be anything, which is what's so exciting," Hunt says. "It could be writing a funding application, or a trust report. Or going to a board meeting of a youth arts project in Geelong, or getting up the highway to Melbourne and talking to Arts Victoria about how Geelong as an agency fits into their scheme of things, or sitting down with a group of staff to talk about our

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# Colour and Movement - The New Forum Theatres

By Mandy Jones

Melbourne's Old State Theatre has recently been transformed into The Forum, the newest addition to the David Marriner led Melbourne theatre renaissance.

Built as an American style grand picture palace in the 1920's, the Old State Theatre was one of Melbourne's main picture theatre for many years. In later years the usage of the theatre dropped off until a change of ownership left the theatre virtually unused. Then in April 1995, David Marriner's Staged Developments company purchased the theatre for \$4 million, determined to restore it to its former glory.

Having undergone major renovation works over the last 7 months, the entire venue has been rewired and has sustained significant structural additions to improve the theatre complex, including a lavish new bar, and an entire new backstage complex of dressing rooms, crew and office space.

The theatre recently re-opened as The Forum and has already found its niche in Melbourne's live theatre district as a versatile venue catering to cabaret, live theatre and film audiences.

I arrive at the Forum at 10.00 am and already the theatre is bustling. Workmen are finishing off refurbishments, cleaners are polishing and vacuuming, and technicians from the current production in Forum 1, Piano Men, are checking lights for that evening's performance.

I am taken on the grand tour of the venue by the Head Electrician for the Marriner Theatres, Mark Allan. Mark has been with the Marriner group for over three years and works between The Princess, The Comedy, The Regent and The Forum theatres. His career began in South Australia where he undertook an electrical apprenticeship with the Adelaide Festival Centre.

He went on to work for a fur-

ther 8 years at the centre as a lighting technician. From there Mark moved to Sydney where he worked on Festival 88, Cats and Les Miserables among other shows. He then moved to Melbourne to work on the Melbourne Festival, and then with Elston, Hocking and Woods on several projects including the revival of Hair.

The Forum is made up of two separate theatres, Forum 1 - a cabaret room, and Forum 2, a lyric style theatre more suited to film screenings and seminars.

## Forum 1

Forum 1 is undoubtedly the showpiece of the venue. A bare-wall theatre with proscenium arch and removable thrust stage, it is probably best known for its atmospheric house lighting of fibre-optic twinkling stars and moving clouds. Using 56 solution 28 dimmers, the houselights are programmable from control panels located throughout the building. A 2k projector and cloud disk provide a moving cloud image that floats across the ceiling.

Combined with the roman architecture, columns and statues, it creates the effect of sitting in an outdoor amphitheatre at night.

Blue neon features heavily in the house light design, from the foyer to the walls of the theatre itself. Mark explains that the blue neon was chosen to replace existing bulbs during the refurbishment, neon being the more cost effective choice.

David Murray designed the overall house lighting, right down to feature lighting of the statues with 50 watt birdies. The finished effect is awesome.

Forum 1 has been re-designed with versatility being key. To allow for a wide range of productions, suspended truss is used for lighting rigs, with 13 possible hanging positions for the truss itself, ensuring flexibility for events

ranging from fashion parades, to dance parties, to cabaret shows. A front of house bridge allows for follow spot operation and more fixed lighting positions as do the booms.

The refurbishments included a total rewiring of the theatre. The installation of a 1000kva transformer in the basement of the venue means that not only are the theatres' present requirements serviced, but it will also allow for significant expansion in the future. A 400amp supply is located backstage of Forum 1, also accessible from the auditorium to allow for functions using the dance floor area; and three-phase outlets are positioned throughout the venue.

Audio installations were handled by System Sound, including separate power for sound running back to two control positions within the auditorium, as well as an enclosed main control room.

A standard rig has been installed by Bytecraft including lamps and 96 dimmers. Mark explains that this means reduced costs for hirers as lamps and dimmers are already in the building but come at as additional cost. Of course more lamps and dimmers can be brought in depending of the production.

The fly-tower with 24 fly-lines has been fully refurbished requiring replacement of cables and pulleys. Other installations include an in-house audio-visual monitoring system allowing vision of the mainstage to be relayed throughout the venue, from a large screen monitor at the Stage Manager's desk, even through to the bar where a bank of monitors can display text messages and the venue logo.

The original raked seating was removed for a more modular cabaret seating design. The new design has three seating types: the front section being table seating, the middle section featuring booths, and the back section configured to long lounge seats.

The result is an 860 seat fully equipped venue which boasts a state-of-the-art computerised food and drink ordering system for fast service.

## Forum 2

The upstairs venue is a 580 seat lyric style theatre. Running off a 200amp supply, Forum 2 has a similar technical arrangement as the downstairs venue. Suspended truss lowers for rigging, and again all equipment is provided by Bytecraft through the venue. The stage can be extended to up to 6 metres deep depending on the nature of the function, or can be removed altogether.

Forum 2 is a fully operational picture theatre featuring one of the largest screens in Melbourne with fully automated curtain and masking facilities. Recently it was used as one of the major venues of the Melbourne Film Festival. Mark explains that it is just as suited to a theatrical production or seminar due to the excellent acoustics and versatility of the space.

With separate dressing room and backstage facilities running off to the side of Forum 2, it means that both theatres can be fully operational simultaneously.

## The Forum Package

As a venue, the Forum has it all. Location, history, facilities, and an inherent atmosphere that seems to ooze from the lavish walls and ceilings. It is a perfect example of classic design and styling meeting modern technology resulting in a venue that caters to the best of both worlds.



# Engineering Wagner

Feats in The Flying Dutchman

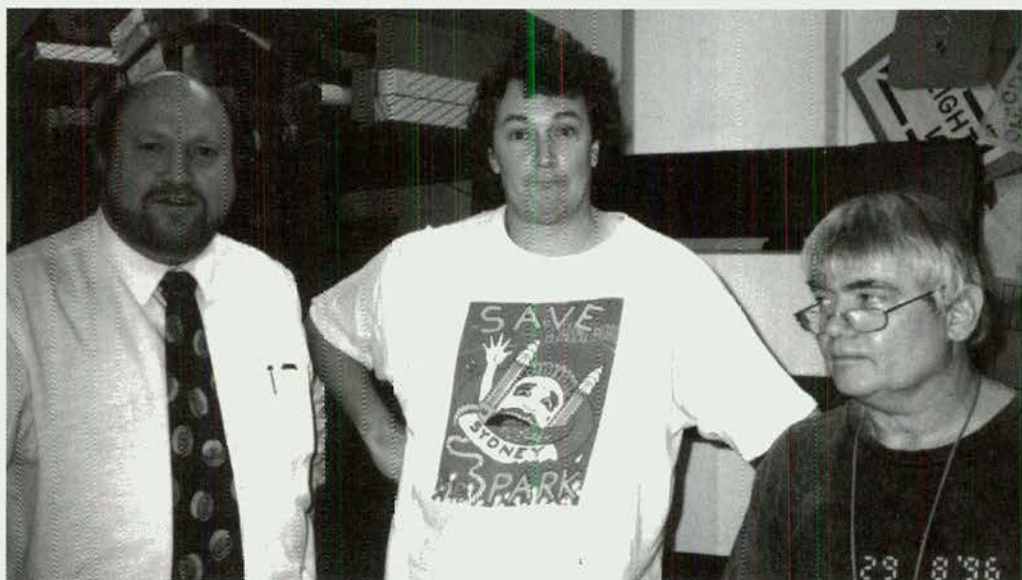
By Madeleine Murray

**T**he production, barely started, is looking pretty staid. The large set is a classic drawing room of floral wallpaper, picture rails, and wooden beams. Stoic men in uniform sing about the sea.

Suddenly, chaos, storm, and Wagnerian crescendoes herald the Flying Dutchman. But this is not a normal entrance. The furniture goes into spasms, the grandfather clock tilts acutely away from the wall, the piano heaves up at a 45 degree angle, sofas slide, and the prow of a ship comes crashing through the set, sending floorboards splintering, ceiling pieces falling, and bits of wall hanging in shrouds of smoke. Quite a guy, this Flying Dutchman.

At the end of the first act, the drawing room rises, with the entire chorus standing on it. It goes higher and higher, on two hydraulic pillars, until it disappears, and a new world opens up under it. The bottom of the drawing room floor, becomes the ceiling of a dark, metallic industrial basement. This is the set for the second act.

Later, the set folds down, like a pop up book, and the drawing room descends again, slowly, on the hydraulic posts. This amazing



feat happens twice during the opera, with changed sets folding up, and cut of nowhere.

At the end of the story, the parquet floorboards of the drawing room crack up into a crazed maze.

The design and technical achievements here are brilliant, but can't swamp the story. The Flying Dutchman is not like a mega budget special effects film, with pumped up guys with glistening specs rushing out of explod-

*Noel Stanton, (Technical director, left), unidentified but happy man (centre) and workshop director Hannes Finger (Workshop director)*

ing digitally enhanced buildings. The pop up book concept, and the splintered set work well within the production. This is Barrie Kosky, after all.

#### Figuring out how to do it

"It took us about five months to work it out," said Noel Stanton, technical director of the Austral-

ian Opera. "The problems were, that on the one hand you had a solid floor, with 45 people running around on it. And on the other hand, you had a ship coming through the main structure. It was hard to balance the structure, so that when it was up in the air, it didn't twist. That was the first problem. *(continued over)*

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"The second problem was that the floor itself, had to be solid, but it also had to crack up, like a jigsaw puzzle. The third problem, was how to lose the walls and the ceiling, with no visible masking at the side, when it was up in the air. You had to have a major scene change, 25' up in the air, getting rid of solid walls, and ceilings.

"They were sort of the core problems that we had," Staunton said, with the good humoured tone of a man who enjoys challenges.

The set is an engineering feat. Huge steel beams are welded to form the floor structure, and reach back out to form arms behind the stage to balance and steady the set. On the night I saw it, the set rose 15' in the air, and then shook slightly before settling down. A long, wide hole had to be left in the structure, to leave space for the boat to come through, and for the set to clear the boat as it rises.

"The problem we had with the ship, is that when it comes in, it's vertical," Staunton said. "But when the room goes up, it changes angle. So we had to break through the wall, and visually look like the ship was touching the wall. The ship actually never touches the wall. There's about 8-9" clearance, so that when the wall goes up, it still doesn't touch the ship."

The hydraulic rams shrink down to a metre. One pushes down, and one pushes up. The rams, bought from an engineering shop, blend into the industrial look of the lower set.

The ceiling has false beams, with lights inside. Cables run along and up each ceiling flat, which are flown up during the scene change, or scene squeeze one might say. All the side walls are on tracks, broken into three section where the beams are. The walls are winched along, and load themselves straight onto a truck behind the set. This all happens in the dark, behind the set, during Scene Two.

#### Breakaway walls and floors

The breakaways are a big jigsaw, worked out by the Australian Opera's workshop director, Hannes Finger. These pieces are connected with webbing. Three or four pieces are loose, and just crash to the floor. The bits are put in like keystones, so that when you pull a metal lever, two doors open and all the keystones fall away. They have to fall out of the track of the ship. Four sections of the floor come up first, then the walls break through, then the ceiling falls apart. The floor sections are on metal levers, with people

underneath them. Like double hinged doors, they come up, and then fall forward.

#### Moving furniture

They couldn't use the floor underneath with magnets, because they had the complex welded steel structure, and metal grid for the floor to crack up. Fine pieces of cable went along the floor to a series of winches at the side of the stage. The cables were attached to the furniture, and then cut when the chorus takes the furniture out of the room. Every night, they redo the cables.

#### Problems

During the tech run, the moving masking was temperamental. The scene changes in the dark, from a raked stage 20' in the air, were tricky. And if the hydraulic rams didn't go up to their complete rise, the walls going off didn't marry into the waiting truck. So they had to be taken out of their tracks in the dark, and put into the trucks. Not easy with 23' high flats.

#### Solutions

Part of the beauty of the set is that it is essentially collapsible onto a basic structure. Hydraulic jacks lift the whole thing up,

wheels are put are, and at the end it is just rolled away. "It's like a big giant jigsaw within a jigsaw, like a popup book really," Staunton said. "That's how we thought of it, our design office, our workshop director, and I pulled all those loose pieces together. From the basic design concept, we achieved everything the director asked for."

25 stagehands work the show each night. Every time the floor is down, 10 people are operating underneath. When the floor is up, 20 people are above it, getting rid of stuff.

"It was a fun project to do in rep. For each idea we ended up with, there were about 20 other ideas we discarded on how to make things work. Like how do you have the walls solid, and then get rid of them? Everything that looked real wasn't real, and everything had another generic life to it. That was the fun of doing it. It was lots of heartache, lots of angles to it. It was on the crawling board for a long long time before we actually built it."

# EnTech

## 1997



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## MUSIC INDUSTRY

○ The **Australian Recording Industry Association (ARIA)** has devised a new initiative to support the development of performance standards for musicians. Run through a Masterclass format each Session is designed to cater for guitarists, drummers and bass players to improve overall performance and industry awareness. ARIA Session #1 was held at Sydney's Annandale Hotel on the 29th of September and was part of the events that led up to the ARIAs and featured three prominent musicians, bassist Victor Rounds, guitarist Peter Northcote and drummer David Jones. More are planned.

○ Meanwhile **IMMEDIA!** have picked up some of the slack left by the closure of **Aussie Music Online** taking on some of its writers and editorial aims. Again, the **IMMEDIA!** site is a very useful industry resource and can be found at: [www.immedia.com.au](http://www.immedia.com.au) The full text can be read here about why Australia will *not* have a stand at the MIDEM music trade fair at Cannes.

## WEBSITES

[www.rane.com/digidic.htm](http://www.rane.com/digidic.htm) A very thorough A-Z of audio terms. Worth a look. QSC have launched their web site — [www.qscaudio.com](http://www.qscaudio.com) Crest Audio — [www.crestaudio.com](http://www.crestaudio.com)

## CLARIFICATION

○ In our August edition we incorrectly attributed the **National Transmission Agency** as having responsibility for spectrum allocation at the Melbourne Grand Prix. It was in fact, the **Spectrum Management Agency** who co-ordinated the frequency use.

## EVENTS AND STAGING

○ **Lyndsey Thompson** from Sydney staging and production company **Audience Motivation** was awarded the Esprit Award for Best Industry Related Contribution. Lyndsey received

the award in Miami at the International Special Event Society (ISES) Awards for his efforts at the 8th International Special Events Conference and Special Events Week for Sydney.

○ **AEMS Exhibitions** will no longer organise the Sound And Light Asia (SALA) trade exhibition after organising the 1995 and 1996 shows.

○ Singapore will host the **REPLitech** exhibition in October featuring stands from production, duplication, reproduction and recording manufacturers and distributors. Contact Diane Greco T +914 328 9157 F +914 328 2020.

○ **Interact 96** will be held in the Melbourne Exhibition Centre on October 24-27 for the Interactive Multimedia industries. Interact 96 will feature seminars (international and domestic), displays and events. Interact 96 coincides with annual conferences of: the Australian Interactive Multimedia Industry Association; the Internet Association of Australia and the ATOM Australian Interactive Multimedia Awards. Contact: T 03 9696 7900

## BROADCAST MEDIA

○ Radio ahead of TV? **Nigel Milan**, Chief Executive Australian Radio Network thinks so: "The radio industry has successfully repositioned itself, now we have talk stations, adult contemporary stations, country and western and rock 'n' roll stations — each appealing to a definite market. If you look at network television now, you'll see it's quite old fashioned.

## ADVICE

○ The **Arts Law Centre Mediation Service** is available for those with an arts related dispute and is a real alternative to litigation. A lot cheaper too. The cost is \$50 per hour per party to the mediator. Further details contact: T 02 9356 2566, email: [artslaw@artslaw.asn.au](mailto:artslaw@artslaw.asn.au) or <http://www.artslaw.asn.au/~artslaw>

## Work, work, work!!!

*Theatre has a big Spring as the shows move*

By Madeleine Murray

### Sunset Boulevard

**Dates:** Three weeks bump into Regent Theatre Melbourne began on 19 August. Most of the scenery, electrics, and sound were in by 7 Sept.

The sets were built in Adelaide, at the Adelaide Festival Workshop. The lighting equipment came from Bytcraft in Melbourne, and Jands Vari\*Lite in Sydney. The automation gear came from APC in Adelaide. The sound equipment came from System Sound, in Melbourne and the Cadec desk came from Autograph Sound, UK.

After the bump in, there are three weeks of tech and cast rehearsals on stage, then two weeks preview.

**Staff during bump in:** 50-60 people. That is 8 electrics, 15 scenery and flying grid, 2 automation, props, and others.

**Opens:** 28 October.

**Staff during run:** 62 backstage. That is 14 scenery mechs, 5 follow spot operators, 2 floor electrics, 1 Vari\*Lite tech, 1 LX board operator, 1 head electrician, 1 automation operator, 10 dressers for wardrobe, 4 permanent wardrobe, 6 props, 3-4 stage managers, 3 company managers.

### Miss Saigon

**Dates:** closes 2 Nov at the Capitol Theatre, Sydney

The two week bump out involves a week to remove gear, and a week to restore the theatre. As it is a heritage building, the restoration has to be done particularly carefully. 30 mechanists, 16 electrics, and 10 sound will work on the bump out. The set will go into storage until mid '97.

**Staff during run:** 63 staff, that is 3 stage managers, 12 mechanists, 6 flies, 8 props, 4 electrics, 2 automation, 4 domes, 3 sound, 19 wardrobe, 2 wigs

### Crazy for You

**Dates:** Opens 9 Nov at the Theatre Royal, Sydney

Pre-rigging starts on 7 Oct, bump in begins on 14 Oct, electrics on 15 Oct, and sound on 16 Oct. Tech rehearsals start on 23 Oct, with the first preview on 30 Oct. The

sets are being refurbished at AFC workshops, and transported in 12 trucks. 80-90 people will be needed to bump the show in.

**Staff during run:** 45, that is 4 stage managers, 15 mechanists and flyers, 2 props, 6 electricians, 4 sound, 13 wardrobe, 3 wigs, 1 tech manager

### Beauty and the Beast

**Dates:** Closed 11 August at the Princess Theatre, Melbourne.

Took two weeks, and 50 people to get it out of the Princess Theatre. Used 14 trucks to bring it to Sydney, and put it in a warehouse, because the theatre wasn't available. Lighting was sent back to Jands for cleaning and repair. Some of the set was left in Melbourne for alteration.

Bump into Her Majesty's Theatre, Sydney, began 2 September.

**Begins run:** 19 Oct.

**Staff during run:** 60 staff. That is, 14 wardrobe dressers, plus 10 day maintenance staff, 8 wig, 1 makeup, 7 sound, 3 automation, 9 stagehands, 4 flymen, 2 props, 11 lighting including Vari\*lites, 7 sound, 11 department heads, 4 stage managers, 1 pyro.

### The Phantom of the Opera

**Dates:** Closed 27 Sept at the Theatre Royal, Sydney

The two week bump out allows six days to leave the theatre, and six days to put it back to the agreed state. The production has removed a lot of the flying sets, and cut holes in the stage floor. Most of the modifications will stay, as they are improvements. 26 trucks will take the show to the Lyric Theatre, Queensland Performing Arts Centre. The company is putting in a new automation system, and a new deck. 30 mechanists, 16 electrics, and 12 sound will work on the bump out

**Begins run:** 31 Oct.

**Staff during run:** 72 staff, comprised of 3 stage management, 14 mechanists, 5 flies, 6 props, 5 electrics, 2 automation, 6 domes, 3 sound, 20 wardrobe, 7 wigs, and 1 prosthetics



**Film Tech '96**

Avid stage a user seminar in Sydney

By Madeleine Murray

**O**ver 100 people braved warm, sunny weekend weather to sit in a dark auditorium all day, and listen to Avid experts and artists talk about digitally created reality. Ironic, but very stimulating.

Film Tech '96 was a day long show fest held in Sydney. Avid had an impressive line up of Hollywood talent. Peter Moyer brought his computer screen up on the big screen, and showed the step by step process of working on a section of *Judge Dredd*. Stallone is hanging from a stone, filmed against chroma key green. Moyer adds several layers of traffic below him, works in footage of buildings from a vertiginous height, and paints out the green reflections on Stallone's skin. Moyer works with up to 25 layers of film

at a time, and invents devices as he goes.

Rob Kobrin, editor of *Alaska*, talked about the process of setting up a totally digital editing environment, where everything is digitised once. The sound files, for example, never go back to tape, they are always kept in the digital realm. The mixing is digital, as is the rushes, and the edit. Kobrin explained ways to avoid double handling material. He also showed footage from *Alaska*, where different the star polar bear lives in a composite landscape.

Michael Phillips spoke about the new tools being integrated into Avid's Media Composer, and the general integration between all the Avid products that is happening. Phillips showed a tool which allows the editor to draw a path, a

trajectory on an image in the editing suite, and have that path show up on the computer of the digital effects artist.

The other speakers were from Australia. Chris Chitty, who built the animals for *Babe*, produced a little shape of welded metal, and explained it was the chassis of a ewe. Chitty entertained everyone with stories about his precocious childhood, and anecdotes of building sharks, whales, and sheep. The only time he mentioned digital was describing Marge Simpson's hair.

Julius Chan, sound editor, explained the three aspects of a sound track, dialogue, effects, and music, and showed the strands an editor pulls together on a film. Chess Winter introduced her company, Render Farming, which has six Silicon Graphics black boxes

to work on finishing a computer graphics artist's digital effects, fast.

There was a lot of emphasis on Avid's symbiotic relationship with the people who use their equipment. The editing and effects tools are changed and improved by working closely with the users. Avid must be doing something right. Their turnover in '89 was \$1m. The next year, it was \$20m, and doubled every year after that, taking it to \$406.7m in '95.

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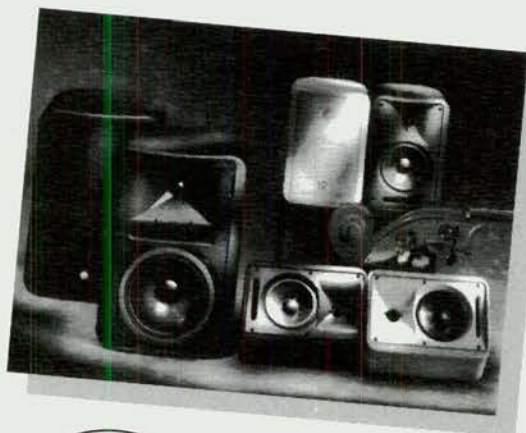
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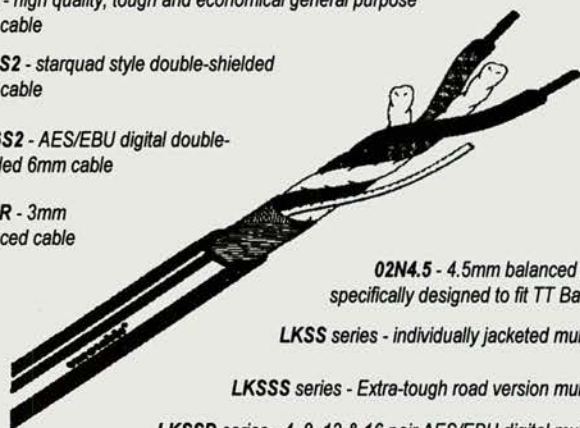
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# Recording



## PRO TALK

### DAT MACHINES

This month in Pro Talk the use and application of DAT - Digital Audio Tape machines is the issue. The following studio professionals took time out to respond to our fax which included the questions; *Do you love your DAT machine; or is it a troubled relationship? How reliable is it? What brand tape do you use, and why?*

• Greg Hopping from **Nu-town Studios**, Sydney, says: "We have been using a Tascam DA30 for 3 years and it has been a terrific machine. The features are unique such as multiple ins and outs, (for instance, balanced returns can feed the console while at the same time two extra pairs of RCA outs can feed other machines such as cassettes or other DATs). The margin reset function is also handy which allows you to know instantly whether your signal has exceeded 0Db. The only design fault is the drive mechanism: one motor shares a number of different functions."

• James Edwards from **Broome** says: "I use two brands of DAT machines regularly, the Otari DTR-7 and the Tascam DA30. The DTR-7 is much smarter and more forgiving than the cheaper machine — you get what you paid for. A few points though;

- Always be afraid of moisture! ALWAYS!!
- For tape I use BASF for quality, reliability and availability;
- Always check the final mastered edition before a mass production — just in case! (speaking from experience);
- Keep a safe original copy to compare the mass produced product, if extra mastering has been done elsewhere."

*(continues over)*

## Under the Banana Tree

*Cries and whispers on location in Queensland*

By Madeleine Murray

*Pacific Drive* is a Channel 9 strip soap, based on the lives of sexy, sultry, babes and dudes living near surf, marinas, and palm trees. Just like us.

Graham Hicks eavesdrops on them, he's an aural voyeur, or to put it more simply, he's the sound recordist.

Hicks has been on the series for a year, since it started. They've done 220 episodes so far. Two crews work full time, shooting at locations around the Gold Coast, and in the studio.

Between them, they do five episodes a week. Each unit does about 12 minutes of drama a day, and it's all shot single camera, rather than the standard three camera setup of TV studios.

### The sound

The pictures are done on digital Betacam, and the sound is recorded on time code DAT. To save time and money, they are transmitting a guide audio and time code via radio link to the camera. The main program is stored on the DAT, and this saves time in syncing rushes.

"The ongoing problem with shooting on Betacam, or similar tape formats, is having the sound cables attached to the camera," Hicks said. "It's always been the bane of every camera operator, to have this umbilical cord tied to him, so he can't run around."

Hicks and the original Director of Photography came up with the idea of using a radio link to the

camera, as the guide, and using the DAT as the main audio source. "They sort of jumped to it fairly quickly, because it's a bit closer to film style," Hicks said. "Everyone was very keen to give it a go. GP was doing something similar for a while, but I guess we've refined it a bit up here. We can use any number of cameras, and everyone will have the same time code. So that saves an enormous amount of editing time."

The radio link had to be free of interference from other sources, such as the boats at the marina, and the TV stations in the area. "We experimented, and had a look at the spectrum, analysed it, and fiddled around until we got it

*(continued over)*

## Choosing Technology

Roland product expert puts the argument for Firmware. Page 61



right. There's just so much RF happening around (the whole spectrum) at the moment, it's almost ridiculous. While it's not as complicated as some of the major Outside Broadcast races for TV, like Bathurst, or the Indie 500, we've got to be very aware of the RF at all times. Because we're using so many frequencies of RF, you've got to be careful they don't clash with each other. You get funny harmonics happening.

"The whole radio spectrum is getting very crowded at the moment, so I went for the UHF 500meg band for my high quality radio mics. Then I was lucky enough to find a couple of frequencies in the 200meg area that were free. Occasionally we'll have a few splats, or a little bit of interference in the 200meg area. But that's just the guide audio track, not the critical signal path, so we don't worry too much."

Hicks is using five radio mics, plus three other RF transmitters. The floor manager also has a unit. Hicks uses Lectrosonic Diversity units, UCR195D, and Comtec links for program feeds to the camera.

Hicks generates the time code on his HHB portadat, and transmits the time code to the slate, and the camera. He also transmits a guide audio program to the camera tape, which is a mono feed at the desk. This is through a Comtec camera companion link.

About his radio link innovation, Hicks said, "The technology was

always there. We built a little box to put on the back of the camera, with a couple of wires hanging out of one end, and a couple of aerials on the other, and that's basically it. You buy the equipment, and stick it on the camera."

Because of the speed required on *Pacific Drive*, the producers didn't want to have to do any ADR (additional dialogue replacement), which means

the sound had to be perfect, without any helicopters, or other noise. "Steve Smith, the sound supervisor, wanted perfect dialogue, so I just have to have the right equipment for the job," Hicks said. Hicks uses primarily Neumann mics, KM150s for interior work, KMR81s for most of his exteriors, and KMR82 for the wider shots. He uses KM140s, with a looser pattern, to plant on sets. "I choose Neumann for their reputation, reliability, and their quality. I've never really had any problems with them. And I like the sound of them better than Sennheiser. They are a much smoother sounding mic. They have a warmth and a quality about them that's hard to match. They cost roughly twice most others, but I guess long term, you plug a mic in, and you know it's going to work. In this situation,

I know a couple of people that have had other time code DATs, and have had trouble with them. It's a very tight market, there's not a huge amount of portable machines available

that's imperative."

Hicks uses a HHB Portadat. "It's a reliable unit. I know a couple of people that have had other time code DATs, and have had trouble with them. It's a very tight market, there's not a huge amount of

portable machines available. And I find the HHB extremely reliable. And the backup that Gristie [Geoff Grist/Audio Sound Centre] is giving me is fantastic."

One night, a faulty tape went through Hicks' Portadat, shed a lot of oxide, and clogged the heads. Hicks rang up ASC in Sydney at 8pm, and had another machine on the Gold Coast the next morning.

### Special situations

The sound of water is not a huge problem, but the writers are aware that quiet, intimate scenes can't be set near crashing surf. "Timing is the hardest thing, getting everyone to peak at the right time, when there's no helicopter overhead," Hicks said.

Distracting noise is the bane of the sound recordists' life. "We've just established a new location at Fisherman's Wharf, near Sea World. There are actually five helicopters, three sea planes, a Hovercraft, and a bungy jump work-

ing less than 500m away. It's an absolute nightmare, and we're moving the location."

Sound considerations are usually the last on the list. "After years of working in sound, you think no one cares about sound, until you give them bad sound, and they notice it straight away. No one notices sound until there's something wrong with it."

### The boom operator

Hicks thinks his boom operator, Greg Steel, is great. "The talent he's shown is just unbelievable. He gets very little rehearsal time, and has to basically memorise scripts. And words get changed quite dramatically from the page to an actor's mouth. He's incredible, very professional."

### The process

The Betacam tape is digitised into the Avid, and cut, using the guide sound track on the camera tape. The network, and producers view and approve the picture cut. Then the EDL (edit decision list) is put through a shotlister program in a computer. The sound is then reformed directly onto a Fairlight MFX3. The Shotlister strips all the vision edits out, chooses the sound takes, and lays that up against the time code position in the episode.

The Fairlight finds every sound take, and leaves a few seconds on either end, so that the dialogue editors can trim where they want. "The Fairlight is a very powerful computer, and it stores the sound on hard disc," Hicks said. "You can shift it around digitally, edit it, equalise it, fade in and out, without any degradation. You can do a full dialogue edit in this unit."

This is all done on the Gold Coast, so that if any dialogue replacement is needed, the actor can just do it there, in the sound booth. When the dialogue edit is finished, it is sent to Sydney. One of the new, useful developments is transferring complex data, such as the dialogue edit, between a Fairlight MFX3 on the Gold Coast, and a Fairlight at Tracks in Sydney.

### Vietnam

Hicks went to Hanoi for three weeks in June to work on a Vietnamese soap opera. They had

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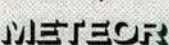
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*By Trevor R. Griffiths.*  
A complete guide to theatrical practice covering all aspects from choosing a play to backstage and FOH management. Now, even the most inexperienced amateur group can attain professional standards. Experts have formulated their own hard-won experiences into a set of guidelines and show how to achieve the best possible production with the least number of pitfalls. 192 pages.

#### Stage Management & Theatre Administration

**\$29**



A clear and concise guide for both stage managers and theatre administrators. Areas covered include rehearsals, production week, effects, stage fights & weapons, financial control, marketing, venue and FOH. A most practical guide for anyone involved in theatre management. 128 pages, 1993.

#### Stage Design and Properties

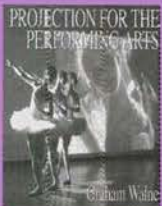
**\$29**



*By Michael Holt.*  
A comprehensive guide for those involved in theatre design, set construction, workshop techniques, models, props, painting etc. Simple and clear ideas presented with illustrations make this book a must, especially for anyone keen to learn the many facets of theatre production or who need new ideas. 128 pages, 1993.

#### Projection for the Performing Arts

**\$69**



*By Graham Walne.*  
Written in non-technical language and lavishly illustrated, this book gives a brief historical overview of early projection attempts, then goes on to look at equipment and the planning and design of every kind of live performance, both inside and outdoors. Will be of interest to anyone in the field of theatre and other forms of live performance. 139 pages, 1995.

#### Stage Makeup

**\$34**



An invaluable guide providing the fundamentals of stage makeup for the performer. Herman Buchman has worked on the Broadway stage, in opera, television and film and presents clear, step by step colour illustrations to demonstrate the effects correct stage make-up can achieve. 191 pages.

### NEW STOCK

#### Lighting and Sound

**\$29**



*By Neill Fraser.*  
An introduction to the art of theatre lighting and sound. Can be used by both the novice and the experienced technician when a quick and easy reference is required to improve working methods, provide new ideas or solve problems. Clear diagrams and easy to read explanations make this a very handy guide for anybody involved in theatre production. 132 pages, 1993.

### Lighting

#### Set Lighting Technician's Handbook

**\$75**



*By Harry C. Box.*  
This book provides students and budding professionals with practical hands-on information about standard practices, equipment and tricks of the trade essential to the motion picture set lighting technician. Covers electrical distribution and regulations, HMI and arc light operation plus set protocol. Includes more than 150 illustrations and 100 tables. 377 pages, 1993.

#### Basics of Video Lighting

**\$25**



This book is for the beginner and aims to give a rapid understanding of the complex process without going into too much technical detail. Details of equipment are included with a guide to planning, selecting and positioning of lights to make your own production look very professional. Covers studio and on-location lighting; practical examples; hints and tips for choosing equipment; exercises for students and a comprehensive glossary. 133 pages, 1995.

#### Professional Lighting Handbook

**\$95**

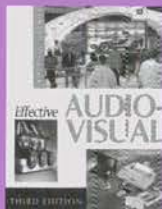


*By Verne & Sylvia E. Carlson.*  
A concise guide providing the vital working knowledge professionals need to create effective visual images. Details technical foundations, equipment and methods of lighting for film and video productions. This book is packed with practical insights, tips and troubleshooting techniques useful on the set. 224 pages, 1991.

### Audio Visual

#### Effective Audio-Visual

**\$65**



*By Robert Simpson.*  
An audio-visual user's handbook detailing equipment and techniques. The third edition demonstrates how the computer is fast becoming an effective show delivery platform in its own right. Applications covered are business presentations, conferences, training sessions, museum exhibits, visitor centre displays and multimedia applications. A useful asset to anyone with an interest in the audio-visual world. 255 pgs, 1976.

### Audio

#### Music & Technology

**\$29**



*By H.P. Newquist.*  
An excellent introduction to new music technology for today's active musician affected by the digital revolution. Includes simple guidelines on how to use the technology and provides explanations on MIDI, computers & music software, digital keyboards, drums, guitars and winds; sequencers and samplers; technology and live performance plus new techniques in home and studio recording. 198 pages, 1989.

#### Sound Reinforcement Handbook

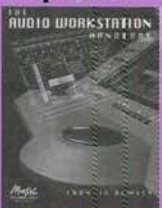
**\$69**



Written for Yamaha by Gary Davis & Ralph Jones, this handbook provides a useful reference for those wishing to learn about the basics of sound reinforcement. Presented in an easy-to-read format with clear diagrams and an index, this manual is a must for anyone working to bring better sound and music to the world. 412 pages, 1989.

#### The Audio Workstation Handbook

**\$55**



*By Francis Runsey.*  
A complete guide for students, operators and engineers on digital audio and associated technologies. Contains vital information on MIDI control and computer soundcards, audio workstation principles, mass storage devices, files transfer and networking, audio interfaces and digital video. Similarly, those involved in the computer industry needing a greater understanding of high quality audio. 284 pages, 1996.

# CONNECTIONS SHOP

## Music Producers

*Edited by MIX Magazine.*

**\$39**



Popular recording techniques have changed dramatically in recent times effectively bringing the outside world into the realm of music. This has resulted in a marked transition in the role of the record producer. Music Producers contains 24 interviews with today's top record makers giving a broad view of the ways in which they create their audio images. 128 pages, 1992.

## Sound & Music for Theatre

**\$44**

*By Kaye & LeBrecht.*



This book is for anyone interested in creative sound and traces the complete process of sound design from the original concept through to the finished plan. It covers development, research, cues, recording and various techniques. Also included is a director's and playwright's forum where they express their views on sound, design and its impact in today's theatre. 196 pgs, 1992.

## Project Studio

**Blueprint \$53**

*By Greg Gallucio.*



A practical D.I.Y. guide on project studios for home or business use, with information on the latest audio technology advancements. Contains practical business advice and expert recommendations on equipment. Areas covered include ideas, budgets, studio acoustics, an installation guide to audio connections and patch bays, troubleshooting, sound proofing and multimedia. 236 pages, 1992.

## Studio Seconds

**\$19**

*By Tom Lubin.*



A detailed handbook designed for those interested in music and sound recording. Covers basic principles for the beginner and advanced methods for the audio professional. Also includes techniques for the smooth running of recording sessions and features a humorous look at the development of magnetic recording. 154 pages, 1991.

## Making Music with your Computer

**\$39**

*Edited by David (Rudy) Trubitt.*



Explores the high-tech world of computers, synthesizers & digital audio. Covers MIDI sequencing, music notation & printing, hard-disk recording and multimedia. Special features to help you discover the many ways computers can contribute to the creative process with tips on selecting the right programs & gear for your needs. 128 pgs, 1993.

## Sound for Picture

**\$39**

*Edited by MIX Magazine.*



Takes you behind the scenes as top sound professionals reveal how dialogue, sound effects and musical scores are recorded, edited and assembled. Case studies include Terminator, The Simpsons, The Doors and Northern Exposure. Ideal for audio engineers, recording students, aspiring sound operators plus film and video enthusiasts. 134 pages, 1993.

## Making the Ultimate Demo

**\$49**

*By Michael Molenda.*

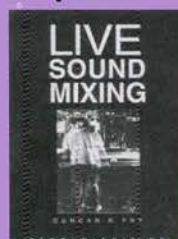


Outlines the process involved in the successful recording and marketing of your demo tape. Packed with tips from industry professionals on vocal and instrumental tracks, signal processing, mixdown and budgeting. Also advice on how to market your demo to the record labels without wasting your time. 128 pages, 1993.

## Live Sound Mixing

**\$35**

*By Duncan Fry.*

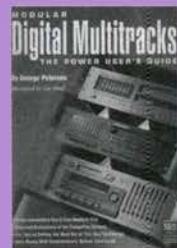


A 'hands on' manual in its second edition, Live Sound Mixing is for anyone wanting information on the basic principles of how a PA system works and details on trouble shooting when it doesn't. Covers EQ, processing, mixing, soundchecks, effects, monitors, plus what each knob does, why and when to turn it. 176 pages, 1992.

## Modular Digital Multitracks

**\$49**

*By George Petersen.*

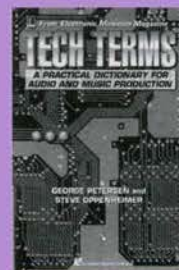


A personal guide to new recording industry technology with analysis of systems such as Alesis ADAT, Tascam DA-88, Fastec RD-8, Akai A-DAM and Yamaha DMR8. Explores features that aren't mentioned in the manufacturers' literature, reveals secret button pushes and explains maintenance and auto-diagnostic procedures. 120 pages, 1994.

## Tech Terms

*By George Petersen & Steve Oppenheimer.*

**\$19**



A practical dictionary of audio & music production terminology, written for the musician of the 90s. It provides a quick, accurate definition on 300 of the most commonly misunderstood words and phrases in the field of studio recording, digital audio & electronic music. 50 pgs, 1993.

## Concert Sound

**\$48**

## Concert Sound

*By David (Rudy) Trubitt.*



For all those interested in the sound reinforcement field. Full of useful information on specific live sound topics and profiles of individual tours including U2, Stones, Van Halen etc. Covers monitor mixing, drum & guitar miking, noise regulations, computers in live sound and career development. 166 pgs, 1993.

## Hums & Buzzes Explained

**\$9**

*By Laurie Nethercote.*



A small handbook written in plain English for sound engineers and musicians. Explains earth loops and magnetically induced noises. No maths, no formulas, just down to earth trouble shooting tips! Includes: Project - build your own transformer isolation unit. 30 pages, 1993.

## Practical Studio Techniques

**\$40 WITH CD**

*By Tom Misner.*



A book full of practical recording information for anyone interested in studio audio. Includes CD, a practical demonstration of a complete studio mixdown session including setting up effects; uses of the compressor; gating of sound; various types of equalisation; selecting reverb settings and much more. 102 pages, 1994.

## MIDI Systems & Control

**\$55**

*By Francis Rumsey.*



2nd Edition. Provides a comprehensive coverage of the principles of MIDI control and how it can be implemented in practical systems. Useful for those interested in design devices with numerous diagrams and illustrations. Deals with MIDI in studio, musical and lighting equipment, mixer automation plus information on the latest additions to the MIDI spec. 202 pgs, 1994.

## Electronic Projects for Musicians

**\$39**

*By Craig Arderton.*



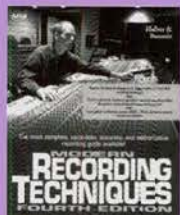
A comprehensive guide on how to build your own Preamp, Compressor/Limiter, Ring Modulator, Phase Shifter and Talk Box along with 22 other inexpensive electronic accessories. Written in clear language with hundreds of helpful diagrams & simple step-by-step instructions. Includes free demonstration record of electronic effects. 220 pgs.

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## Modern Recording Techniques

By Huber & Punstein.

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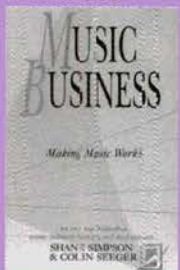


A comprehensive recording guide which addresses the area of project studio recording - the new base of home music production using multitrack, hard-disk and MIDI technologies. Perfect for the student of professional recording with easy-to-understand descriptions of the toys, tools and day-to-day practices of music recording and production. 4th edition. 500 pages, 1995.

## Music Business

**\$49**

By Shane Simpson & Colin Seeger. A book about the business side of the Australian music industry by two top industry lawyers and deal makers. Shows how and why things are done as they are in the industry & what to watch out for in negotiating deals. A comprehensive guide for both the novice and the industry professional. 496 pgs, 1994.



## The Best of Duncan Fry

**\$15**



Connections Magazine popular columnist Duncan Fry chronicles his road stories, including some XXX rated, never before published! Dunk writes about life at the gig, after gig, and nowhere near the gig - it is sometimes a chronicle of the world through his eyes. Duncan ran his own PA and Lighting rigs through the 'golden era' of the Australian Rock Industry. Today he is co-owner of ARX, the Australian PA equipment manufacturers. 100 pgs, 1995.

## Concert Lighting

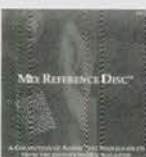
**\$94**



By James Moody. This hardcover informative book places special emphasis on rock and roll concert lighting equipment and techniques. Of particular interest for the touring professional lighting technician and designer it covers every aspect including the design stage, cuing the music, road safety, equipment designed to travel and practical examples of techniques. 191 pgs, 1989.

## Test CD

**\$29**



Very handy for audio people, this test CD has: Tape deck alignment tones, sine waves, 10kHz through 20kHz; 1/3 octave tones, (30 seconds of each); Square waves, (30 seconds of each); Frequency sweeps, 20Hz to 20kHz, sweeps down and up; Phase test at 250Hz, in phase and out of phase; Digital 'black', 1 minute of pure silence to find faults with; Dry instrumental performances, without ambience or reverb; and SMPTE/EBU time code. Produced by MIX Magazine.

## Recommended Practice For DMX 512

**\$19**

By Adam Bennette.

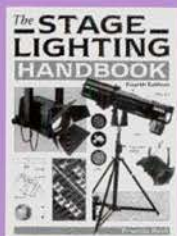


A guide for users and installers. Explains the DMX512 specification & offers professional advice on how to set up a successful DMX512 system. An authoritative illustrated study of standard Lighting Control protocol. Endorsed by PLASA and USITT. 80 pgs, 1994.

## Stage Lighting Handbook

**\$39**

By Francis Reid.



Fourth Edition. This standard illustrated guide incorporates recent advances in technology in areas such as light sources and instruments, including remotely-focused spotlights and computer aided design. In 1974, Connections editor Julius Grafton read the first version of this book and went out to successfully light a professional stage play. It can be done! 208 pages, 1992.

## Control Systems For Live Entertainment

**\$86**

By John Huntington.



Demonstrates the use and integration of computers in the control and coordination of lighting and sound equipment. Includes the basics of control systems, data communication concepts and networking; case studies of problems and solutions; in-depth discussions of important topics like SMPTE Time Code, MIDI, MIDI Show Control, MIDI Machine Control, DMX512, MediaLink and many others. 292 pages, 1994.

## Effects for the Theatre

**\$34.50**

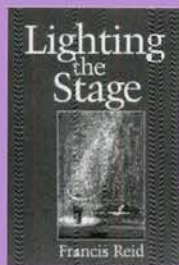
Edited by Graham Walne.



This practical handbook divides effects into four sections; scenic, sound, lighting and special written by internationally experienced experts in each field. An exciting range of techniques are explained with consideration given to budget. Also covers areas of safety, plotting and cuing. 150 pgs, 1995.

## Lighting The Stage

**\$36**



Written in an informal style, Francis Reid draws on his many years experience as a world renowned lighting designer and teacher to pass on tips and pointers which will interest and stimulate all those concerned with using designed light on stage. Ideal for directors, choreographers, set designers, costume designers, stage managers and specialist technicians. 114 pages, 1995.

## Lighting by Design

**\$55**

By Fitt & Thornley.



A full technical guide to the basic theory and practice of lighting for practitioners of lighting in the entertainment industry, including stage, film, television and still photography. Included is a thorough coverage of equipment and a look at design requirements, writing specifications, awarding contracts and purchasing of equipment. Emphasis has been placed on safety and its current legislation. 321 pgs, 1992.

## Basic Stage Lighting

**\$17**

By Mark Carpenter.



Written in 1982 primarily as a first text, Basic Stage Lighting provides answers to many of the lighting problems which occur in drama productions. Teachers, amateur lighting and production managers together with students of drama will appreciate the detailed and informative diagrams which reflect the author's wide experience in stage lighting. DMX and moving lights not included. 113 pages.

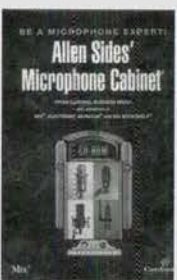
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# PRO TALK

## DAT MACHINES

• **A# Sharp Studios**, Sydney, say: "Generally they are the best thing to happen for recording studios in the last 5 years, because *everybody* has a standard at last. Two stories;

Knocked the time button to record, which goes automatically into record. It did — before I noticed wiping 2 mixes at 3 hours each from the previous night.

I Put a new head on my DAT Player — which was a good idea. The service man said, 'Gee, I've never seen a Head so worn.' With the 'new head' my DAT player was unable to play any of the mixes I had made for the previous month."

• **Jason de Wilde, SAE College**, NSW: "SAE has four DAT players in all; 2 Panasonic 3700s, a Sony 2300 and TC D-7 Portable. We have found the 3700 to be a less reliable machine (chews tapes). We also had a problem with material recorded on one of our 3700s that could not be played in any other machine except another 3700. Quite bizarre. The 2300 is generally a good machine but doesn't have as many features as the 3700. The portable DAT is fine for general location recording but has had bad results when used for mixing purposes. We have used the Denon brand of DAT tape but have recently

never recorded location sound for television, and were reluctant to try. Hicks went over with some very basic equipment, that is three radio mics and a mixer. "Within a week, they were into it, they were loving it. Now they don't have to post sync everything. It was probably one of the more rewarding jobs I've ever done. The attitude of the people was fantastic."

Hicks has worked on TV for fourteen years. Before that, he worked for Jands, and was systems engineer for local and international bands, such as The Cure, Simon and Garfunkel, and Rickie Lee Jones.



# Firmware vs. PC

**Technology Debate:** Dan Cole talks to Marc Allan from Roland about Recording Systems based on the PC, and 'one-box' systems : aka Firmware.

**T**he evolution of digital recording systems has certainly changed studio practices both in the home and in dedicated spaces yet the question remains where is the trend headed?

On the one hand, there are now two distinct formats; PC based systems and stand-alone recording technology (sometimes called 'turnkey' systems).

On the other hand there is a definite move towards convergence with new and soon to be accessible, formats of CD-R and DVD on the horizon. For the time being the choice is between a PC or Mac based vs. integral firmware system is the issue.

Marc Allen, Product Specialist from Roland Australia was kind enough to comment on a few of these issues. He is in a unique position of dealing with a diverse range of audio professionals and studios.

"Either way it is clear that hard disk recording will continue and evolve," he says, "The systems that work best at the moment are ones that have dedicated operating systems". Enter firmware: the box has everything inside it.

"Stand-alone hard disk recorders tend to be the most expensive but the fastest and most reliable with a bulletproof interface. This is important because in a studio situation you can't afford to spend time on the phone to some guy in the US who's the expert on this particular system. One company doesn't provide everything; they might provide software like the A to D converter, but you've then got to start looking at add-ons and plug-ins".

"So there still tends to be a problem when you start adding different components from different manufacturers on a computer that wasn't specifically designed for that," he says.

Certainly a phobia of PCs, real or otherwise, has been to the advantage of static, dedicated systems yet the issue of backwards

compatibility of 'open plan' software systems has also damaged their cause. However there is crossover occurring, as Marc Allen suggests,

"The software company Cakewalk have developed an interface page for the VS880 which

traditional terminology because that's what people still relate to."

Another issue is avoiding spending large amounts on technology that is changing particularly when setting up a traditional 16 or 24 track studio,

"We are still talking about simi-



I think says something. Here is a company that specialises in audio MIDI recording for PC, yet recognises that there is a lot of people still using hardware based systems.

"There will be software support for hardware systems, and I think that's a much better way to go because you are not depending on the computer to do the actual computations for all of the audio processing. All you really require it to do is to act as a visual interface to send messages."

It is clear that none of the mediums have any real advantage as far as audio quality is concerned.

How easy and friendly they are to use is an issue though. According to Marc Allen people still want to relate to things that they can touch: faders, buttons that say 'play' or 'record' or 'fast forward'. He continues,

"These terms are pretty much irrelevant now with hard drive. We've deliberately stayed with that

lar sorts of money for a good hard disk system now as we were for a good tape based system but really, you look at a good 24 track tape based system, you're still talking about \$25,000 or \$30,000 at least, without any of the facilities that hard disk recording has — or any of the advantages."

The emergence of compact, hi-fidelity cheap audio technology has not meant the end of professional recording spaces. It has meant a certain consolidation in how this sector sees itself and how they operate. At the same time this technology makes accessible and realistic smaller projects to be realised in a cheaper and efficient manner. As well, the issue of experience and dedicated acoustic environments is as important as ever and to enter into arguments about the advantages of one over the other becomes simply polarising.

"If you are just going to be do-

**Firmware**  
(continued)

ing a jingle plus a narration, do a quick edit, maybe add time compression, expansion: the projects over. Or in the home environment where you've got the time to do one track at a time, you can take care with that without someone hanging around saying this is costing us \$300 an hour - get it done, get it done quickly.

"ADAT obviously was not the end of studios. It just meant that a lot of smaller studios sprung up with less capital outlay, but the studios were still there because, again they still had the acoustic environments."

New recording and operating formats such as DVD and CD-R continue to redefine the studio with many capable of handling vision and multimedia for their clients.

"Roland certainly believes that there's a big market in CD-R and it's going to get bigger for mastering. We are only concerned with digital mastering of audio because that's the market we are in. There will be a lot CD-R machines out there so it is definitely worthwhile us accommodating that.

"I think you'll find a lot of people will own CD-Rs. A DAT machine is great but it only has audio applications whereas a CD-R has so many. You could record an audio master on to it or you could dump down a CD-Rom software program or multimedia presentation." Marc Allen continues, "Being a new technology, there's an initial fascination with recording your own CDs. It seems to be a more robust medium and that's appealing. You can also record a CD and give it to practically anybody and they'll be able to listen to it in its original quality, whereas it is not so straightforward with a DAT or MiniDisc.

It is the case that products tend to be driven by what people want (and what they want to pay),

"It's really up to the end user to say, 'this is what I want' and lo and behold 12 months later you'll find a product that does it."

# EDIT POINTS

## Studio News

■ Compiled by Dan Cole

■ **AMS Neve** is compiling an international directory of studio facilities equipped with its analogue consoles (80, 81, V and VR Series) The directory will be published in November for direct mailing to producers, engineers and studios.

AMS Neve has details for the majority of analogue installations but would welcome contact from studios equipped with consoles not bought directly from the company or its appointed distributors.

A spokesperson said, "We'd like to ensure that the directory is as comprehensive as possible so that it can serve as an essential guide for producers and engineers worldwide."

To confirm entry into the AMS Neve Analogue Desk Directory, studios are requested to contact Tammy Armand in the USA. ph or fax +1 212 977 5884 or Helen Thorogood in the UK on phone/fax: +44 128 241 7377.

■ The **Damien Gerard website** (<http://www.ether.com.au/dgss/>) is about to undergo a major overhaul with updates to the virtual studio tour and all other pages.

■ New staffer at **Flagstaff Studios** in Melbourne is **Tim Symons**. He joins the Studio in the position as Sound Engineer Post Production Studio.

Tim has spent most of his career working in audio production in the radio, advertising and television industries. He has also worked at Melbourne's Triple M as Production Manager. At Flagstaff Studios, Tim joins John Fleming, collaborating in an experienced audio post production team. Contact: T 03 9699 1844

■ **Soundwarp** (Syd) have expanded with the takeover of the CD Bureau, located in the Emerald City Studios in Brookvale on the lower

North Shore of Sydney. Studio 1 is a fully equipped Mastering Studio featuring equipment such as a API recording Console Ampex ATR100 open reel mastering deck, various DAT, Cassette, CD machines and Aphex, Urei, and Orban processing.

Studio 2 has been rebuilt and dedicated as the new home for CD Bureau and the space is equipped for multiple DAT cloning and Studio Quality Chrome cassette copying. Soundwarp-CD Bureau inform us that they are equipped to handle Master Tapes/ Sources of almost all 2-Track audio formats including DAT, CD (Orange and Red Book), Cassette, Vinyl (all speeds), Open Reel (all varieties) PCM (Beta and VHS). Soundwarp-CD Bureau is fully and independently owned and operated by Meredith Brooks and Bill Syrratt. Contact: T 02 9905 7144

■ **KISS MUSIC Recording Studios** (formally Platinum Studios) has opened its doors to the world. The new studios boasts an SSL console with a 'G' Series computer, Sony 48 track digital tape machine, Otari and Studer 24 track analogues (with 46 channels of Dolby SR).

The facility also boasts new Quedsted soft dome main speakers powered by Amcron amplifiers (2,200 watts+). Both the control room and recording rooms have been rebuilt and redesigned including a new concrete live room with movable walls plus four unique, separated recording areas in the main room. Artists who have already used and are using the new facility include: *Rage Against The Machine, The Truth, Effigy, Dave Graney and others.*

Contact: Paul Kosky, T 03 94827 1500 Email: [plosky@kiss.com.au](mailto:plosky@kiss.com.au) or Web Site: <http://www.kiss.com.au/kiss/kissmusic/>

# PRO TALK

## DAT MACHINES

switched to HHB."

• Kim Horne at **Powerhouse Recorders**, Adelaide says: "I love my DAT! The Panasonic SV3700 is absolutely faultless and sounds great- but is even better with a Spectral A/D to D/A converter. Keep the DAT clean and use the recommended cleaning tape. Powerhouse Recorders use BASF DAT tape.

• Norman James McCourt from **C'est Ca AV Services** Victoria, says: "The head life on all DAT machines is around 1200 hours (1500 tops). Head replacement is around \$900, and don't forget to replace the pinch roller. So the most inexpensive alternative to replacing heads is to replace the entire machine every 12 months. That should only set you back a few hundred dollars (after you sell the old one) and will also keep you up to date — you'll never get stuck with a worn-out dinosaur worth \$0. While youre replacing your DAT machine try to go up market a little each time, the theory being you started out with a \$1,000 machine in 1993 and four years and four machines later, you own a pro machine worth \$6,000.

Also don't fall in love with any one machine, because like any love affair after 12 months you'll likely to be kicked in the face with your heart broken (moneywise and destroyed tapewise).

The most common fault we see with machines is "chewing"; they might only chew 1 in 10 tapes but eventually it gets them all. Stop using the machine at the first sign. It is expensive to continue using it believing the love of your life has just had a small hiccup! Seek counselling. Immediately."

• From **Damien Gerards** in Sydney: "We love both our DATs!! We have a DA30, Sony ES55 with Apogee A/D to D/As. We have a story about the band who booked studio time to re-record vocals who said they were bringing the "tape" with them and arriving with a



"DAT" tape — not an instrumental but a complete mix, and they could not understand the problem!

We hate DIC DAT tapes. We have had problems now and then with TDK DAT tapes but Sony, AMPEX, BASF, HHH, Apogee DAT tapes are all great."

• Paul Bryant from **Paul Bryant Mastering**, Sydney says: "I use Sony PCM 7010s and they are practically bulletproof despite very heavy use. All DAT machines MUST be maintained. I recommend a 500 hr service and 1000hr head change. I use both Sony Pro and BASF DAT tapes for consistency and low error rates. There are some real dud brands out there. As a mastering engineer I see DATs from all over and I'm amazed at the number of people who don't know how to use their machines correctly. Also, too many people are trying to get by with inferior semi-pro machines. In other words, you get what you paid for (surprise, surprise).

• From **Crystal Clear Studios**, Sydney, Dave Tozer adds: "We use a Tascam DA30 (we love it). We have had it for approximately 7 years and has never been sent for repairs. I do a lot of live to DATs and pre-production with this machine. It's reproduction has never skipped a beat! Amazing transparency and clarity. We use TDK DAT tapes; they are reliable and sound great! Never had any glitches and they are cost effective. I did use a DA 30 at another studio and it chomped up an album mix (lucky we had a back-up!) But this guys' DA30 had never been properly working since it had been repaired."

• Barrie Clissold, **Wombat Road Studios**, Sale Victoria says: "We have always mastered to a digital format originally on an old Sony PCM 501 system, which we still use occasionally for archiving. We have two DAT machines both of which have worked perfectly since

new, apart from an occasional head clean they seem to be totally reliable. As for tapes we have used most brands and have never noticed any difference in performance between brands. We have a Yamaha DAT machine that is odd as it places start IDs at the start of the recording and not at the start of the actual program. This can be handy when cloning from DAT to recordable C.D. or to a second DAT. Both the PCM format tapes are around 10 years old but they still play perfectly, DAT being a similar but miniature format should store equally as well."

**Compiled by Dan Cole.**

**Join our Pro Talk-ers. If you are NOT one of the hundreds of studios on our monthly fax-out, call Elaine or Nichole and add your name to our list. Call 1-800-635-514, or fax (02) 9876-5715.**

## APOLOGY TO MR RONALD BRACHER

In the September 1996 issue of Connections Magazine we published an article headed 'Changes at Eclipse Music Studios'.

**Solicitors acting for Mr. Ronald Bracher have pointed out that the article carries some inaccuracies.**

Connections accepts that:

1. Mr. Bracher placed equipment used by the Eclipse Music Studios for sale on the market only in August 1996.

2. The SSL console was, in fact, installed in the studio by removal of a window, not via a hole in the wall;

3. Mr. Bracher did not buy the studio from Paul Rich, rather it was bought by Eclipse Music Studios Pty Ltd from a receiver.

4. Mr. Bracher and the consortium of which he was part did not run the studio by 'public service methods'.

Connections apologises for any hurt or distress caused to Mr. Ronald Bracher.

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Write in Reader Service Number: 2C0

## MORE EDIT POINTS

■ ENTECH award winning engineer **Kevin Shirley** has just finished Aerosmith's new "Journey" album in New York. Kevin produced the debut silverchair album and was forced to decline the second album because of other work commitments. Although working hard in the US and London, his home and base is still Australia.

■ **Sound Around** (Melb) have recently expanded with an additional MIDAS 46 input console. This increases their capacity to 80 Transformer balanced mic inputs. Sound Around also offer Location Audio Packages to suit a wide range of activities from 2 to 80 tracks and now offer their services in Melbourne, Sydney and surrounding areas. They recently recorded T.I.S.M at Collingwood Town Hall over two nights and the Screaming Jets at Melbourne's Corner Hotel over 2 nights too using 32 ch of an active Splitter. Contact: T 03 9531 3891

■ **Soul Studio** on the Gold Coast are offering a recording package of 7 days recording for \$2500. The offer expires New Year Day and includes accommodation arrangements through the studio with pick up and delivery to the studio included. Contact: Daniel Winter (07) 55 922 222 .

## STUDIO PROFILE

# Post Production Without Question



*Simple Living! Q Audio's control and work room*

A new post production house in Canberra has managed to establish a healthy client base, stretching as far interstate as Cairns.

Called Q Audio, they provide audio post production services including tracking and editing for a diverse range of television and multimedia material, designing audio solutions for producers of

all types of electronic media. Co-director Nunzio Gambale explains,

"We were the first people in Australia to have a multitrack Sonic Solutions system and are the only commercially available non-linear digital suite in Canberra. We have also built up a fairly comprehensive sound effects library of around 19,500 sound effects and expand-

ing! Providing audio services is our prime focus, from advertising, television producers and independent production houses."

The other co-director of Q Audio is David Small and with Nunzio Gambale they have a combined seventeen year history in the audio industry.

# CAD 95 JUST COMPARE!

Compare the new CAD 95 Condenser microphone! Compare it with microphones twice, three times the price. The CAD 95 provides more controllable gain - that's 6 to 12dB hotter than other mics. You will be surprised at the crisp, natural sound without noise. Compare!

But really...it's not that surprising. CAD are a USA Company that have been making microphones for just about longer than anybody else. They don't make speakers, mixers, or even keyboards! Compare the CAD 95 at your local CAD dealer, and then compare the price...

Flexi-Form™ hardened steel grille screen for mega protection against dents & related physical damage

Ultra low-noise, electret condenser cardioid microphone equally at home on the stage or in the studio. Other features include: Smooth bandwidth of 40Hz-20kHz, transformerless design for optimum low frequency response & low distortion, rugged steel construction, & durable black urethane finish.

INR Internal Noise Rejection system....rubber shock mount isolates the transducer from the barrel dramatically reducing handling noise..plus there's an internal Multistage Pop Filter which minimises wind and breath noise.



CAD microphones are used by Joe Camilleri, Richard Dodd (1996 Grammy Winner 'Engineer of the Year'), John Mellencamp, Neil Young, Clair Brothers, Nile Rodgers, Omar Hakim, Ronnie Foster, Nate Morrison (Boyz II Men), Cesar Rojas (Los Lobos), Randy Seigmeister (Mariah Carey FOH Engineer)

For more information contact: Australian Audio Supplies on Tel (043) 291 711



Write in Reader Service Number: 168



"We have experience in location sound recording for film, television and compact disc, to sound design for documentaries, multimedia, commercials, corporate video and drama productions. Post production is our focus."

According to Nunzio the post production scene in Canberra is changing, partly due to the fact that distance is not such an issue,

"Even over the last 9 months there have been two new non-linear suites (Avids etc) and a couple of people with Media One 100s with producers off-lining their own work, and people moving onto higher production levels.

"With aggregation all the TV and radio networks make much of their commercials here, so it is a small market. We do a lot of work in other states such as Cairns and Sydney. For instance, we have just completed the Explorer Buses project for Sydney buses [Part of N.S.W. State Transit]; they operate CDs with pre-recorded tourist material. We have a CD burner so it is the complete package, including writing."

"With an industry standard facility in the region we are finding clients are staying local to complete their work, and even getting some overflow from Sydney and Melbourne. When you put the equations together it works out better here; we aim for the more budget conscious, looking to spend more time on a project through block bookings as opposed to Sydney where there is a much higher demand for studios."

Some of Q Audio's previous work: a film called *The Blind Leading The Blind*, a TV docu-

mentary for Oz Iris Productions; Australian Radio Networks 1996 campaign; audio component for the Canberra Tourism 'Mystery' 1996 campaign; Australian War Memorial Interactive 1945 exhibition; Jingle productions for 'Palmolive' Colgate Palmolive; SFX and dialogue production Great Southern Energy 1996 campaign; retro dance track 'Xanadu' produced for Central Station Records through Q Audio's music label, Q Music (receiving national airplay).

#### Studio Equipment

- Sonic Solutions 24 track DAW including - full dynamics processing; PQ code editing; TimeTwist compression and expansion; SMPTE;
- 9 Gig hard disk storage and DAT back up
- Sony CDU 920s CD writer
- MCI JH-600 in-line console
- 1" Video; Betacam SP, CD-R, DAT Timecoded 1/4" and SyQuest removable hard disc
- Aphex Studio Dominator
- Ensoniq DP/4+ • Orban De-esser
- Plus: range of outboard equipment and microphone selections

#### CONTACT

- Q Audio,

Nunzio Gambale/David Small,

Call 06 251 7675,

Fax 06 251 5120

Email: Q Audio@spirit.com.au

## ■ STUDIO PROFILE

# A Walk In The Cloudburst

By Jim Sarantinos

Jimi Hendrix recorded here! Well maybe he could have in his purple haze. Cloudburst studios located in the heart of Fitzroy in inner city Melbourne is a renovated Victorian terrace house tastefully decorated in various shades of purple and maroon providing both visual and musical stimulation for musicians of all persuasions.

Bruce Jacques (manager) commenced operations in this facility four years ago to cater mainly for the acoustic and folk markets but has also dabbled into other music genres ranging from electronic, rock, blues to grindcore thrash four piece ensembles who sing about dismembering body parts.

Cloudburst has produced ten albums and clients have included CDB, Cranky, Janette Geri, Ches Haynes, Gary Phillipson and Valanga Khoza (African percussion based band).

Since Bruce enjoys capturing a live band

feel rather than recording individual tracks and tinkering with them later, the main recording room (5.3 x 4.1 x 2.7 m) which comfortably fits three and four piece bands is relaxed and conducive to a live band ambience.

Sound proofing consists of a suspended ceiling, double brick and double plastered walls, double glazed windows with 10.38mm laminated glass, double doors and insulated wall cavities. A smaller drum booth (3.4 x 2.8 x 2.7 m) is constructed similarly to the main room to reduce sound reflections rather than eliminating any traces of sound colour.

While the studio does not aim to keep up with every new piece of gear released on the market, it is well equipped nonetheless. The main control room is fitted with both analogue and digital recording facilities. Cloudburst has predominantly recorded on 16 track analogue half inch tape, although the

# M-S STEREO RECORDING

#### WHAT IS IT ?

The M/S stereo technique provides the modern sound producer an articulate yet versatile stereo image while at the same time maintaining an uncompromised discrete mono compatible signal. The M/S system is based on combining the signals from a forward-facing microphone, (the Mid or Mono signal) with a laterally oriented figure-8 microphone (the Side or Stereo signal) via a special matrix. Additional flexibility can be had if the Mid microphone has a remote pattern control.

#### HOW IT WORKS.

The M microphone "hears" the principle portion of the sound field and provides the central monophonic pickup. The S microphone responds primarily to directional information and ambience because it is positioned to be most sensitive to the sides and least sensitive to the central portion of the sound field.

The M and S signals are combined in a sum *and-difference* matrix (M+S and M-S) to produce the individual left and right signals for conventional stereo. By changing the relative contributions from these microphones, a variety of sound perspectives from monophonic to a very out of phase *hyper-stereo* can be created.

Since the matrix can be introduced at any point in the recording or post-production process, the M/S technique affords complete control of ambience and stereo perspective even during the last stages of the final mix.

**For more information on M-S recording techniques and equipment please call the Audio Sound Centre on (02) 9901 4455.**



# ASC

AUDIO SOUND CENTRE

Cloudburstz owner Bruce Jacques (standing) and House Engineer Dale Warren in the control room.



benefits of the Macintosh based 'ProTools Project' (8-tracks) hard disk recording system have become increasingly important.

It can be chained to the 16-track analogue recorder if extra recording tracks are required. In line with the technological revolution

Cloudburstz boasts superior A/D converters (888 interface) which can provide clean low noise signals. 'Logic Audio' is also available for projects requiring MIDI.

The entire studio is well maintained including a small workshop for all those pesky soldering jobs.

Both recording rooms are fully patched into the control room via a single bay allowing external equipment to be effortlessly introduced into the single path.

Cloudburstz can easily cater for both the demc and album markets although its future lies in-

creasingly with the latter. Voice-over and corporate work are also handles here in an ever diversifying audio visual market. The studio is planning to double the capacity of ProTools to record 16 tracks and eventually couple it to two ADAT mastering units, allowing operation in the fully digital domain.

Cloudburstz is "a studio run by musicians for musicians" (that explains the empty pizza trays) and employs two full time engineers and an assistant.

The facility is also available to freelance engineers.

**EQUIPMENT**

**CONSOLE**

- MACKIE 32 channel 8-bus series console
- YAMAHA DMP-7 (for console automation via MIDI)

**RECORDERS**

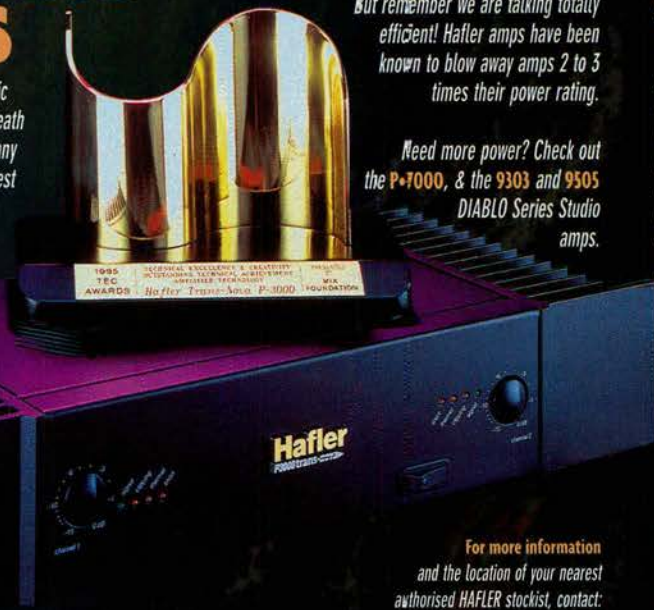
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The **P-1000** is ideal for the project studio. One rack space. Headphone input on the front panel. With bal. 1/4", XLR's, and unbal RCA's it's rated at 50wpc @ 8 ohms, 110wpc bridged mono @ 8 ohms. The P-1000 has a suggested retail of only \$995.



The **P-1500** at 2 rack units & \$1395, is rated at 75wpc @ 8 ohms & 170wpc @ 8 ohms bridged mono. The **P-3000** (pictured) is rated at 150wpc @ 8 ohms, & 400wpc @ 8 ohms bridged mono, retails for \$1895.

But remember we are talking totally efficient! Hafler amps have been known to blow away amps 2 to 3 times their power rating.

Need more power? Check out the **P-7000**, & the **9303** and **9505** **DIABLO** Series Studio amps.

**P-3000**

Winner Technical Excellence & Creativity (TEC) Award

**P-1500**

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"The Hafler Trans-Nova 9505...I found its ability to deliver excellent resolution and detail, without producing much edginess, or irritation, endearing. Space, dimension, and air were excellent, as were tonal balance, bass definition, and impact...it behaved just flawlessly. I liked it very much."

AUDIO (USA) 4/96

"The Hafler P-3000 provides a sharpness that reveals the subtle details of live or recorded sound."

EQ 10/95

"The Hafler P-1500....the best way to describe the sound is like some of the class tube amps, with a more open low end."

RADIO WORLD 4/95

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- TASCAM DA30 DAT

**MICROPHONES**

- GROOVE TUBE system 2 valve
- AKG 414 & 451 condensers
- SENNHEISER 521/421
- SHURE SM 57/SM58 • BEYER M88

**CONTACT**

Cloudburstz Studio, 187 Kerr Street Fitzroy, 3065, Call 03 9416 1038, Fax 03 9416 1866.

# HOWARD JONES WORKBENCH

## OLD IS NEW

In this high tech modern world of ours, the workbench is becoming a challenging place to be. Every time a manufacturer develops a product based on a new standard or some new recording medium, then we're more or less obliged to buy a new set of test gear, tapes, discs or whatever.

Of course, the old formats don't die overnight, so you need to maintain a good suite of analogue chops in order to do that work too.

Accompanying the sweeping changes affecting the way the recording world works are a whole set of advancements in the techniques used to manufacture and assemble printed circuit boards. Thus, the older world of dual-in-line chips is giving way to the wide-spread use of surface mount devices.

DIL chips are the ones you've all seen by

now, whether it be on television or by looking inside your own equipment. These ICs have legs which stick through the circuit board and are soldered into place from the other side of the board. The legs on surface mount components are folded into an S shape and so are soldered into place on the same side as the chip itself.

Because every square millimetre of circuit board space can be translated into dollars at some point in the production chain, there is always pressure to either get as much componentry on the board as possible or, alternately, to make existing components as small as possible. This means that surface mount ICs can have over 100 legs to be soldered and that the solder pads are tucked in very close to the body of the IC.

When circuit boards are prepared using SM components, the manufacturer has special

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And the same manufacturing, technical support and sales people. You even get the same Ampex brand name. The difference is that we're now the only media company dedicated exclusively to you, the recording professional. So call us today and we'll tell you more about Quantegy. After 35 years, we're just getting started.

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Home Page: <http://www.quantegy.com>

New Zealand: 0800 400 229



# BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT	ARTIST	PRODUCER	ENGINEER	PROJECT
<b>New South Wales</b>							
<b>A#Sharp</b> Jeff Cripps (02) 534 4440 24 Track 1*				Rimana	Christian	Paul Bryant	CD Album
Elmore Fudd	Jeff Cripps	Jeff Cripps	Demo	Craig Byrne	Jack Pledge	Paul Bryant	CD Album
Bart Willoughby	Trevor Stanton	Jeff Cripps	Tracking	Union is Strength	Peter Hicks	Paul Bryant	CD Album
Pleasure & Pain	Jeff Cripps	Jeff Cripps	Demo	Gympie Muster 96	Grant Luhrs	Paul Bryant	CD Album
3rd Degree	Jeff Cripps	Jeff Cripps	CDPNS Prodn.	<b>Paradise Studios</b> Jason Lea (02) 9357 1599, Custom Mixer, Studer A800, 24 Track			
<b>Airmotion</b> Guy Dickerson (02) 9550 6576, 24 Trk. Analogue				Glare	Band/Beck	Craig Beck	EP
Pandoras Box	Phil Rigger	Keith Cooper	Mix	Frank Bennett	M.Scully/T.Wall	Tony Wall	Mix - Album
Swirl	Jeremy Allom	Jeremy Allom	Album	M.B.F.	Val Donlan	Mark Roberts	Mix - DBL Album
Bain Maries	Band	Fraser Stuart	Tracking	Mitchell Shadow	Colin Watson	Ted Howard	Album Tracking
<b>Audioscapes</b> Jim Blackfoot (02) 564 0099 16 Trk. Dig./Post Prod.Film & TV				Billy Field	Field/Stavrou	Michael Stavrou	Mix - Single
Charlie McMahon		Jim Blackfoot	Demos	Slim Dusty	Watson/Coe	Ted Howard	Album Tracking
Various	Rod Lee	Jim Blackfoot	Album	<b>Powerhouse Studios</b> Doug Henderson (02) 9318 1220 32 Input Neve Console 24 Trk.Studer A800			
Abroad with 2 Men	J. Biggins	Jim Blackfoot	Musical Revue	Brother Brick	Band	Doug Henderson	Album CD
<b>Bush Traks</b> Ruth Miller (066) 891 290, 24Track Recording and Multimedia				Dark Order	Band/Gavin	Gavin Duffield	Album CD
Spiffmasters	Tonkin/Major/Highet	Dave Highet	CD-Plus Album	John Rowles	Berger/Henderson	D.Henderson	CD Album
Kym Pitman	Pitman/Highet	Dave Highet	Album	Bliss	Lachie Magoog Goold	Magoog	CD Album
Jeff Joubert	Jeff/Dave	Dave Highet	Demo	Bullrush	Band	J.Darwish/N.Sanning	CD Album
Glenn Brace	Glenn/Dave	Dave Highet	Jingle & Demo	Orphan Spy	Band	M. Mailander	EP CD
<b>Charing Cross Studio</b> David Sykes (02)387 8362 - 24 Trk Neve 8000 Series				<b>R. &amp; R. Recording</b> Robert Zimola (02) 9672 4494 16 Track 1*			
Mental As Anything	Martin White	Martin/P.Jones	Album Mixing	C.J. Turner	Mike Kerin	Rob Zimola	Album - CJJM
Pollyanna	Jon Auer	Peter Jones	EP Mixing	Blacktown Ch. of Comm.		R.Zimola	Corp. Message
The Flanders	Wayne Connelly	Wayne	EP Mixing	John Doe	Band	M.Mariasson	Demos
Died Pretty	Wayne Connelly	Wayne	Mixing	<b>Rockinghorse Studio</b> Grant Hilton (066) 884 131, 48 Trk. Analogue, 24 Trk. Analogue			
Sandpit	Greg Wales	Greg/P.Jones	Album - Track & Mix	Screamfeeder	Paul McKercher	Paul	Album
Sidewinder	Marty Beath	Peter Jones	EP - Track & Mix	Carmella Baynie		Greg Courtney	Demos
<b>Crystal Clear Studios</b> Dave Tozer (02) 684 1152 24 Tk. Dig. Adats & BRC, 32 Ch. (66input) Console				Pollen	Greg Wales	Greg Wales	Album
Eternity	D.Tozer/Don	Dave Tozer	Album	Grinspoon	Greg Courtney	Greg Courtney	Demos
Krush	Dave/Band	Dave Tozer	Album Track	Dexter Moore	Greg Courtney	Greg Courtney	Demos
Big Joe Rumble	Dave/Band	Dave Tozer	Album PreProdn.	Spiderbait	Paul McKercher	Paul McKercher	Album
A.D.	Dave/Band	Dave Tozer	Album	<b>Sony</b> Ross Ahern (02) 9332 0320 24 Track/ProTools			
Cyanide for Xmas	Dave/Band	Dave Tozer	EP	Midget		Greg Wales	Pre Prodn.
Myriad	Dave/Band	Dave Tozer	Demo	Joel Scheftz	Joel	Simon Tonx	CD
<b>Damien Gerard Studios</b> Contact Marshall (02) 660-8776 2 x 32"/24 Track				Human Nature	Paul Begaud	Paul Begaud	CD Track
Frenzal Rhomb	Band	Russell Pilling	Single	The One Eyed Milkman	Simon Tonx	Simon Tonx	CD
Andy Holm	Andy/Dave	Dave Trump	Album	Childrens TV Project	Simon Tonx	Timon Tonx	
The Angels		Matt	Monitor Mixes	Overdubs MBF Ad		Mark Roberts	Advertisement
Purrelene	Steve Foster	Steve Foster	EP	<b>Soundwarp</b> Meredith Brooks (02) 9905 7144 Mastering			
Laika	Sandi & Kelly	Russell Pilling	EP	Bastards	Bastards	Meredith Brooks	CD Master
Disaster Dora	Greg	Russell	Album	Shoes With Zippers	Peter Zounis	Meredith Brooks	CD Master
<b>Darling Harbour Studios</b> Ike Brunt (02) 211 1474, 24 Track A80 Studer, D88 Sony				Nude Sunday	Justin Harris	Meredith Brooks	Mastering - Cassette
The Angels	Rick Brewster	Julian Slade	Alb. Tracking	Various	Greg Jones/Issue #1	Meredith Brooks	Cassette Album
Dead Flowers	Rob. Rowlands	Rob.Rowlands	EP Tracking	MPD Limited	Canetoad	Meredith Brooks	CD Master
<b>Festival Studios</b> Catherine Knapman (02) 660 4022 2 x Analogue Multi-Tracks or Digital Multi-Track				Fingertoe	Fingertoe	Meredith Brooks	CD Single/EP
Human Nature	Paul Begaud	Adrian Boland	1 Track Rec.	<b>Studio Arts Production</b> Ed lee 042 849 128, Independent Studio			
Gina Jeffries	Garth Porter	Lovell/Hemmings	Xmas LP	Inscape	Ed/Band	Ed Lee	Album
Sidewinder	Jeremy Allom	Jeremy Allom	Live Rec.Mix	Grail	Ed/Band	Ed Lee	Demo
<b>Groovetoun Productions</b> James or Stefan (02) 9672 3513, ProTools III, Premier Prodn.facility.				David Beniuk	Ed/David	Ed Lee	Album
Olaf John	Stefan Novak	James Novak	EP	Jenna Maitland	Ed/Jenna	Ed Lee	Book Promo
Ray Brooks	James/Ray	James Novak	Album	Various V/O	Rev.Miao Hong/Ed	Ed Lee	Collection Buddhist Stories
Groovetoun Prodn.	Stefan/James	James Novak	Comm.Sampler	Lenore Alexandrovics	Ed Lee	Ed Lee	Demo
<b>Hullabaloo</b> Geoff (02) 9906 2933, 24 Track, 16 Trk. Protocols				<b>Studios 301</b> Fiona Simpson (02) 9217 7701, X880, Studer A800, SSL 64 Ch, G-Series			
Ian Turpie	Jamie Rigg	Glen/Daniel	ABC Album	Tumbleweed	Adam Casper	Adam	Re-mixes
Nathan Tasker	Nathan	Daniel	Album	Spiderbait	Spiderbait	Paul McKercher	Mix
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	City West Corp.Music	Kaktus Mantres	Rob Taylor	Rob	Recording
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	Foxtel Pilot Music	Jimmy Barnes	Mark Opitz	James Cadsky	Mixes
Ritchie Productions	Bob Ritchie	Heaton	Various TVC/Corp.mixes	<b>Troy Horse</b> Colin Wright (02) 319 1799 or 0412 240 000, 24 Track 2'			
Robert Knapp	Robert	Heaton	Various TVC/Corp.mixes	Lawnsmeil	Gina Arena	John Vittorio	Album
<b>JMF Sound Studio</b> Fran Esther (02) 9790 4097				Magic Lunchbox	Hans	Ramesh Sathiah	Album
Hellhound Blues	Band	Ralph Ester	CD	Simpletons	Dave Trum	Dave Trump	Album
Mark Bonnici	Mark	Ralph	CD	Shouties	Band/McKercher	Paul McKercher	Album
<b>Lucinda Street Recordings</b> Rick Mostyn (042) 291 169, Dig. Multitrack Computer Based Studio				Tony Lewis	Tony Lewis	Chris McBurnie	EP
David Crowe	Rick Mostyn	Rick	Tracking for Live CD	<b>Wirra Willa Studios</b> Will Rout, (02) 9605 1203, 24 Track Analogue @ 2 x 8 Track Digital			
Colleen Baxter	Rick	Rick	78 RPM Rec.Restored	C.L.G. Liverpool	Kim Pronger	Will Rout	New Christians Video
Nabilone	Rick Mostyn	Rick Mostyn	Live Set Track	Ted Evans	Rick Knowles	Will Rout	Album
Sturman Electronics	Rick	Rick	CD - Promo	Eschol Park P.S. Chior	John Davies	Ian Cooper	Album/B.Tracks
Bung	Rick	Rick	Demo	Llanos Video	Jacqueline Llanos	Ian Cooper	R/Estate Video
Syndicate	Rick	Rick	Demo	Loaves & Fishes Orchestra	Steve Gorringe	Will Rout/Ian Cooper	Album
<b>Main Street Studio</b> Rob Specogna 042 834 515, 16 Track				Billy Newton	Miklos Keretz	Ian Cooper	Digital Mastering
Bootleg Brother	Neil Corey	Rob Specogna	CD Album	<b>Woolly Mammoth</b> Andrew Perrott (02) 9557 2721, 32 Ch. Cons./16 Trk. Dig.			
Stephen Cheney	Rob	Rob	CD Album	Charlie McMahon	C. McMahon	Nick Sanning	Demos
Kelly Tassone	Kelly	Rob	CD Album	Simon Smith		Nik Sanning	Demos
Craig Byrnes	Jack Pledge	Rob/Jack	CD Album	Azhu		Nik Sanning	Demo
Deliberate Strangers	Rob	Rob	CD Album	Smother		Nik Sanning	Demo
Rimana	Christian	Christian/Rob	CD Album	Grant Lane		Gavin Drew	Demo
<b>Megaphon Studios</b> Guy Dickerson (02) 9550 6576 24 Track & 48 Trk Analog.				Apostrophe		Nik Sanning	Demo.
Drop City	James Dixon	Greg Wales	Album	<b>Queensland</b>			
Jamie Rhodes	Rob James	Colin Simpkins	Tracking	<b>Burbank Productions</b> John Ryan (07) 3245 4314, 16 Track Studio			
Casey Green	Julian Lee	Guy Dickerson	Album	Fiesta Tropicale	Michaeli	John Ryan	Album
<b>Nu-Town Studio</b> Greg Hopping (02) 9516 3306, 16 Trk. Analogue, 16 Trk. Digital				Celebration Singers	Athol Ewan	John Ryan	Album
Savage Garden	Greg Hopping	Mark Worrall	Single - Club Mix/Radio Edit	Dean Daniels	John Ryan	John Ryan	Album
Dungeon	T.Grouse/M.Worrall	Mark	Album - Japanese Release	Sarah Cunningham	John Ryan	John Ryan	Demos
Shield	Greg Hopping	Greg	Single - Radio & Club Mixes	Free Flow	Band		
The Conformists	Julie J	Mark Worrall	EP	Desmond Caulder	Desmond		
ELE	Greg Hopping	Mark Worrall	Single - Radio * Club Mixes				
ACT	Greg/Andy Cicone	Mark Worrall	Single - Radio & Club Mixes				
<b>Paul Bryant Mastering</b> Paul Bryant (02) 9748 0222, Mastering Suite							
Hullabaloo	Keith Ogilvie	Paul Bryant	CD Album				
Bellhops	Jeff Cripps	Paul Bryant	CD Album				



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# WORKBENCH

(continued)

machines and techniques for soldering all the devices to the PCB. Reversing this process on the workbench is not so easy, however. When a faulty component is to be replaced, it has to be removed without tearing tracks or overheating the PCB. Where the component is small, such as a surface mount resistor or capacitor, then this isn't too hard. It becomes somewhat more challenging when it is a 128 pin IC! Of course, there are special tools for soldering and desoldering surface mount components, so this becomes another investment for the workshop.

These developments have helped to change the economics of manufacturing and are part of the reason why so much gear is now available at such affordable prices. You'll notice, for example, that both the current digital 8 track formats were developed using pre-existing tape transports (the ADAT using a VHS transport and the DA-88 using a Hi-8 transport).

The real R & D on these machines was in the chip sets which make them work. Once the technology has been proven in the lab, then the chips can be put into mass production and the circuit boards robotically assembled. These production techniques hold costs down considerably. Previously, a tape machine manufacturer might expect to sell, say, a few hundred 2" 24 track units around the world, so consequently the unit cost was high. Now, a manufacturer might sell many thousands of digital 8 tracks just in one large market, so the individual unit cost comes down greatly.

These new machines are also incredibly reliable when it comes to the electronics. One of the great benefits of shrinking thousands of circuits down to a handful of chips and having a pick-and-place machine assemble them, is that there is almost nothing to go wrong. If you get one of these units and it works correctly at the beginning, then chances are that the electronics won't need attention for the life of the machine. Of course, the mechanical parts are subject to wear and will have to be serviced regularly just the same as in the old days.

Something that I've said on many an occasion bears repeating here: it's in the nature of digital technology to work perfectly, or near-to-perfectly, until the day it suddenly pegs out. There is no mystery in this: digital recording is only possible because of the power of the error correction techniques which are used. This means that as a digital recorder wears, the correction circuits work harder and harder. One day, they start working too hard and you realise that something's wrong.

This is pretty different from watching wear in an analogue tape recorder - the high frequencies start to lose their zip, the transport maybe runs sluggishly. Moreover, you can see the wear in an open-reel recorder, notice the growing wear pattern on the heads, catch your fingernail in the gutter on the tape guides.

But just because you can't see into your DAT doesn't mean that you ignore the fact that it is wearing.

This new world of affordable gear seems not to be properly understood by some people. We've had several occasions now where clients have declined to go ahead with a repair when given an estimate on the parts and labour cost to replace the head drum in their DAT recorder. One bloke seemed to feel that the DAT had tragically let him down and that the only way out was to sell it - nasty unreliable thing that it was. I couldn't understand him - the machine had run just fine for about 1300 hours of use and the rebuild was going to cost a lot less than buying a new machine. And, generally speaking, when you rebuild one of these machines it comes out just as good as new. The aim of any repair, after all, is to return the device to manufacturer's spec.

The new manufacturing techniques are not just confined to the more exotic pieces of equipment like digital 8 tracks. Mackie consoles make great use of surface mount technology and all the components in the 8 bus series, for example, are mounted on only the one side of the circuit board. The same economics apply whether you are making DATs, mixers or microphones.

Needless to say, these changes carry implications for servicing and repairs. As I've already mentioned above, those same techniques which make it cheap to manufacture equipment also make it expensive to service. It is no longer enough to simply dive in with the trusty Weller soldering iron and a pair of sidecutters. Modern equipment is demanding high levels of sophistication in how you approach faultfinding and component replacement. Formats such as ADAT, DA-88, DAT, Mini Disc and CD can't be aligned without all the necessary tracking, level, torque and other alignment tapes and discs. This isn't something new in itself, of course, as workshops have always had to carry alignment tapes for analogue formats from 1/4" to 2". What is different is that there are now 937 different types of product all requiring their own unique test media. Naturally, like any other sector of the recording industry, we also try to ensure that we're not caught out investing in some orphan format like DCC!

**Corrections to the corrections:** Make sure you catch the letter from Ron Polglaze of Blazon Electronics elsewhere in this issue. Ron gives a detailed response to last month's piece about which cables to use for digital audio interconnects. Among other things he points out an error (sigh) which I made in relation to RG58 cable.

• Howard Jones runs Studio Solutions, catch him on (02) 9906-4363.



## Sound Information from YAMAHA

by Chris Steller

### THE MD DATA FORMAT AGAIN!

Following on from last issue's groundbreaking news of the MD Data multitrack format, this time around we'll talk about unique features of the format and the MD4 itself.

The MD disk is only 64mm in diameter but can store up to 74 minutes of stereo audio. To achieve this capacity, audio data is compressed using the ATRAC (Adaptive Transform Acoustic Coding) system, which gives 37 minutes of four track recording on the MD4. This system offers virtually no audible loss in sound quality.

On the MD4 it is possible to ping-pong four tracks down to stereo - the random access capability of the MD medium will locate the playback point immediately for recording and the recorded data is compressed to about one-fifth of its size, so there is enough room to record and play back data at the same point in the same channel.

In the utility section of the MD4 there is a function called Cue List, which allows the 8 marker points in a song to be played back in any order - great for remixes or playback of dialogue topics in any order that you wish.

Synchronisation to a MIDI sequencer is possible using the MTC (MIDI Time Code) output provided, which is ideal for MIDI users who want to add four tracks of good quality audio recording to their synthesizer setup. The MD4 acts as timecode master and MTC is output as 0:00 at the beginning of each song.

The MD Data format specifies that standard Mini Disks can be recorded and played back, but only as two track - to record a four track song requires the MD Data specific disks.

MD4 - looks good, feels good, sounds good!

If you require further information call Yamaha on 1 800 805 413

ARTIST	PRODUCER	ENGINEER	PROJECT	ARTIST	PRODUCER	ENGINEER	PROJECT
<b>Digital Paradise</b> Ian Peters (07) 5527 0722, 32 Track Digital				Supremacy	Anne	Trevor Carter	Metal Album
Lee Conway/Brian Cadd	Lee/Brian	Ian Peters	Album Track	Indian	Trevor Carter	Trevor Carter	Mixing Album
Jim Pilgrim	Ian Peters	Ian Peters	AV for Mack Trucks	Poesia Andina	Trevor Carter	Trevor Carter	Album
Various	Mike Taylor	Ian Peters	Amway Motiv. Tapes	Kaliopi	Kaliopi	Peter Frawley	Demos in Studio B
Druids	Druids/Ian	Ian Peters	2 Week Lockout for Album	Blood Red Sand	Band	Peter Frawley	Demos
Erin Blackly	Ian Peters	Ian Peters	Demo Tracks	<b>Wombat Road Studio</b> (051) 454204 Barry Clissold 24 Trk. Plus full Midi Facilities			
<b>Soul Studio</b> Daniel Winter (07) 5592 2222 24 Trk. Dig. Tape, Mac Hard Disc Rec. Radio/TV Prod.				A Tractor Prod	Brian Baker	Brian Baker	Jingle Prod.
Clayton Reiser	Self	Daniel Winter/Mick Stills	3 Track CD	Maffra P. School	R. Woodhouse	Barrie Clissold	Orchestra Rec.
George Rad Band	Mick Stills	Mick Stills	Album	Crossroads	V.Gartiv/C. Twite	Barrie Clissold	Album Tracking
Nicky Sweet	Self	Dan/Mick	Album	Gaye Lynn	B. Clissold	Barrie Clissold	Album Tracking
Freeway	Gregg Dafferty	Dan/Mick	Album	Gail & Lindsay	L. Hammond	Barrie Clissold	Album Tracking
Soul Menders	Mick Stills	Daniel Winter	Demo	Salvation Army	P. Roberts	Barrie Clissold	Live Album Trkg.
<b>Sunshine Studios</b> Leon (07) 3844 6844, 36 Channel Neve				<b>Western Australia</b>			
Spot the Dog	Pryce Surplus	Pryce Surplus	Album	<b>Bonsai</b> Tom Thorpe (09) 246 4408			
Webster	Mark McElligott	Mark McElligott	EP	PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles
Cardigan	Mark McElligott	Mark McElligott	EP	Geoff Brownrigg	Tom Thorpe	Tom Thorpe	Album
Lavish	Mark McElligott	Mark McElligott	EP	Kay/Redman	Tom Thorpe	Tom Thorpe	Jingles
<b>Vandersound Studios</b> Eric Vandersande (07) 5546 8100, 24 Trk. ADAT/XT, HDR, 02R, CD-R, Multimedia				Time Warp	Tom Thorpe	Tom Thorpe	Jingle
Warren Winter	Eric	Eric	Album Tracking	<b>Planet Sound Studios</b> Denise Preston (09) 382 2211 48 & 32 Trk. Dig/24 Trk. Analog.			
Steve Mills	Eric	Eric	Album Tracking	Evergreen	J.Villani/Band	John Villani	Album Mix
Lachlan Blundell	Eric	Eric	Album Tracking	Oz-Connection	J.Villani/Band	John Villani	Album Trkg.
Wish Lot	Eric	Eric	Demo	Lee Sappho	Lee/Howie Smallman	John Villani	Album Mix
Ben Burton	Eric	Eric	Demo	Hank Marvin	Hank Marvin	Les Williams	Album Mix
Kelly Ford	Eric	Eric	Demo	<b>Poons Head Rob Grant</b> (09) 3394791, Studer Analogue/Alesis Digital/Valve			
<b>South Australia</b>				Cinema Pragut	Steve/Rob/Band	Steve/Rob Grant	EP
<b>Disk Edits N. Clark</b> (08) 340 1377 Editing & Mastering				Alton Tebutt	Rob Grant	Rob Grant	Album
Spiral Dance	Piggot/Tonkin	N. Clark	Album Master	Love Bites	Rob/Phil Bennett	Rob Grant	Album
The Borderers	J. Patterson	N. Clark	EP Mastering	Hum	Mark One	Rob Grant	Mastering
Rough Image	Band	N. Clark	Album Master	Jebediah	Chris Dickie	Chris/Rob Grant	Single
Psyco Green	Band	N. Clark	Album Master	Spooky	Rob/Clayton Chauncy	Rob Grant	EP
The Barkers	Bradford/Day	N. Clark	Album Master	<b>Troppo Sound</b> Mick Connolly (091) 922 394 24 Track Dolby			
Adel. Harmony Choir	J. Hall	A. Mazzone	Location Recording.	Pigram Bros	Band	Alan Pigram	Debut Album
<b>Victoria</b>				Shoveller Band	Band	James Edwards	Album
<b>Big Beat Studios</b> (03) 9898 5815 John 'Shadow' Toth 16 Trk. Analog. 1", 32 Trk. Auto Session 8 Hard Disk				Desert Child	Band	James Edwards	Demo
Amanda	Toth/Borgeest	Ben Williams	CD	<b>Witzend Recording Studio</b> Alan Dawson (09) 3311818 16 Track			
Daniel Kelso	Toth/Borgeest	Ben Williams	Demo	Mardi Picassos	Band/Alan	Alan Dawson	Album
Curse Ov Dialect	Toth/C.O.D.	Ben Williams	CD	Two Minute Noodles	Band	Alan Dawson	Pre-Prod.
Dave Close	John Toth	Dave Borgeest	Demos	Glow	Band	Alan Dawson	Album
Project A	Toth/Williams	Dave Borgeest	CD	Melissa Banas	Melissa/Alan	Alan Dawson	Sound Track
Stainless Steve	Toth/Williams	Dave Borgeest	Demos	<b>Northern Territory</b>			
<b>Boathouse Studio</b> Jamie Durrant 057 633 293				<b>CAAMA Music</b> Stan Satour (089) 895 29205			
Spud Gun	Jamie Durrant	Jamie Durrant	Demos/Album	Bart Willoughby	Kevin Stanton	Stanton/Satour	Album
Debaser	Jamie Durrant	Jamie Durrant	EP	Chrysochase	Stan Satour	Stan	Album
Michael Meeking	Jamie Durrant	Jamie Durrant	Album	<b>To have your facility listed call Elaine or Nicole on (02) 9876-3530. Listings are free, they are sponsored by (&amp; thanks to) BASF.</b>			
Lost Souls	Jamie Durrant	Jamie Durrant	Album	<b>YOUR BASF TRADE SALES OUTLETS:</b>			
<b>C'est Ca</b> Norman James (03) 9419 1506 Automated 24 Track				<b>NSW:</b> Audio Visual Designs (02) 9281-2444, Silver & Ballard (02) 9439-5355, Independent Tape Services (02) 9436-0666			
Pat McKernan	Pat	Genn Coath	Live Album	<b>VIC:</b> CATS (03) 9529-3177, Chapple Tape (03) 9580-6620, DEX Audio (03) 9372-2266, MTA & Assoc. (03) 9819-6455			
Meg MacDonald	Tony Hargraves	Genn Coath	Live Album	<b>SA:</b> Adelaide Tape Duplicators (08) 8212-7111, Pro Media (08) 8276-6793			
Circus Oz	Carl Polkie	Genn Coath	Tour Album	<b>WA:</b> Ausmag (09) 314-1953, Pro Copy (09) 375-3902			
Rob Bartlett	Norman/J.J. McCourt	Genn Coath	Live Album	<b>QLD:</b> Musiclab (07) 3862-1633, Tek (07) 3239-4000			
<b>Kiss Music Recording Studios</b> Paul Kosky (03) 9827 1500 SSL Console, 48 Trk. Digital				<b>BASF</b>			
Dave Graney	Dave Graney	Andy Baldwin	Album	<b>YOUR MUSIC IS SAFE WITH US</b>			
Effigy	Paul Kosky	Paul/Andy	Album				
N.I.L.	Paul Kosky	Paul/Andy	EP				
Tommy Emmanuel		Doug Brady	Single				
<b>RB-X (Aust) P/L</b> Bevan Quelhurst (03) 9429 6199 24/48 Track SSL Cons.							
Fantasia	Band	Adam Quaife	Album				
BIB Productions	Mike Brady	Doug Brady	Jingles				
Chester	Band	Ethan Cook	Demos				
Jocks Full of Jelly	Band	Ethan Cook	Demos				
Police Band	Andy Parsons	Andy	Album				
Thirstee	Band	Ethan Cook	Demos				
<b>S.A.E. Technology College</b> Michael Pollard (03) 9534 4403, 24 Tk. 2", 8 Tk. 1/2" & Hard Disk. Dig. Editing							
Fire Fly	M. Pollard/Band	Michael Pollard	CD/Editing & Mastering				
<b>Sound Around</b> Trevor Cronin (03) 9531 3891 Mobile Sound Studio, 2 to 80 tracks.							
Duncan Fry	D. Fry	Trevor Cronin	Radio Jingle (3AW)				
ATROPHY	Band	Trevor Cronin	Live Recording				
<b>Studio 52</b> Paul Higgins (03) 9417 7707 Studio A - 32 Tk. Studio B Adat 16 Tk							
Oxygen	Roger Clark	Trevor Carter	Mod. Jazz Album				

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# EDUCATION FEATURE:

## Technical Training

### INTRODUCTION

The Connections Education supplement has become a useful reference for those who wish to join the industry and for those looking to improve or update their skills in the many and varied aspects of entertainment technology. We have included as many courses here as possible that are relevant to these industries.

The courses listed are many and vary considerably in length, cost and depth of coverage. We must emphasise, Connections do not endorse any course, as with anything it is a case of 'buyer beware'. A course should, ideally, be accredited by a Vocational Education Training Accreditation Board. This means it has been independently assessed by a panel of industry specialists to ensure it provides the precise training needed for that vocation. There is no harm in asking prospective organisations if they have accreditation and may in fact determine how serious the course is. There is an Arts Training Office in each State who can help in this matter.

Courses from Universities, TAFES and Privately run colleges have been included. Some are full-time (up to three years), to short

courses lasting a few weeks. All have different entry requirements and we have listed these where possible. It is advisable to apply for your chosen course promptly as some schools operate on a 'first come first served' basis. Late applications may be possible for larger institutions and in most cases you will have to do this through the relevant State based agency or admissions centre.

### Other Possibilities

#### Community Colleges

These organisations also offer a range of technology arts related and vocational courses at varying skills' levels. Contact your local Community College for course outlines.

#### TAFES and Universities

We have detailed those institutions who responded to our general inquiry for information. It is advisable to contact your local TAFE and/or Universities who may run relevant industry training courses.

#### Professional Theatres and Organisations

Local and state based theatres may be prepared to take on trainees/secondments. Contact the Technical Manager in each.

### Some Points to Consider

- There are many courses available with varying closing dates. If you have missed out on a place in your desired institution there are still a number of private and occasional courses listed here whose closing dates are ongoing.

- Many large Schools, Institutes and Universities run short courses through the year at basic to advanced levels. Most are listed here. Your own research may discover others.

- Rule of thumb guides:

- Always research any industry you intend entering **before** being trained in it.

- The completion of a course will not guarantee entry to the industry and is not the only path.

- The oldest rule in the book: most good jobs are never advertised. Network, circulate, work for free if you can, and above all, keep your eyes wide open. This applies to all.

We have attempted a thorough survey here. If you have been left out or know of any courses that should be here, please drop us a line.

Good luck!

- Dan 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, multi-media. Artistic explorations in audio and electronic music.

Duration: 12 months

When: February 1997

Cost: HECS + Admin/Course levy.

#### Canberra Institute of Technology

GPO Box 826, Canberra ACT 2601  
T 06 207 3700 F 06 207 4829

Contact: Andrew McGuinness

- Diploma of Contemporary Music

> Five specialist streams, Studio Recording, MIDI Composition, Performance, Live Production, Music Business. Conducted in a purpose built facility, students work with current disk recording and editing technology. Other units taught include Financial Planning, Business Planning, Project Management and Recording Studio Management and Operation.

> Certificate IV in Contemporary Music granted after early exit after 1 year

Duration: 2 years F/T (Part Time study available)

Fee: Ranges between \$200 and \$720 per semester.

Application: By November 7. Entry with Certificate II in Contemporary Music or equivalent skills. Entry to Second year possible with advanced standing.

See the CIT also for Make Up, Rigging courses

#### Community Radio 2XX

PO Box 4 Canberra ACT 2601  
T 06 249 4512 F 06 062 465 560

> Various short workshops and courses relating to technical production skills including presentation.

Duration: Varied

When: Ongoing

#### NRS Training School

PO Box 68, Barker Centre, ACT 2603  
T 06 295 0162 F 06 295 9448

Contact: Sonia Cottee

- Certificate in Media Production and Communications

> Media public relations; occupational health; radio production; sound recording; video & TV production; audio production; radio and TV news and current affairs production; advanced video and TV production.

Duration: 6 Months F/T

When: February/July 1997

Fee: \$4995

- Video & Television Production

Duration: 4 weeks (F/T) 20 weeks (Part Time)

When: Every month (except Jan, April, June, Dec) 1996/1997

Fee: \$1395

- Advanced Video & Television Production

Duration: 10 weeks (P/T)

When: February, September 1997

Fee: \$640

- Introduction to Video Production

Duration: 10 weeks (P/T)

When: February, September 1997

Fee: \$495

- Television Stage and Special Effects Make-up

Duration: 10 weeks (P/T)

When: October 1996; March/June/October 1997

Cost: \$445

- Sound Recording

When: February, July 1997

Duration: 20 weeks (P/T)

Fee: \$1295

- Advanced Sound Recording

Duration: 10 weeks (P/T)

When: February, July 1997

Fee: \$640

- Live Sound Production

Duration: 10 weeks (P/T)

When: February, June, September 1997

Fee: \$445

- Radio & Television Announcer

Duration: 10 weeks (P/T)

When: February/May/August 1997

Fee: \$495

- Radio Announcer

Duration: 10 weeks (P/T)

When: February/May/August 1997

Fee: \$445

Application to all courses: Direct to School

#### University of Canberra

- Bachelor of Arts (Communications)

> Major units in Film, Video, Multi-media are offered as part of the undergraduate degree.

Cost: HECS + Admin/Course levy.

Application: Through UCAC by late September. Late applications through Oct/Nov.

#### Other Possibilities

#### Professional Theatres and Organisations

##### > Australian Performing Arts Centres Association

The APACA Project  
PO Box 396 Civic square ACT 2608  
T 06 241 6182, F 06 241 6743

Contact: Evol McLeod

- Certificate II

> APACA have developed a Live Theatre (technical) Traineeship program which incorporate on and off-the-job practical and theoretical learning in professional venues and organisations. A detailed training schedule has been devised and accredited and completion of the course units entitles the Certificate. This is a national scheme so contact APACA for your local area details.

#### Community Colleges

> Stirling College

Freemantle Drive Stirling ACT 2611

T 06 292 1573

F 06 292 8982

> Voice Training, Video ski Is

#### TAFES and Universities

> Australian National University

### NSW

#### Art & Technology College of Make Up

3 Myrtle St, Chippendale, NSW 2008

T 02 9698 1070 F 02 9319 1950

Contact: Course Co-ordinator

> The College offers five accredited courses for all aspects of make-up technology for television, film, video, theatre, ballet, opera, advertising,

fashion, special effects. Contact college for a full brochure.

- Associate Diploma of Make-Up Technology

> Subjects covered in this course include: Make-up Techniques, Application and Design, Special Effects Make-up, Casualty Simulation Make-up.

Duration: 2 years F/T

When: Early 1997

Fee: Contact School. An additional \$450 will be required for materials.

Application: Interview and entrance assessment with a practical make-up task.

#### APM Training Institute

33 Chandos St, St Leonards NSW 2065

T 02 9436 0155 F 02 9906 2625

Contact: Alan Kuczynski

- Marketing Diploma (Arts & Entertainment)

> Planning and marketing in the entertainment field including entertainment law and entertainment policy

Duration: 1 year P/T

When: Ongoing

Fee: \$3950 (discount for early enrolment)

- Marketing Diploma (Sports & Entertainment)

> Includes study of subjects; event management, financial skills, entertainment public relations (fundamentals, sport entertainment and the law. F/T or P/T.

Fee: \$9700 F/T, \$4500 P/T

#### APW Media Skills & Voice Training College

13 Calder Rd, Chippendale, NSW 2008

T 02 9310 2424 F 02 9310 1515

> Voice training for all aspects of announcing and public speaking.

Duration: 10 Weeks of 2x2 hour sessions.

When: Ongoing

Fee: \$650

#### Australian Film Television & Radio School

PO Box 126 North Ryde NSW 2113

T 02 805 6444 F 02 887 1030

Contact: Student Centre

> The School's full-time courses are run in NSW only and include:

- Film, Television and Digital Media.

> A 3 year program offering specialisation in: Cinematography, Design, directing, Sound, Digital Media, Editing, Producing, Scriptwriting.

Closing Date: 26 July for following year.

- Commercial Radio Course

Duration: 28 weeks, F/T.

> Emphasises the techniques of the on-air presenter and skills in production, news writing and presentation, interviewing and talkback.

Closing Date: 20 September

- Open Access

> For specialisation in an area of commercial broadcasting for people working in radio or with media background. Limited places.

- Short Courses:

> Various full-time courses available as well as AFRS conducts ongoing industry short courses across a wide range of media; radio, sound, TV, video. Aimed at people already working in the industry includes conferences, seminars, forums, work-

# EDUCATION FEATURE: Technical Training

## How I Got Started...

We asked some industry professionals at random how they got started. Here's what they said:

### Trevor Harrison, Sound Supervisor at Tracks Studio:

"I started out of school at the ABC in Melbourne, as what was then called TV and Radio Technician in Training. Every two years, the ABC used to have an intake of 20 trainees. I sat for an exam, with 400 other people, and luckily I came fifth, so I was in. That's how I started my career, and I've been in TV ever since."

### Geoff Squires: Lighting Designer and occasional writer for Connections:

Geoff's career in lighting began when he was acting as a Stage Manager for his school's Year 12 musical. "A light blew and I was the only one dumb enough to climb a ladder to change it. After school I was accepted into the technical course at BCAE/Kelvin Grove (now QET) on my second application. After 18 months I left the course to join Lightmoves as their Hire Assistant." Geoff now works as a freelance designer, mainly in theatre, and owns his own company Pro-nel.

**Peter James, Director of Photography** (as told by his mother) "Peter started at Supreme Sound, in Paddington straight from school. George Lowe was in charge, and took him under his wing. There was no film school then, so he learned the hard way. All the camera people used to go to Supreme."

### Belinda Lightfoot, Video, Graphics, and Film Producer at Wavelength:

"I did a year's course at AFTRS in Film and TV Production. I then went to work as a Production Assistant in a film production company."

**Chris Ford, Rigger for Pollard Productions:** "Initially I started in circus tours for Burnhams etc. It was through people I knew and I didn't have a ticket but things have changed now. It wasn't policed as much then. That is still a way in but the conditions and pay are not very good but good experience in all sorts of rigging. Practical experience counts whereas courses can only provide so much. I'd advise people to enrol in a course and then latch onto relevant people such as Pollards or Jands."

### Sarah de Jong, Music Composer for film and theatre:

"I did a three year course at Melbourne State College where I majored in music and drama. I wrote music for about 30 plays in three years. I taught for 6 months, and I hated it, and I left in order to write music. I met the writer Louis Nowra, and we started living together, and I started writing for his plays. After I'd done a couple of plays for him, peo-

shops, master classes course. Contact AFTRS for a full list. Upcoming:

- October
- Multimedia Scripting Development
  - Post-production for sound recordists
  - Introduction to 3D modelling and Animation

- November
- Radio Announcing and Presentation
  - Sound for Multimedia
  - Introduction to Radio Copywriting.

• Safety Report Writing, Animation techniques.

Fee: \$150 upwards.

- SummerSkill

> A series of seminars combining Q&A, lectures and screenings in various industry topics. Upcoming:

Producing for the Screen; Marketing & Distribution; The Director of Photography; Digital Film Effects; The Sound Designer. Contact AFTRS for full list.

Fee: \$50 per seminar.

- Operational Training

> The Sound Department offers operational training for the Harrison Series X, Fairlight MF2, ProTools, Sadie, Editron and Adams-Smith Synchronisers. By arrangement T 02 9805 6581

### Australian Theatre for Young People (ATYP)

The Wharf, Pier 4/5 Hickson Road, Walsh Bay, 2000

T 02 9251 3900 F 02 9251 3909

Contact: Nicole Hercus

- Workshops

> Designed to introduce young people to a wide range of theatre activities. Ages: from 2 years to 25 years.

> Some courses include Stage Management, Set & Costume Design, Acting, Musical Theatre.

When: Ongoing

Duration: Average 2 hours a week.

Fee: \$100-\$250.

### Charles Sturt University-Wagga

PO Box 588 Wagga Wagga NSW 2678

T 069 33 2589 F 069 33 2887

Contact: Ray Goodlass

- Bachelor of Arts (Design for Theatre and Television)

> Part of an undergraduate degree, the course provides practical training for areas of design, technical production, stage and production management in theatre and television.

Duration: 3 years

Application: Through UCAC by 27 September with late applications through Oct/Nov.

### Charles Sturt University - Bathurst

School of Communication Bathurst NSW 2795

T 063 38 4349 F 063 38 4409

- Bachelor of Arts (Communications)

> Covers the areas involved in mass media, print, broadcast journalism, theatre & media. Specialisations available in film & video, radio, theatre.

Duration: 3 years F/T

Application: Through UCAC by 27 September or late fees apply.

- Graduate Certificate and Diploma in Communication (Radio Broadcast-

ing)

> Aimed at graduates seeking entry-level qualifications in radio broadcasting and people already in broadcasting looking to improve practical and theoretical skills. In conjunction with ABC Radio.

Duration: 1 year F/T

Fee: Graduate Certificate: \$6,040; Graduate Diploma: \$12,080.

### Creative World

Level 2, 51 Walker Street, North Sydney, NSW 2060

T 02 9959 4993 F 02 9957 6031

> Courses for copywriting and producing for the advertising and broadcast industries including:

- Radio & Television Advertising

> Designed to train students in creative writing and production skills for radio and television. Hands-on experience is provided in the School's in-house audio-visual studio.

Duration: 22 weeks P/T

When: February & July 1997

Fee: \$ 2500

- The Copy School of Sydney

> An intensive course teaching skills of writing advertising copy. Topics covered Writing for Print, Press, Radio and Television and how to conceive and produce Campaignable Ideas.

Duration: 12 weeks

When: Feb./May/August

Fee: \$ 2000

### Film Make-Up Technology

43 Trafalgar Street, Annandale NSW 2038

T 02 9519 7049 F 02 9519 2836

Contact: Josie Knowland, Director.

> Professional training in film, television, character and special effects make up.

Duration: 1 year

When: Early 1997

Fee: \$6950

Application: By 30 November. Late applications considered.

### Illawarra Institute of Technology, Goulburn

Verner Street Goulburn 2580

T 048 231838 F 048 218 706

Contact: Dr Michael Barkl, Head of Music

> New Certificate and Diploma courses in Contemporary Music with strands in production, business and performance.

- Certificate II

> Suitable for year 10 leavers. Music production modules include: Operation of Live Sound Systems and MIDI Music Systems.

Duration: 6 months F/T

Fee: \$80

- Certificate III

> Suitable for year 10 leavers; as for Certificate II plus the Operation of Home Studio Systems

Duration: 1 year F/T

Fee: \$160

- Certificate IV

> Suitable for year 12 leavers; music production modules include the Operation of Lighting Equipment, Multitrack Recording Studio, MIDI, and Writing for the World Wide Web.

tion to video and multimedia, Music Business and the Web

Duration: 2 years F/T

Fee: \$510 per year

- Certificate II in Community Radio Broadcasting

> Open entry; theory and practice of radio production.

Duration: 6 months F/T

Fee: \$80

All courses Austudy approved. Applications late September. Late applications also accepted.

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

Level 3 Cooper St, Surry Hills, NSW 2010

T 02 281 8899 F 02 212 48C1

Contact: Claire Azzopardi, Director of Studies

- Certificate in Audio Engineering

> Structured for beginners in mind; MIDI, theory of sound, digital formats, 8 & 16 track recording studios. Duration: P/T 40 weeks, F/T 13 weeks

When: Early 1997

Fee: \$3500

- Certificate in Multimedia Production

> Designed for beginners in this field, subjects include DOS and Windows, Sound Cards, CD ROM, Graphics, Animation, Video Capture and Editing.

Duration: F/T 13 weeks, P/T 40 weeks

When: February

Fee: \$4000

- Advanced Certificate in Applied Audio

> 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 F/T

When: Contact School

Fee: \$3500

- Music Business Management - Advanced Certificate

Duration: 21 weeks F/T, 54 Weeks P/T

When: Contact School

Fee: \$3500

### KvB College of Visual Communication

99 Mount St North Sydney NSW

T 02 922 4278 F 02 922 7862

Contact: June London

- TV & Film Production Certificate IV

> Provides specific skills in all areas of video production, editing, camera techniques, lighting.

Duration: F/T 1 year, P/T 2 years.

When: February/March

Fee: F/T \$11,574; P/T \$5,388 (2nd Year \$5,728)

> Also available is a range of Diplomas, Certificates in graphic design and multimedia, photography.

- Multimedia Certificate IV (F/T and P/T)

Duration: 1 year

Fee: \$15,224

- Bachelor of Arts (Visual Communication)

Duration: 3 and 4 years

Fee: \$21,986 per year.

### Mask Make-up Studios

3rd Floor Citibank Arcade, 162 Church St. Parramatta, NSW 2150

T 02 9687 1097 F 02 9893 9458

Contact: Katherine Parkinson

- The Certificate IV of Film, Theatre, Fashion and Photographic Make-up

> An accredited course training students to be professional make-up artists in the arts industries.

Duration: 1 year

When: Ongoing

Fee: \$4250 F/T, \$3600 P/T

- Theatrical Make-up

> Provides knowledge and techniques for any theatrical production.

Duration: 10 weeks

Fee: \$790

- Special Effects and Casualty Make-up

> This course is designed for those wishing to gain specialised knowledge in creating characters and effects for film, television, video and theatre.

Duration: 9 Weeks

When: Ongoing

Fee: \$770

### Metro TV

PO Box 299 Paddington, NSW 2021

T 02 361 5318 F 02 361 5320

Contact: Jennifer David, Training Manager

> Metro has available a wide range of short courses in their training program including: Video Production, Camera and Lighting, Production Management, Audio Visual Non-Linear Editing, Proposal Writing, Location Sound. Metro also conducts courses for the Australian Film Television and Radio School.

Duration: From single days to weekly duration.

When: July-December 1996 (Jan-June 1997)

Fee: From \$15 per day for one-off seminars; up to \$680 for short technical courses. Discount on proof of Metro membership.

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: Course Co-ordinator

- Bachelor of Art in Stage Management

> Provides training in all aspects of stage management, as well as grounding in the crafts, sound and lighting, technical theatre, theatre administration and production management.

Duration: 3 years, F/T

- Bachelor of Art in Design

Duration: 3 years, F/T

- Associate Diploma of Dramatic Art in Theatre Crafts

> Provides basic training in all aspects of a specific craft area: either costumes, scenery or properties.

Duration: 2 Years, F/T

- Graduate Diploma of Dramatic Art in Production Management

> Aims to equip students with the necessary technical, administrative and managerial skills to gain employment as a production manager in a small theatre company and thereafter to advance to positions of greater responsibility

Duration: 1 year F/T

- Graduate Diploma of Dramatic Art in Voice Studies

# EDUCATION FEATURE: Technical Training

## How I Got Started....

ple just started asking me to do it."

### Toby Harding: Meryl Tankard's Lighting Designer

Toby was a student of the Technical Production course at the Victorian College of the Arts. The year after he graduated, Toby was working at the Adelaide Festival when Meryl Tankard's Dance Company was performing.

"As luck would have it, her Stage Manager left at that time and I was asked to take over, eventually starting to light some of Meryl's work." Toby is now Lighting Designer for the company.

### Gavan Swift: Theatre Lighting Designer

Gavan studied at NIDA where he met Roger Barratt who was teaching there at the time. Recognising talent, Roger employed Gavan to draw his plans and work on his show transfers whilst Gavan was still in his last year at NIDA. "As soon as I graduated from NIDA, I was employed as Roger's full time assistant. A short time later, Roger passed away and I took on some of his responsibilities." Gavan works from Chameleon and is currently doing *Little Shop of Horrors*.

### Ian Blackburn: Icon Systems Engineer

I was an electrician by trade and began as a crew hand at Brisbane's old Her Majesty's Theatre in the late seventies. By the early eighties I was touring and in 1985 worked for Cam Mac in Sydney. While I was there I did a Vari\*lite course and in 1994 left for Bytecraft to become their Icon specialist." He has just finished putting together an Icon rig for *Sunset Boulevard* and is currently in Singapore putting *Aida* together.

### Brian Thomson, Production Designer:

"After high school I studied architecture. I met the director, Jim Sharman in a hamburger bar. I was known as an artist. We did *As You Like It*, and that led to things like *Superstar*, and *The Rocky Horror Show*."

### Julius Grafton, Connections Editor:

"At school I saw this amazing valve audio console which was built into the top of a standard education department table by Bruce Jackson. Bruce and Phil Story had left the year before I started at Vaucluse Boys High School, they started Jands - J and S. I got terribly interested in audio and lighting for school plays, anything to avoid lessons. I got ejected from school because I was a miserable rebel, and learned about psychedelic lighting, hanging around the Arts Factory in Sydney. In my early days the music industry was going through unbelievable growth. No-one had any formal skills. Most of the people I worked with in live performance during the '70's and '80's have ended up in theatre, or broadcast, or product distribution. Work for free. I did!"

Duration: 1 year, F/T

Most Courses:

Fee: HECS + Admin/Course Levy.

Application: Direct to NIDA, folio, interview.

• NIDA Open Program Short Courses

Contact: Daniel Ballyntine

T 02 9697 7626

• Sydney Program: (Gen admission)

Upcoming courses include:

• Stage Management: 15 September

• Lighting Design: 10 November

> Full brochure now available.

• Summer Program:

> Held through January presents short courses in many aspects of technical theatre. Some courses include Lighting Design, Sound Design, Stage Management, Props and Mask making, Costume Arts, Scenic Art and Construction.

Duration: Normally 4 Sundays, 10am-4pm

Fee: Around \$260 each

### North Sydney College of TAFE

213 Pacific Highway, Gore Hill NSW 2065

T 02 9901 5000

F 02 9438 5768

Contact: Chris Mc Keith

• Film and Television: Production Techniques - Certificate

> Provides entry level training covering most areas of film and television production operations. F/T or P/T

Duration: 22 hrs/wk for 18 weeks/11 hrs/wk for 36 weeks.

• Film and Television Production Techniques - Advanced Certificate

> Provides further levels of training in all areas of film and television production operations, and allows for speciality training in Cinematography, Editing, Sound and Television. P/T

Duration: 10 hrs/wk for 72 weeks

Fee: \$85 Courses less than 1 year;

\$170 per year Certificate Courses;

\$530 per year for Associate Diploma Courses.

All courses: Austudy approved. Applications by September. Late applications may be accepted.

### SAE Technical College

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: Jason de Wilde

• Audio Engineer Program

> Gives a solid grounding in all aspects of studio and multimedia combining practice and theory.

Duration: 18 months part-time or 9 months full-time.

When: P/T, 19 February 1997, 20 August 1997

F/T March 12th, June 4th, Sept. 10th,

Dec. 3rd

Fee: \$6,695 (P/T), \$7,435 (F/T)

• Studio Sound Certificate

> 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.

Duration: 3 Months F/T, 6 Months P/T

When: P/T-March 12th, June 4th,

Sept. 10th, Dec.

F/T-February 19th, August 20th

Fee: \$2495 P/T, \$32785 F/T

• Advanced Music Production

> Offers additional studio experience in specialised areas. Guest lectures by international professionals.

Duration: 3 months P/T.

When: January 30th, April 2nd, June 25, August 20th.

Fee: \$1050

• Music Production Degree

> In association with Southern Cross University, Lismore. The Audio Engineer program is a pre-requisite for this course.

Duration: 12 months F/T

When: February 26th

Fee: \$9,400 (paid quarterly)

• Multimedia Producer

Duration: 12 months P/T

When: March 25th

Fee: \$5,800

Professional Training Also Available: MIDI Workshop, Live Sound Certificate, Studio Assistant, Hard Disk Course

Duration: 3 months

Fee: \$900 each

### Screen Production Academy

3A/491-493 Elizabeth Street, Surry Hills NSW 2010

T 02 9318 2727 F 02 93 0 1475

Contact: Brain Adams, Registrar

• TV Film Production Directing Certificate

> Media training for the television and film industry. Some subjects include: Camera Positioning & Shot

Composition, Production Management, Video Production, Documentary Making

Duration: 26 Sessions, 3 Mths P/T

When: March/September each year

Fee: \$1595

Application: Entry by interview.

### Southern Cross University

Lismore Campus

PO Box 157 Lismore NSW 2480

T 066 20 3000 F 066 22 1300

Contact: Student Enquiries

• Bachelor of Arts (Media Communications and Asian Studies)

> A 3 year course. Production and broadcast strands may be taken including radio, video, multimedia including professional placement.

Application: through UCAC by late September. Late appl. fees apply.

### Sydney Institute of Technology - TAFE

Mary Ann Street, Ultimo NSW 2007

T 02 9217 3400 F 02 9217 4032

Contact: James Black

> A new range of music technology and theatre technology courses have been devised and will be run in the new year. Some will be run at professional venues such as the Opera House. The range of courses available will include:

• Certificate II in Theatre and Venues - Technica

• Certificate III in Theatre and Venues - Technical Practices

• Certificate IV in Theatre and Venues - Sound

• Certificate IV in Theatre and Venues - Lighting

• Certificate IV in Theatre and Venues

- Stage Management • Certificate IV in Theatre and Venues - Audio/Visual • Diploma of Theatre and Venues - Technical Operations • Certificate I in Entertainment Industry Skills - Radio Video & Theatre

### Sydney Institute of Technology-TAFE

Building and Construction Faculty - Rigging Section

Cnr. Johnstone St & The Crescent, Annandale, NSW 2038

T 02 9568 0357 F 02 9217 4039

Contact: George Korbula

• Rigging Course

> Aims to provide skills and knowledge for all rigging levels. Subjects covered include Load Moving Preparation, Slinging and Gear Storage, Dogging Legislative Provisions, Load Placing. Includes TAFE and Partial WorkCover Assessment.

Duration: 160 hours

Fee: \$80. Admin cost.

Four courses available:

Dogging Skills, Rigging-Basic, Rigging-Intermediate, Rigging-Advanced

Duration: 40 hours each

### 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.

# PRODUCTION AND DESIGN

Australia's most comprehensive and dynamic performing arts institution is still taking applications from students wishing to enrol in our 3 year diploma courses in:

**Sound, Lighting, Set Construction, Costumes, Stage Management, Design, Venues Operations**

Production and Design students at the WA Academy of Performing Arts are able to see their work used in theatre, musical theatre, dance, classical, jazz and contemporary music performances.

For more information contact:  
James Hamilton, Admissions Officer, (09) 370 6594



WESTERN AUSTRALIAN  
ACADEMY OF  
PERFORMING ARTS  
EDITH COWAN UNIVERSITY

# EDUCATION FEATURE: Technical Training

## Other Important Tickets, Certificates, Permits

An important part of technology education often left unsaid is the realm of tickets and certificates. Now, if you are, or intend to become, a professional industry operative in either lighting or sound working in theatre, television, it is advantageous (to your cause) to have some or all of these official bits of paper:

### • 3A Truck License (light truck):

> 2 axles or up to 15t GVM (\*Once you have it is advisable to keep it a secret that you have it, as you will be asked to drive the truck, anyways.)

### • Senior First Aid Certificate.

> Available from St Johns Ambulance service in your state.

### • Class 1 Rigger's Ticket

> Also known as Rigger/Dogger Ticket. The Rigger's Ticket will be recognised in all states. A basic or Intermediate Rigger course is very handy for all types of rigging, climbing, safety issues if you don't want a full ticket. Contact your local TAFE for this. (See Brisbane TAFE or Annandale TAFE below as a guide). Once you have passed all requirements at college you can then apply for your Rigger's Ticket from the relevant WorkCover Branch.

### • Moving Platform Ticket

> For operating and occupying Cherry Pickers and other moving temporary platforms legally in venues. Again, a local TAFE for this.

### • Welding, Basic Electrical/electronic Skills

> Useful for basic to serious equipment maintenance/alteration. Your local TAFE can provide this.

### • Pyrotechnics Licence

> In NSW Sid Howard & Sons occasionally run a short course on safety and use of their pyrotechnics. Contact them to get on the list. Also, if you are responsible for pyrotechnics you may need a temporary permit available from either the pyrotechnics distributor or WorkCover. A separate licence is required for the use of Le Maitre brand pyrotechnics and is available from the distributor, Lightmoves.

### • Pyrotechnics Permit or Theatre Fire Persons Certificate

> Name varies per state. Only available from WorkCover. Two forms (NSW):

**Specific Permit:** For one off theatrical fire-works. Lasts the duration of event. (\$20)

**General Permit:** For longer durations. Can be permanent after application. Contact WorkCover Ernie Brent (NSW) T 9370 5203 or Phil Butt T 9370 5000

> A local theatre or hall may need to apply to the Health Inspector at the local council authority for permission.

Duration: 1 year F/T

When: February

Fee: \$4500 per semester (for Audio Engineering: all other majors \$3500)

• Bachelor of Music-Entertainment Management, Music Technology Major

Duration: 4 years F/T

Fee: \$4000 per semester

### The Flying Fruit Fly Circus

PO Box 479 Wodonga Victoria 3690  
609 Hovell Street, Albury, NSW 2640  
T 060 21 7044 F 060 21 7238

Contact: Denise Bourke

> Held in conjunction with the Wodonga Institute of TAFE.

• Certificate in Circus Instruction - Pilot Programme

> Some teaching modules include: Skill Acquisition and Kinesthetic, Training Methodology, Communication and Administration.

Fee: TAFE admin. costs.

Duration: 260 hours

### The Max Rowley Media Academy

Studios: "The Terrace", 241 Chalmers Street, Redfern NSW 2016

T 02 9918 8000 M 041 491 8800

> A range of media skills offered aimed towards placement in the professional broadcasting industry.

• Radio

> Major elements covered: Announcing, Research, Writing, Speech

• Television

> Presentation and Production Techniques

• Voice-Over

> Techniques and skills for all types of voice-over

• News

> For the Electronic Media including research and interviewing techniques.

Duration: From 1 hour private tuition to a term of 12 weeks.

Fee: Varies from \$80 to \$500+

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

Wilkinson Building NSW 2006

T 02 9351 2686 F 02 9351 3031

Contact: Fergus Fricke

> This postgraduate audio program aims to provide a broad range of audio education for the audio practitioner, complementing existing knowledge and experience. Courses available include:

• Graduate Diploma (Audio)

> Subjects include Acoustics, Electrics, Electronics, Electric-Acoustics, Loudspeaker Design, Audio Production and Multimedia. Extra-departmental electives can also be chosen.

Duration: 2 years P/T. 24 units of course work.

• Master of Design Science (Audio)

> Same structure of Grad. Dip. with extra course work (12 units) or thesis for an M.A. (Hons.)

Duration: 3 years P/T.

Fee: Contact Co-ordinator

Application: By Late November

Short courses sometimes offered, contact the School.

Specific contact: Ian Dash

• Graduate Certificate, Graduate Diploma and Master of Design Science (Illumination)

> Advanced programs designed to improve the quality of lighting design and produce good lighting designers with an interdisciplinary

background of knowledge.

> Lighting Design, Light Sources and Luminaires, Photometric and Colorimetric Concepts and Measurement, Vision & Visual Perception, Vision Field and Human Factors.

Duration: 3 years P/T.

Fee: Contact Co-ordinator

Application: By Late November

Specific Contact: Warren Julian

### The University of Sydney Union

Level 1, Wentworth Building, Sydney University, NSW 2006

T 02 9563 6032 F 02 9563 6029

Contact: John Buckmaster

> Short courses include: Documentary Making, Digital Editing, Introduction to Film Production, Advanced Film Making, Camera Grips, Steadicam Course, Script Writing, Audio Engineering, Audio Mixing for film Steadicam and Grips.

Duration: Usually six to seven sessions of 2 to 3 hours each

When: August/Sept. and ongoing  
Fee: Range 250-\$450. Discounts for Union Members, Unemployed

### University of Newcastle

University Drive, Callaghan, NSW 2308

Department of Drama

T 049 215 001 F 049 216 927

Contact: Joanne Taylor

> The University offers a Bachelor of Arts with majors in Drama and Drama production.

Application: Through UCAC by 27th September (late appli. possible)

### University of Western Sydney Nepean

PO Box 10 Kingswood NSW 2747

Faculty of Visual & Performing Arts  
T 047 360 280, F 047 360 464

• Bachelor of Arts (Performance)

> Major strands of technical skills including stage management, lighting, sound, property, production management, theatre administration. 3 yr. F/T

• Bachelor of Arts (Theatre Theory & Practice)

> Designed for critical analysis of issues in contemporary theatre; writing, theatre and community, teaching, directing, administration. 3 yrs F/T, 6 yrs P/T

Application: Through the Universities Admissions Centre (UAC) by 31 October.

### University of Wollongong

Faculty of Creative Arts

Northfields Avenue, Wollongong, NSW 2522

T 042 213 555F 042 213 301

Contact: Ms Olena

• Bachelor of Arts (Theatre)

> A 3 year undergraduate degree with majors studies in theatre production. Production components include stage management, lighting sound operation and design, rigging.

Fee: HECS + Admin/course levy.

Application: Through the Universities Admissions Centre (UAC) by 31 October.

### Other Possibilities

• Community Colleges

> Blacktown Community College, Eastern Suburbs Regional Evening College, Macquarie Evening College, St George & Sutherland Regional Evening College, Parramatta Regional Evening College, Workers Education Association (WEA).

• TAFE and Universities  
Macquarie University, Department of Media

New South Wales University and College of Fine Arts, Paddington campus

The University of Sydney, Sydney College of Art, Balmain campus  
The University of Technology, Sydney. Faculty of Humanities

• Professional Theatres and Organisations

> Local and state based theatres may be prepared to take on trainees/secondments. Contact the Technical Manager in each. For instance:

• Performance Space  
199 Cleveland Street, Redfern NSW T 9698 7235

Contact: Peter Heward, Technical Manager

> The Performance Space are open to graduates for secondment arrangements and sometimes offer workshops in Technical Theatre.

## NT

### Batchelor College

Post Office, Batchelor, NT 0845

T 089 376 256 F 08 8939 7117

Contact: Jenny Brandt

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# EDUCATION FEATURE: Technical Training

## SA

• Diploma of Applied Science - Broadcasting & Journalism

> College for indigenous and Torres Strait Islanders only. Currently teaching Radio. Prospective students need to be attached to an Indigenous Media Association, as much of the course work requires access to technical facilities.

> Units offered include: Media Law, Media Analysis, Researching for Media, News Writing, Production Techniques.

Duration: 3 years F/T

### Central Australian Aboriginal Media Association (CAAMA)

PO Box 2608 Northern Territory, 0871

T 08 8952 9202 F 08 8952 9212

Contact: Raelene Beale

> Courses run in Video Production and Technical Production for Broadcasting. Contact the Association for more details.

### Centralian College

PO Box 795 Alice Springs, NT 0871

T 08 8959 5211 F 08 8952 9856

Contact: Rod Moss (Arts Coord.)

> Video techniques and production taught. Other arts related subjects available also.

Application: Direct to the College.

### Darwin Theatre Company

T 08 8981 8424 F 08 8941 3222

Contact: Vanessa Hutching

> Some short courses in technical theatre are run during the year.

### Adelaide Institute of TAFE

Flinders Street School of Music

279 Flinders St, Adelaide

T 08 8223 4138 F 08 8232 0459

Contact: Marie McCormack

• Certificate 4 In Music Technology

> Units covered: Audic Music for Film and TV, Sound Engineering, Broadcasting, Radio, Video Production, MIDI, Software Design. P/T or F/T.

> The Music Technology Centre also offers short courses and workshops during the year.

Duration: 1 year F/T or 2 years P/T

When: 1st and 2nd Semester.

Fee: On application

Application: Through School, audition and AMEB Grade 5, AMEB Theory 4.

### Adelaide Institute of TAFE

Centre for the Performing Arts

101 Grote Street, Adelaide SA 5000

T 08 8231 5416 F 08 8231 8028

Contact: Maxine Le Guier

• Diploma of Arts (Technical Production)

> Designed to equip technicians, craft workers and stage managers with skills for employment as production staff in the arts and entertainment industry.

> Subjects: Scenic art, Props Making, Lighting, Sound, Stage Mechanics, Costume Making, Scenery Construction, Technical Drawing.

Year 1-Certificate in Technical Production

Year 2-Associate Diploma of Arts (Tech. Production)

Year 3-Diploma of Arts (Tech. Production)

Duration: 3 yrs F/T

Fee: \$550 per annum.

Application: Closing Date 18th October. Through SATAC.

Selection: By interview and presentation of a project.

• Technical Production (Named Skill)

> For those employed in the industry who have gained on-the-job skills in one area providing certification for skills already acquired, and providing additional and new skills.

> Subjects offered: Lighting, Sound, Stage Mechanics, Scenic Art, Set Construction, History, Industrial Relations.

Duration: 18 Months P/T over two calendar years.

Fee: \$550 per annum.

Application: Closing Date 18th October. Through SATAC.

Selection: By interview and presentation of a project.

• Diploma of Arts (Theatre Design)

> Training for performing arts, advertising, video, film and convention display work. Training in the realisation of visual concept suitable for use in multi disciplined industries

> Subjects: Technical Drawing, CAD, Production Design, Critical Studies, Workplace Training.

Duration: 3 yrs F/T

Fee: \$550 per annum

Application: Closing Date 18th October. Through SATAC

Selection: By interview and presentation of a project.

• Performing Arts (Certificate)

> An introductory course for further education and training. Will provide skills for FOH work in theatres, cinemas, entertainment centres.

> Subjects: Workplace safety, First Aid, Theatre Fire persons Certificate, Intro. to Production, Technical and Stage Management, History of Theatre.

Duration: One semester (580 hours)

Application: Through SATAC

• Advanced Certificate in Technical Production (Costume)

> A specialist course in costume construction

Duration: One semester (580 hours)

Selection: By interview and presentation of a project.

Application: Through SATAC

### Auscom Systems

1 Cuming St, Mile End SA 5031

T 018 803 705 F 08 8443 7535

Contact: Catherine Conway

> Associated with British group Insight Consultancy Services, offering various courses in the Asia/Pacific region in conference/workshop formats.

> Some subjects so far Fibre Optic Systems and Sensors, Modern Satellite Communications, Networks, Radio Communications.

Fee: Varied. \$2500 for five days

When: 1 to 2 per year.

### Australian Film Television &

### Radio School - South Australia

20 Princess Street, Adelaide SA 5000

T 08 8232 4266 F 08 8232 4210

Contact: Joy Stein

Short Courses: 1996-1997

October: Documentary Workshop

November: Writing the Low Budget Feature

February 1997: 16mm Camera Workshop

March 1997: Assistant Directors Seminar

April/May 1997: Videotape Operations Workshop

June 1997: Script Writing for Interactive Media.

Fee: \$150-600

### Big Sister Productions

2 Walter St, North Adelaide, SA 5006.

T 08 267 1990 MT 04 1614 6969

Contact: Abbey Gee,

> An ongoing school for DJs. Called Checkpoint Charlie, the course is an 8 week, 9 unit certificate course covering all aspects of DJing within the entertainment industry.

> Units covered: DJ Industry Studies, DJ Technology, DJ Performance, DJ Techniques, CD Deck Practice and Performance, Studio Sampling, Sequencing and MIDI, DJing & Radio, Promotion.

When: Ongoing

Fee: \$30 per session. 1 x week over 8 weeks.

### Flinders University of S.A.

Sturt Road, Bedford Park SA 5042

T 08 201 2727 F 08 201 2317

Contact: Course Adv ser

> Available in 1997 is a Bachelor of Performing Arts with majors in Theatre Administration, Film & Video Editing Production.

Duration: 3 yrs

Fee: HECS + Admin/course levy

Application: Through SATAC

### SAE Technical College

18-20 Deeds Rd,

Camden Park SA 5038

T 08 376 0991 F 08 376 1867

Contact: Michael Davison, Dean Edwards

> See NSW listing for full descriptions of courses and approximate pricing structure.

• Sound Certificate

Duration: 6 months, P/T

When: August 1996, February 1997

Fee: \$2000

• Audio Engineering Program

Duration: 9 months, F/T

When: March 1997

Fee: \$5600

• Audio Engineering Program

Duration: 18 months, P/T

When: August 1996, February 1997

Fee: \$5600

### The Channel Nine School of Video

Southern Television Corporation

202 Tynite Street, North Adelaide SA 5006

T 08 8267 0111

Email: neil@webmedia.com.au

Contact: Course Coordinator

• Video Course

> The course is designed to provide

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us!  
Listen to  
our  
students

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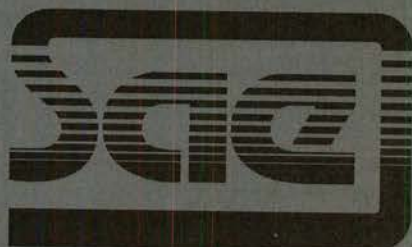
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HOBART 002-315 446 ADELAIDE 08 - 8376 0991  
AUCKLAND 09- 373 4712  
SINGAPORE 65- 741 1257

\* SAE is the ONLY audio course conducted in partnership with Southern Cross University with a guaranteed articulation towards a degree.



## Tom Lubin Talks Audio Training

Tom Lubin has recently accepted an appointment at the JMC Academy in Sydney, after battling a debilitating and mysterious illness which almost took his life. He won, and is on the road to 100% recovery. This is his overview of how the Academy fits into the scheme of things:

Competition in the music industry has always been keen, but tighter budgets have made it where everyone must pull their own weight from the very beginning of their employment. There is simply no room or money for trainees to be paid while they learn. Secondly, the technology has become so advanced that people can no longer learn by rote.

In even the "business" areas of promotion, marketing, and sales, the technology that is now universally used makes qualified training an essential prerequisite. Even those with a desire to pursue music production of performance need a foundation in music business practices and procedures.

As to the probability for graduates achieving success in the industry, unlike traditional organised industries, the music industry always has room at the bottom for up and comers with potential.

In the music industry it is common for people to move horizontally.

Someone who is an engineer may gain a reputation as a producer and as such won't be doing as much engineering, a producer might find that management roles are causing him/her to produce less acts and so someone else will be engineering or producing for them.

The business thrives on young talent and new ideas, it is built on it and driven by it and new people are constantly being given the chance providing they are competitively skilled. Young and successful is common in the music industry, but for a young person to steer themselves toward a lifetime career they must quickly develop advanced skills.

Will any given person be successful in the music production business? The foundation of a career is training.

Such training is available through the JMC Academy in Sydney, where I work. The Academy can be contacted at 02 9281-8899.

students with entry level knowledge to enable them to continue with further studies or enter into a career in the industry.

> Areas covered include: Camera Techniques, Lighting for Video, Sound Recording, Video Recording, Studio Workshop, Post Production, Editing, Script and Production, Legal Aspects. There are no prerequisites. Students should be 16 years of age or older.

Duration: 12 weeks P/T or 1 week F/T  
When: Ongoing  
Fee: \$970

### The University of Adelaide

Performing Arts Technology Unit  
South Australia 5005  
T 08 8303 3799

• Graduate Diploma in Digital Arts  
> Trains students in the creative use of new technology in the arts. The course is intended to provide students with the theoretical understanding and practical skills to use digital technology at an advanced level.

Duration: 1 year  
Application: From the School. Prerequisites: B Mus.

### University of South Australia

School of Communications, Magill Campus  
T 08 8302 4424

Contact: Ian Dinning  
• Graduate Certificate in Communication (Media Production)

> The course consists of operation of production and post production equipment; sound equipment, video, multimedia and sound production; identification of appropriate media forms and technologies for specific audiences and projects, standards and contexts.

Duration: 1 year P/T  
Fee: In the vicinity of \$2900  
Application: Contact the School. Entry Requirement: Graduate Degree in any discipline.

### University Radio 5UV

228 North Terrace Adelaide SA 5000  
T 08 303 5000 F 08 303 4374

Contact: Deborah Welch  
• Graduate Diploma in Radio Broadcasting

> Offered in conjunction with the Faculty of Performing Arts, University of Adelaide.

Duration: 1 year, F/T  
Fee: \$5904  
Entry Requirement: Graduate Degree in any discipline.

• Graduate Certificate in Communication (Radio Broadcasting and Production)

> Offered in conjunction with the School of Communication and Information Studies, University of South Australia.

Duration: 6 months, F/T  
Fee: \$2900  
Entry Requirement: Graduate Degree in any discipline.

• Certificate II in Community Radio Broadcasting

> 5UV has run this course in conjunction with the New Work Opportunities Project in 1996 and plans to continue with funds from the Diverse Market Funding Program.

Duration: 270 Hours (nominal)  
Fee: \$150

• Module: Basic Radio Broadcasting

> Currently running as a Professional Extension subject within the Certificate IV in Music Technology at the Filders St. School of Music (Adelaide Institute of TAFE). To be accredited as an ongoing subject.

Duration: 20 Hours

• Module: Radio Broadcasting-Studio Operation  
> A core Module as part of the Certificate II in Advanced Microphone Techniques and Voice Production, run by the Kathryn Dean School of Media and Performing Arts (part of Peacock Academy Training).

Currently being accredited as a Nationally recognised module.

Duration: 25 Hour (nominal)

• Radio Broadcasting- Live to Air Presentation  
> A core module as part of the Certificate II in Advanced Microphone Techniques and Voice Production, run by the Kathryn Dean School of Media and Performing Arts (part of Peacock Academy Training).

Currently being accredited as a nationally recognised module.

Duration: 25 hours (nominal)

• Australian Ethnic Radio Training Program

> Nationally accredited at Certificate IV level.

Also available:  
Volunteers Training: 5UV Basic Radio Training

> Units in Presenting, Technical Operation, Broadcast law and ethics

Duration: 30 hours

Fee: \$10/70 (concession)

**Vaughan Harvey Radio School**  
3rd Floor, Epworth Building, 33 Pirie Street Adelaide  
T/F 08 8231 3087

• Radio Course

> Covers all aspects of radio with an emphasis on voice and presentation techniques. Other areas include Studio Operation, Interviewing, Production Techniques. Assistance also given in resume, auditions and job location.

Duration: 12 weeks  
When: Each Feb, June, Sept.  
Fee: \$600

• Advertising Copy

> Designed to provide writing skills for advertising copy as used in all aspects of media and broadcasting.

Duration: 10 weeks  
When: Each Feb, June, Sept.  
Fee: \$500

**TAS**  
**Australian Film Television and Radio School - Tasmania**

77 Salamanca Place, Hobart 7000  
T 002 23 8703 F 002 23 8703

Contact: Jane Brown

> A range of short courses and seminars are held during the year for industry professionals and those interested in upgrading their skills in the film, television, radio and multimedia industries. Upcoming:

November:

• Multimedia Scripting Development  
Duration: 2 days

Fee: \$320 or \$550 for full week

• Multimedia Project Development  
Duration: 3 days  
Fee: \$350 or \$550 for full week.

**Hobart Institute of TAFE**  
Advanced Studies Section, Clarence Campus

Bounty Street, Warrane TAS  
T 03 6233 7378

• Rigger  
> An award for vocational studies is granted. Provides knowledge and practical skills on Regulations Safety and Dogman and Rigger Operations.

The Rigging course comprises eight subjects from Working at Heights, Cranes to Gin Poles, Shear Legs, plus six units from the Dogan course such as Selecting Slings, Chain, Wire Rope and Fibre Rope.

Duration: P/T  
Fee: On Application  
When: Enrolments in February of each year.

**Launceston Institute of TAFE**  
PO Box 1308, Launceston Tasmania, 7250

Contact: David Blanch (coord.) T 003 36 4305 F 003 34 2528

• Advanced Certificate in Sound Production

> The course aims to provide training for sound engineers in recording studios, live sound recording and sound reinforcement as well as other areas requiring audio production su

# MUSIC INDUSTRY CAREERS



## JMC Academy

All courses are VETAB & ACPET accredited, AUSTUDY/ABSTUDY approved and CRICOS registered.

Some programs lead to advanced standing at SYDNEY UNIVERSITY and Southern Cross University.

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This Education Feature is on the Connections Internet site all year... and will appear revised in Connections next September.

Visit: [www.conpub.com.au](http://www.conpub.com.au)

# EDUCATION FEATURE: Technical Training

ch as theatre, television, film and radio.

> Subjects range from Electrical and Electronic Theory, Monitoring, Signal Processors to Mix down and Live Mixing.

Duration: 1 year F/T (P/T available)

When: February

Fee: \$390 + \$100 for text books.

Application: Selection of applicants by interview.

## Mummers Theatre Company, Hobart

GPO Box 1111 Hobart, 7000  
T 03 6223 6840 F 03 6231 1996  
Contact: Robyn Roylance

> Short courses in technical theatre occasionally run during the year.

## SAE Technical College - North Hobart

T 03 6231 5446

Contact: Dean Preston

• Audio Engineer Program

> Provides a solid grounding in all aspects of studio and multimedia combining practice and theory.

When: September/March

Duration: 9 months F/T

Fee: \$3715

• Studio Sound Certificate

> Suited to studio assistants, home studio owners and professionals who require more technical skills or information. Split into monthly modules and covers MIDI, Mixdown Procedures, Live Sound to Copyright and Job Preparation.

When: October/February

Duration: 24 Weeks P/T

Fee: \$960

• Advanced Music Production

> Offers additional studio experience in specialised areas. Guest lectures by international professionals.

When: February

Duration: 3 months P/T

Fee: \$975

## TTT Radio Academy

Inferno Promotions  
75 Liverpool Street, Hobart 7000

T: 002241009 F002343030  
Contact: David Counsell

> The core of the course focuses on the technique of broadcasting. Emphasis is placed on the role of the announcer and many aspects of the industry are covered. Particular attention is paid to practical skills. Conducted at TTT FM.

> 51 sessions including: The Internal Structure of a Radio Station, Writing For Radio, Production Technical, Research and Ratings, Radio News, Audition Tape.

When: The course is circular so you can join the program anytime.

Fee: \$35 per night (\$50 for the first week including cost of manual)

Duration: 1 year, 1 session per week, 3-4 hours each.

## University of Tasmania

Centre for Performing Arts  
PO Box 1214, Launceston  
T 003 24 3599

• Associate Diploma - Drama

• BA Performing Arts

> Undergraduate and Post Graduate studies available in the arts, media studies. Contact student adviser for specific course inquiries.

Also Film and Video Studies available at the Sandy Bay Campus. T 002 20 2543

## QLD

### Academy of Film-Video Production

PO Box 611

Spring Hill QLD 4004

T 073 831 5193 F 073 3832 7512

Contact: Brian Benson

• Film-Video Production Course

> Offers training in the theory and technique of all aspects of film and video production. Practically oriented with a wide range of professional equipment available for students' use. Two levels: Intermediate and Advanced

Duration: 40 weeks

When: February

Fee: \$3200 plus \$120 registration

## Australian Film Television & Radio School - Queensland.

PO Box 370, Newfarm QLD 4005  
T 07 3254 0212

Contact: Julie Keenan

Short Courses

> A range of short courses and seminars are held during the year for industry professionals and those interested in upgrading their skills in the film, television, radio and multimedia industries. Upcoming:

October 4. The Making of *The Beat Manifesto*.

December 16. The Development of *Hot House* - Producer.

## Brisbane Institute of TAFE

Ithaca Campus

Locked Bag 1 0, Kelvin Grove, Q 4059

T 07 3259 9000 F 07 3255 9040

• Rigger/Dogger

> A three stage course. Once you have the Advanced Rigging Certificate you can apply for the Occupational Health and Safety Ticket from WorkCover

> Application of slinging techniques, selection and inspection of lifting gear, directing of the crane/hoist operator in the movement of the load. Designed to meet the requirements of the National Occupational Health & Safety Commissions Certification Standards.

• Basic Rigging and Dogging

Duration: Total of 40 hours, 8.00am

- 4.45pm

Fee: \$700

• Intermediate Rigging

Duration: Total of 16 hours, 8.00am

- 4.45pm

Fee: \$300

• Advanced Rigging

Duration: Total of 16 hours, 8.00am

- 4.45pm

Fee: \$350

Starting Date:

Courses are provided to meet demand. Approximately 3 times per year, usually February, August and November. Dutton Park Campus.

Application: Through the Institute.

## 4ZZZ FM

PO Box 509, Fortitude Valley, QLD 4006

T 07 3252 1555

Contact: Volunteer coordinator

> Various short workshops and short courses relating to technical production skills of radio broadcast including presentation.

Duration: Varied

When: Ongoing

## Gold Coast Media Centre

Unit 2/24 Expo Court, Southport QLD 4215

T 07 55 711 400 F 07 55 270 733

Contact: Richard Hulston

> The Gold Coast Media Centre provides several courses in both part and full time and certificate and diploma grades. In conjunction with Griffith University, Gold Coast University College Faculty of Education and the Arts.

> Courses include: Certificate and Diploma courses in Audio Engineering, Music Technology, Film & Television Music and Sound, Video & Film Production and Directing. Further information to be confirmed.

## Griffith University

Queensland Conservatorium of Music

PO Box 3428 South Brisbane, Q 4101

T 07 3875 6202

• Bachelor of Music Sonology

> Equips those looking for qualifications and experience for careers in audio, music and multimedia industries.

> Subjects: Audio Engineering Techniques, Audio Recording Techniques, Applied Acoustics, Sound Reinforcement, MIDI concepts

Duration: 3yrs F/T

Fee: HECS + Admin/course levy

Application: To the University and Queensland Tertiary Admissions Centre (QTAC) by 2nd August. Possible late applications.

## A Beginning in The Theatre Industry

The Diploma of Arts - Small Companies and Theatre Course from the Northern Melbourne Institute of TAFE is suited for people who have established an interest in the theatre, yet are unsure exactly where their interest lies. A recent graduate Katrine Gabb describes the course and her future prospects for here.

"I found the course invaluable in providing a wide view of the theatre industry. I gained experience in lighting, sound, stage management, performance styles, theatre history and much more. The skills that I was introduced to at the Northern Institute have helped me to gain an understanding of the theatre and the many facets that make up a production.



Katrine Gabb

"I now work as a stage manager, production manager and lighting technician - and also teach drama to groups of people with intellectual disabilities as well as teaching stage management and basic lighting. In the future, I plan to further my study in specific areas such as directing or animating.

## Sydney Institute of Technology Offers.....

### Short Computer Aided Drafting (CAD) & Modelmaking Courses

CAD Courses are 36hrs duration and classes are conducted both day & evening. They are available in:

AutoCAD \* MiniCAD \* ArchiCAD

The *Modelmaking Course* is suitable for Set Designers, is 28hrs duration and conducted over 3 days.

Rigging and Scaffolding courses are available for those associated with set building.



**For more information**  
Short Course Co-ordinator  
Sydney Institute of Technology  
Ph: (02) 9217 4170 Fax: (02) 9217 4018



# EDUCATION FEATURE: Technical Training

## CREWING AGENCIES

Where they brew up fresh crew

When young people call Connections asking how to get a start in the industry, they usually get put on hold. Because sometimes we're busy. And they need to adjust to being patient!

We always tell them that there are two good ways to learn more about entertainment technology. The first is work experience at a production or theatre company, the second is to work as a loader and stagehand.

United Crewing Services are one of the crewing agencies who will take new crew. They have certain criteria they assess an applicant on, and I won't divulge that here. But the primary consideration is promptness and physical fitness.

Scott McDougall at United says the firm is just now heading into its busiest period, and it has crews working on film shoots, theatre show load in's, concerts, and even moving the Jands factory.

A new employee could expect to be hired for a three hour call, which would be an assessment session. Generally loading work is tough but manageable. It is a team effort, where safety comes first. There is no barrier, females can do it too provided they are fit.

Typically a crew will be directed to work for a department on a show. It is a good environment to learn, because you see a stage, a lighting system or a sound system built from the ground up.

If treated as healthy exercise and educational, it is an ideal stepping stone. As Scott says, "I see some of my crew get work at major production companies .... they get their eye on them and away they go". United work for all the major tour promoters too.

United Crewing: call Scott on (02) 9662-1175, or the national office on 074 433-099.

## Be Your Best/Live over Lunch

The Contemporary Music Department at the Canberra Institute of Technology (CIT) recently co-ordinated a month-long series of all ages shows in 17 different venues around Canberra. Lunchtime shows in Secondary colleges were followed up with nighttime shows at youth centres.

Greg Williams of Audio Acoustics who supplied all the production for the tour said *Live Over Lunch* was a 'damn good idea - it breaks the monotony for kids at school'. Greg added further, "They really enjoy it, nobody is putting on all ages shows, and most of these bands were too young for licensed venues. Some of them were better than most bands touring."

Ben Kilsby is one young technical assistant on the shows worth mentioning. He has been

(continued p113)

### Griffith University

Pacific School of Screen Production  
Nathan, QLD 4111  
T 07 3875 7700

Email: J.Mitchell@hum.gu.edu.au

- Bachelor of Screen Production
- Bachelor of Screen Production (Animation)
- Bachelor of Multimedia

> Located at the Queensland College of Art, the School offers a full spectrum of facilities and courses taught by industry professionals.

> Provides specialist studies in various aspects of film and television production, focusing on film history, technical background and skills. A folio is required for the Bachelor of Screen Production (Animation)

Application: Through QTAC

Duration: 3 Years F/T

Fee: HECS + Admin/course levy

### James Cooke University

Townsville

Contact: (General) T 077 814111

(Specific) Ian Cole, Director of Technical Theatre T 077 814 662

> A Bachelor of Theatre degree is available. All aspects of technical theatre are covered from Wardrobe, Scenery, Lighting, Sound, Rigging, Production Management.

Duration: 3 years, F/T

When: Feb/March 1997

Fee: HECS + Admin/course levy

Application: Through QTAC by late September with possible late application through Oct/Nov. Interview and folio.

### SouthBank Institute of TAFE

Locked Bag 14, South Brisbane, QLD 4101

T 07 3244 5000, F 07 3846 1337

Contact: Lisa McDuff

- Certificate IV in Contemporary Music (Performance/Sound Engineering)

> The centre is equipped with a 24 track, MIDI laboratory including current digital equipment. Subjects from music law to live sound are offered.

Duration: 12 months F/T

When: January intake closes October, July intake closes May.

Fee: \$653.00

Application: Direct to Southbank. Auditions apply.

### SAE College of Technology

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 and timetable. See main entry under NSW for course details.

### The Channel Nine Video School

PO Box 72, Brisbane QLD 4001  
T 07 3214 9999

Contact: Marc Tewksbury

- The Video Production Course

> The course provides an overview of video production with a leaning towards television. The course is taught from a commercial production viewpoint aimed at video production in the workplace. Catering for both the enthusiast and the professional.

Duration: 12 weeks (36 hours), P/T

When: Throughout the year.

Fee: \$970

### • The Presenter's Course

> Skills for the craft of presenting. Speech and Movement are covered in depth. Other topics include Articulation, Tone, Resonance, Pitch, Projection, Autocue Reading, On-camera Techniques.

Duration: 5 weeks (30 hours), P/T

When: Throughout the year

Fee: \$865

Other courses held throughout the year:

- Advanced Camera Techniques, Editing Workshop, Scriptwriting Course, Directors and Producers Workshop, Camera and Audio Assistant Workshop, Lighting Workshop.

### Queensland School of Film and Television

PO Box 380, Fortitude Valley Qld, 4006

T 07 3257 1939 F 07 3257 1947

Contact: Heather Dickson (Director: Lester Crombie)

- Diploma of Film & Television

> This private school also offers a six-week intensive course and one-year and three-year film and television courses.

> Some areas covered include: Editing Film & Video, Principle of Photography, Introduction to Cinematography, Introduction to Sound, Post Production, TV Commercial Production.

Duration: 2 years, 4 Semesters F/T (P/T available)

When: March 1997

Fee: \$950 per unit; \$3800 per semester. May be eligible for Austudy

Application: Direct to School. Applicants should have completed secondary studies, and may be required to attend an interview. Folio work advisable.

### University of Southern Queensland

Department of Theatre

Faculty of Arts

Toowoomba, QLD 4350

Contact: Michael Morell (course coord.) T 076 312 128 F 076 311 855

- Stage Management Course

> Along with training in all aspects of technical theatre the course offers specialist training in rehearsal room and performance procedures and practical experience in production and company management.

Duration: 3 years

Fee: HECS + Admin/course levy

Application: Through QTAC by late Sept. Late applications may be possible. Interview and folio presentation.

### Vandersound Audio Engineering & Multimedia School

202 Hein Rd Buccan, Brisbane, QLD 4207

T 07 3806 8100 F 07 5546 8866

M 015 73 7979

Contact: Eric Vandersound

- Audio Engineering Advanced Certificate

> One to one hands on audio engineering with subjects such as Audio Basics, Recording Techniques, MIDI Sequencing, Live & Studio Mixing and Mastering. VETEC approved.

Duration: 6 weeks F/T or 21 weeks P/T.

When: On application

Fee: \$1990 F/T, \$2340 P/T (Includes

assignments and text books)

- Interactive Multimedia Certificate

> Includes study in the areas of; Multimedia & Internet Concepts, Web page Authoring, CD-Rom Mastering, Video & Audio Capture & Editing.

Duration: Duration: 6 weeks F/T or 21 weeks P/T.

When: January

Fee: \$1405 F/T, \$1655 P/T (Includes assignments and text books)

### Other Possibilities

### TAFES and Universities

Moreton College of TAFE — T 07 3826 8322

Queensland University of Technology, Academy of the Arts. T 073864 5998

## VIC

### 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.

Duration: 8 weeks

When: 2 courses per year. Next: February 1997. Classes; Wednesdays 6-9pm

Fee: \$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  
Fee: \$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.

Duration: 12 weeks, one 3 hour class per week

When: February/August

Fee: \$400

- Visual Diploma

> Designed to develop creative students in professional fields of video and film production

Duration: 45 weeks

When: February/August each year.

Fee: \$260 per month.

### Australian Film Television & Radio School - Melbourne

PO Box 1008, South Melbourne, VIC 3198

T 03 9690 7111

Contact: Lara Richardson

> A range of short courses and seminars are held during each year for industry professionals and those interested in upgrading their skills in the film, television, radio and multimedia industries.

### C'est Ca Audio Visual Services

PO Box 319

Fitzroy VIC 3065

T 03 419 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.

Duration: 10 weeks.

When: Flexible. February usually.

Fee: \$2500

### Melbourne Radio School

Suite 5, Ground Level, 320 St Kilda Road, Melbourne 3004

T 03 9696 7400 F 03 9696 6533

Contact: Gary Mac

- Radio Course

> Designed to improve communication skills, production skills, on-air ability.

> Aspects covered include: Announcing, Radio News, Copywriting, Equipment, Job Application. Seminars are presented by industry professionals.

Duration: Over a fifteen-week period

When: On-going. Next Course, 30th September.

Fee: \$840

### Northern Melbourne Institute of TAFE

School of Arts and Social Sciences  
77-91 St Georges Road, Preston, Victoria 3072

T 03 9270 1200 F 03 9270 1202

Contact: Peter Goodwin

- Advanced Certificate in Sound Production

> Held at the Collingwood campus, the course aims to provide students with specific skills appropriate to the recording and sound production industry.

Duration: F/T, 1 year, 17 hours per week (approx)

When: February 1997

Fee: \$550 (approx)

- Advanced Certificate in Theatre Technology - Stage Management

> Aims to provide training in a wide range of skills and prepare students for employment as a technical theatre worker. Selected modules are available for those already working in the industry who wish to increase their level of competency in specific areas.

Duration: F/T 1 year, 17 hours per week.

Fee: \$550.

- Associate Diploma of Arts - Theatre Technology (Electrics)

> Provides training in streams of stage management and stage electrics.

Duration: F/T 2 years, 30 hours per week (approx).

Fee: \$550 (approx)

Applications: Through VTAC by 27th September or late applications through Oct/Nov. An additional interview is required for Stage Management and Theatre Technology.

Also available:

- Advanced Certificate in Corporate Video Production

- Advanced Certificate in Music Business Management

- Diploma of Arts - Small Companies and Community Theatre

# EDUCATION FEATURE: Technical Training

## Open Channel

Co-operative Ltd  
13 Victoria St,  
Fitzroy VIC 3065  
T 03 9419 5111 F 03 9419 1404  
Contact: Jane Kiddell

- Certificate of Video Production

> Covers hi-band and lo-band equipment and production techniques, video processes using single camera.

Duration: 14 weeks F/T  
When: early 1997

Fee: \$3000

- Short Courses

> Available over the year. Some subjects include: Video, Screenwriting, Production Management, Location Sound Recording, Camera and Lighting, AVID Media 100.

Fee: From \$230-\$640; less for members of Open Channel Co-op.

Coming up:

- Sound Effects Workshop: October 4 and 5. \$120
- Basic Video Editing: November 22, 23, 24 and December 6. \$350.

## 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. STB accredited; Austudy approved. Twenty week part-time course also available.

Duration: 4 terms of 10 weeks, 21 hours per week

When: February/July

Fee: \$7680 F/T (paid in instalments)

Also available:

- Recording and Live Sound Course

Duration: 7 weeks  
Fee: Recording \$595, Live Sound \$495

## Royal Melbourne Institute of Technology (RMIT)

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.

Duration: Three years, 40 weeks total.

When: Early 1997

Fee: \$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

When: February 1997.

Application: Through VTAC. F/T Closing date 27 September 1996 Possible late application. P/T closing date 31 October.

Also available from the Faculty of Art and Design:

- Intro. to Audio Production

- Producing Your Own Audio Demo Tape
- Single Camera Video Production
- Technology for Video Production

Contact the Short Course Unit:  
T 03 9660 4100

## Royal Melbourne Institute of Technology (RMIT)

Department of Visual Communication  
City campus GPO Box 2467v Vic 3000  
T 03 9660 2240 F 03 9660 3809

- Bachelor of Arts in Media Arts

> Covers a wide range of media skills with specialisations in computer animation, sound design, film and video, interactive text/audio, multimedia.

Duration: 3 years F/T 6 years P/T

Cost: HECS + Admin/course levy.

Application: Through VTAC by September 27. Late applications possible.

## SAE Technical College

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 8132

Contact: Ken Pell

Basic Audio Course

> With an emphasis on live applications; suitable for beginners and industry people.

Duration: 16 weeks  
When: February/April/June/August/October each year

Fee: \$75 per class.

## Swinburne University of Technology, TAFE Division

Prahran Campus  
140 High Street, Prahran 3181  
T 03 9214 6937 F 03 9525 2718

Arts Department  
Contact: Folián Kalaitzis

- Associate Diploma of Arts-Visual Arts (Film & Multimedia)

> Directed towards visual artists intending to make film, video & multimedia productions. Aims to develop vocation skills in film video industry.

Duration: 2 years F/T

- Certificate in Commercial Radio

> Specific instruction in all aspects of broadcasting. Access to radio studios and production facilities.

Duration: 7 months P/T.

- Associate Diploma of Arts: Theatre Technology (Costume)

> Training in the area of costume and related fields combining practical studies and work placements.

Duration: 2 years F/T.

Other courses:

- Diploma of Arts: Small Companies and Community Theatre

> Provides skills necessary to organise performance events, projects and related administration.

Duration: 2 years F/T

Fees: HECS + Admin/course levy.  
Applications: Swinburne and VTAC. Interview and additional material may

also be required. By late September or late application through Oct/Nov.  
Showbiz Performing Arts Courses:  
Voice Over: October 16-13 Nov. \$255  
Lighting: August 5-16. \$195  
Sound: October 17-7 Nov. \$335

## Victorian College of the Arts

School of Film & Television  
234 St Kilda Road Melbourne 3004  
T 03 9685 9000, F 03 9685 9001

- Bachelor of Film and Television (VCA)

Duration: 3 years, F/T

- Graduate Diploma in Film and Television (VCA)

Duration: 1 year F/T.

> Trains students to make motion picture programs of a high artistic, technical and professional level.

Emphasis placed on screen writing, direction and editing.

Fee: HECS + Admin/course levy.

Application: Through the School plus interview/Portfolio presentation. Selection is August through December each year.

## Other Possibilities

### Community Colleges

Council of Adult Education — T 03 9652 0611

### TAFES and Universities

The following may run related courses/subjects:

Ballarat TAFE  
Ballarat University College

Box Hill College  
Gordon Institute of TAFE — T 052 25 0801

The School of Mines and Industries (TAFE) — T 053 27 8000

Western Metropolitan of TAFE — T 03 9284 8888 Wangaratta Institute of TAFE — T 057 21 0111

University of Ballarat — T 053 27 9000

Victorian University of Technology  
University of Melbourne — T 03 9344 4000

Deakin University — T 03 244 7100  
La Trobe University — T 03 9479 1993

### Professional Theatres and Organisations

#### Ausmusic

PO Box 307 Port Melbourne VIC 3207

T 03 9696 2422 F 03 9696 2879  
http://ausmusic.org.au

> Ausmusic is an ongoing industry resource and facilitates professional and entry level education. Some Ausmusic activities include:

- Designed courses that have been nationally accredited and are taught in TAFES, Schools, and Colleges Australia Wide. Some include:

- Certificate II - Music Industry (entry level skills from technical to performance)

- Certificate IV in Music (Intermediate-Advanced)

A Diploma in Music (Business) is proposed for 1997. Industry attachments are also available.

- There are education resources also available for those teaching in the area or for those looking for supplementary information. Subjects range from Video, Audio Engineering, Audio Visual techniques. All can be accessed at their internet site.

- Also of interest here is the Virtual P.A., an interactive education designed by John Archer of Hunters & Collectors.

## WA

### The Academy of Radio

PO Box 8319, Perth Business Centre, WA 6849  
T 09 227 9905 F 09 227 9925

Contact: Phil Youd

- Certificate III

> A course designed for multi skillling: Announcing, Production, Radio Sales, Newsreading, Current Affairs. Work experience is arranged at regional and city commercial radio stations. Accredited and Austudy approved.

Duration: 6 months, F/T

When: January/July

Fee: \$3000

Application: Entry by audition and interview. Nov/Dec for January; May/June for July

### Australian Film Television & Radio School - Western Australia

C/O Reel Image  
3/24 Thorogood St, Victoria Park WA 6100  
T 09 470 5330 F 09 362 5500

Contact: Brian Beaton

- Short Courses Upcoming:

November 1996:

- Film and TV Production Secretary

April 1997:

- Negotiation and Management of

employed by Greg for the past 18 months, and was also responsible with Donelle Greenwood for the hands-on organisation of *Live Over Lunch*. Ben is an excellent example of the kind of get up and go that can be found amongst the young people in the Music Industry in Canberra. Since dropping out of school in 1994 and obtaining casual work with Greg Williams he has worked on production for shows such as Salt'n'Pepe, Cliff Richard, James Blundell, Torvill and Dean and Joan Armatrading. Ben sees himself making a gradual shift into tour promotion and management over the next 5 years.

According to Andrew McGuiness, from the Canberra Institute of Technology, the Diploma of Contemporary Music at CIT is designed for people who, like Ben, know that they want to be in the music industry and have the energy to make it happen.

- CIT Contemporary Music, Ph. 0411 462 497

## TECHNICAL BOOKS

Connections offers more than 50 technical books, with student / course discounts. See our netsite, [www.conpub.com.au](http://www.conpub.com.au) or our Catalogue in most issues of this magazine.

Alternative: call 1-800-635-514 and ask us to mail you a copy of the book Catalogue.



## UNIVERSITY OF SYDNEY

DEPT OF ARCHITECTURAL & DESIGN SCIENCE

## GRADUATE AUDIO PROGRAM



### FREE INFORMATION NIGHT

TUESDAY 15TH OCTOBER

5.30 REFRESHMENTS 6.30PM PRESENTATION

WILKINSON BUILDING, 148 CITY ROAD LECTURE THEATRE 2

Sydney University in collaboration with the Audio Engineering Society and the Australian Acoustical Society are hosting an evening to give information about the Graduate Audio Program. The evening will also include presentations by students on their Audio Practice projects.

RSVP 10/10: Lesley Vanderkwast Ph: 9351 2686 Fax: 9351 3031

## TWO DAY SHORT COURSE UNDERSTANDING LOUDSPEAKERS

SATURDAY 13TH NOV - SUNDAY 1ST DEC

WILKINSON BUILDING LECTURE THEATRE 2

This introductory course is open to all with an interest in loudspeakers. There are no entry requirements (maths-free zone). Many demonstrations are included.

- How much can we hear?
- What should we expect from loudspeakers?
- How to interpret loudspeaker specifications
- Room acoustics
- Problems with loudspeakers
- Shopping for loudspeakers
- Building your own loudspeakers.

Participants may also bring along their own loudspeakers for performance testing at the University's acoustical laboratory.

Lecturers include world-famous audio engineers Neville Thiele, electro-acoustic consultant Glenn Leembruggen and Audio Program staff Dr Pal Fekete and Ian Dash.

Course cost is \$250 (includes morning teas, lunches and afternoon teas)

Numbers are limited, so book early to ensure your place

Enquiries: Lesley Vanderkwast Ph: 9351 2686 Fax: 9351 3031

the Creative Team  
May 1997:  
• Scripting Interactive Media  
Fee: Average \$150-250

## Edith Cowan University

Joondalup Drive, Joondalup WA 6027

T 09 273 8765 F 09 387 7095

> This University is a network of six campuses and is strong in the performing arts. Some major streams of study include Film and Video Production, Radio Announcing, Theatre Administration, Music Performance.

## Hedland College

PMB 1 South Hedland WA 6722

T (091) 720 400

• Certificate Basic Music Industry Skills

## Kalgoolie College

PMB 22 Cheetham Street, Kalgoolie WA 6430

T 090 88 6000 F 090 88 6885

> This is a University College affiliated with Curtin University of Technology.

> Some courses offered include Introductory Theatre Skills, Theatre Administration, Arts Administration, Voice Training, Music Performance.

## Karratha College

PO Box 315, Karratha WA 6714

T 091 596 880

• Certificate of Introductory Theatre Skills

## Murdoch University

South Street, Murdoch WA 6150

T 09 239 8698 F 09 239 8799

> Possible units of study as part of degree work include Video Production, Radio Announcing, Media Studies.

## Perth Central Metro College of TAFE

W.A. School of Art & Design  
19 Aberdeen Street, Northbridge, WA 6000

T 09 427 2533

Contact: Brian Williams

• Advanced Certificate of Broadcast Operation

> Provides theatrical and practical skills for a wide range broadcast industries.

> Units include: Audio Operation, Film and Video, Lighting Design, Post Production, Radio Presentation, Television Camera Operation.

When: February 1997

Fee: Under review

Duration: 1 year F/T

• Diploma of Arts - Film & T.V.

> Specific training is offered in the areas of Film and Television, Computer Graphics, Photography and Animation tailored to the professional industry requirements of each discipline.

Duration: 3 years F/T

When: February 1997

Fee: Under review

See also the Perth Campus for:

• Certificate Basic Music Industry Skills

## SAE Technology College

9th Floor I.E.C. Building  
231 Adelaide Terrace, Perth, WA 6000

T 09 325 4533 F 09 221 4401

Contact: Dean Pearson

> See NSW listing for complete details.

• Studio Sound Certificate

When: September 16th, 1996. March 25th, 1997.

Fee: \$1,400 (1996) \$1,600

• Audio Engineer Program (P/T, F/T)

When: September 10th, 1996 (F/T), March 18th, 1997 (F/T). February 24th, 1997 (P/T)

Fee: \$5,700 (P/T), \$6,000 (F/T)

## South Metropolitan College of TAFE

Business Centre, 412 South Terrace, Fremantle, WA 6160

T 09 239 8111 F 09 239 8088

Contact: Tara Hatalie

• Rigging Course

> Aims to prepare the student for the assessments to obtain the National Standard. Levels offered: Dogging, Basic, Intermediate and Advanced Rigging Licenses

Duration: Course is normally taken over a maximum of a one Semester period. Self paced.

When: Contact College

Fee: \$825

## Western Academy of Performing Arts

Edith Cowan University  
2 Bradford St, Western Australia, 6050

T 09 370 6443 F 09 370 6665

Contact: Andy Ciddor, Mark Howitt

• The Diploma of Performing Arts (Production and Design)

> The course aims to provide lighting technical and design skills across the entertainment and performance spectrum, from film, theatre, concert touring to dance and corporate theatre.

> Seven components: Lighting, Sound, Stage Management, Scenery, Costume, Production Design, Venue Operations.

Duration: 3 years, F/T

Fee: HECS + admin/course levy.

Application: Direct to the Academy. Completion of a set project and interview.

• Sound Production Course

> The academy offers a F/T course in production and design majoring in sound. First units include a basic introduction to the theory of sound and operation of basic apparatus, progressing to the operation of more complex computer based equipment. Designed for theatre production, concert sound, film and television sound design, music recording.

Application: Direct to the Academy. Completion of a set project and interview.

Fee: HECS + Admin/course levy.

## Other Possibilities

### Community Colleges

Midland College T 09 274 9333

### TAFES and Universities

Curtin University of Technology T 09 351 2000

Murdoch University T 09 239 8698

University of Western Australia T 09 380 3838

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## SOME LEARNING EXPERIENCES

### THEATRE SECONDMENTS

In their third year of studies for the Bachelor of Theatre (Technical Production) Degree at Townsville's James Cooks University, students undertake four field placements. Successful completion of these secondments, a positive report from supervisor and submission of high quality reports on their experiences prepares these students for placement in the Industry.

Liam Fraser is a third year student and sums up the course by saying, "This is a truly practical course with all the lecturers actually working in the industry and by the end of this year I feel my contacts and 'networking' should secure me a job as a graduate"

Liam's particular area of interest is Stage Management and wants to eventually be involved in venue or company management.

In 1996 Liam went to the Adelaide Fringe Festival with Extensions Dance Company as lighting operator and Assistant Stage Manager. He was the Stage Manager for *Dragged Screaming to Paradise*. This play by Theatre Upnorth toured to Capella, Rockhampton, Cairns, Port Douglas as well as a season on Townsville. Once again for Theatre Upnorth, Liam stage managed *A Midsummer Nights Dream* at the Townsville Civic Theatre. With a cast of 17, crew of 12, a set including a swimming pool and such things as fire twirlers, this was a great challenge for any third year student. "Bouncers is a play about a night club. In his fourth secondment, Liam had the responsibility of producing the show in an actual night club the night before its official opening at the Townsville Civic Theatre. Great venue for bands, but a real challenge for a stage manager of theatre.



### STRAIGHT TO USA

Ben Cheah graduated from the AFTRS in 1995 with a Bachelor of Arts specialising in Sound. In his final year of study, Ben undertook a professional attachment with Skip Lievsay at C5 in New York. Following this he was offered full time work in the US and has been there ever since, returning only once to Australia to get married!

Ben's film credits are impressive: he has worked with directors such as Woody Allen, Jim Jarmusch, and Spike Lee and most recently with the Coen Brothers, Joel and Ethan, on their way to award winning film *Fargo*. He also lists the hit comedy *Bird Cage* amongst his recent credits. In planning are films for both Woody Allen (again!) and James Ivory.

### FROM MUSO TO PA

Simon Milos is an up and coming audio engineer in the Brisbane and Gold Coast area. After playing in various bands Simon decided to set up a PA hire business. Soon after, he enrolled in the Vandersound Studios Audio Engineering Advanced Certificate course to gain the theoretical and practice skills he needed to get into the business.

Since graduating in February 1996 Simon has been freelancing both live concerts and recording in studios. He is currently completing a small business management course, and "SIMON'S LIVE SOUND HIRE AND PRODUCTIONS" will be fully operational in early November. In the early stages, Simon will manage the whole production: hire, transport,

setup and operation of light and sound equipment, and due to escalating demand, construction of a larger and more advanced system is underway, with personnel expansion planned.

Although some of his 5000 watt system may not be "state-of-the-art", Simon is quick to remind us not to underestimate the excellent quality of sound possible in the right hands.

### FROM SAE TO NEVE

Jonas Block Danielson recently completed the Advanced Certificate in Audio Engineering at the Sydney SAE. He studied here as an Overseas Student, originating from the Faroe Islands in Scandinavia.

Jonas' work throughout the course was exceptionally creative. In March '96 he passed the course & topped his class.

To gain more work experience, Jonas approached Studio Manager, Gerry Nixon of Mirage Studios (also owned by SAE), and soon Jonas found himself working with producers such as Tim Whitten, Jeremy Allom, Justin Stanley, Glen Phimister, Mark Thomas and John Gilliard.

Eventually his student Visa expired- back to the Faroe Islands he was contracted to record local bands using the Yamaha 02R, he's one of the only people in his country who know how to use it!

Since his return to the Faroe Islands, Jonas has been working in the Nordic House (Scandinavian equivalent of the Opera House) recording and mixing live performances.



# Buyers Guide

## Audio Power Amplifiers

Each month we feature different products from the world of entertainment technology. Each distributor is invited to list four representative models in each category. Prices include tax, and were current at 01 September 1996.

### Contractor amps

**AMPOWER** Amps Unlimited (03) 9357 8580

**IS-80** Installer Series. 100V Line Mono Amplifier. 4 Models available. From 30 to 400 Watts. Rear level controls, large side heat sinks, stylish aluminium fascia, balanced option, 2 RU, 8Kg. \$595.00

**IS-80-2** Installer Series, 100V Line Dual channel amplifier. 2 Models available. 80 and 160 Watts per channel. Rear level controls, large side heat sinks, Aluminium fascia, balanced option, 2RU 10Kg. \$845.00

**IS-380-2** Installer Series 2 x 80 Watt 3 Channel amplifier, 100V Line, Preset Master/Volume, Bass, Treble, Mic - Aux switching each channel - balanced in. Also available 2 x 160 Watt, 2 RU, 10Kg. \$1050.00

**IS-680** Installer Series, 6 Channel, 80 Watt Mixer Amplifier, 100V Line Master/Volume, Bass, Treble, Mic-Aux Switching each channel, balanced in. Also available 160 and 250 watt, 2 RU, 8Kg. \$785.00.

**ARX** ARX (03) 9555 7859

**SX500C** 2 Channels, 100V or 70V built in line transformers, 2RU, 250 watts per channel. \$1835.00

**SX800C** 2 Channels, 100V or 70V built in line transformers, 2RU, 400 watts per channel. \$2255.00

**AUDIO TELEX** Audio Telex Communications (02) 9647 1411

**AT120RC** 120 watt mixer amplifier featuring 4 dual mic/line inputs, 100V, 70V, 8 & 4 ohm outputs. Built in 6 zone speaker selector, built in auto reverse cassette deck and digital tuner. Made in Australia. 2 RU \$1059.00

**DCM500** 500 watt power amplifier, 100V, 70V, 8 & 4 ohm outputs. Balanced line input. Operates from 240V AC or 24V DC. Fan cooled, with soft start and auto limiter. Made in Australia, exported everywhere. 2 RU. \$1536.00

**ASHLY AUDIO (USA)** Production Audio Services P/L (03) 9415 1585

**P70-400** 2 Channel MOSFET 70V line amplifier. 200 WPC at 70V. Same sonic excellence and reliable performance of standard Ashly amplifiers, LED meters, fan cooled and 2RU. \$2695.00

**P70-800** 2 Channel MOSFET 70V line amplifier. 400WPC at 70V. Same sonic excellence and reliable performance of standard Ashly amplifiers, LED meters, fan cooled and 3RU. \$3695.00

**AUSTRALIAN MONITOR** Australian Monitor P/L (02) 9874 9355

**CS100** 6 Channel @ 100 watts per channel RE 4. Convection cooled and fan assisted (on demand) cooling, balanced inputs, full protection per channel, 2 RU, alloy chassis, individual level controls, bridgeable for line driving. 15 Kgs. \$2825.00

**C1200** Commercial/Install version of our 1K2. Fan cooled, fully protected, balanced inputs, fault & status indication - Great sound & reliability. Bridgeable for 1200 watts @ 100 volt line output, 2 RU, 19 Kgs. 5 Year Warranty. \$2484.00

**C800** Commercial/Install version of our K88. Fan cooled, fully protected including input mute, short circuit, thermal, mains inrush suppression & indication. Bridgeable for 70 to 100 volt line output, 17 Kgs, 2 RU. 5 Year Warranty. \$2056.00

**C600** Commercial/Install Version of OPAL 2802. Convection cooled/fan on demand cooling. Fully protected, fault & status indication, Bridgeable for active balanced output to drive 70u Lines. 2RU, 15 Kgs. 5 Year Warranty. \$1537.00

**CREST** Jands Electronics P/L (02) 9516 3622

**CV301** Professional 340W or 650W per channel; 3RU; Convection Cooled; 100V, 70V or 4 ohm outputs. NexSys computer controlled; IGM, Short, Thermal, DC and Clip Protection. \$3995.00

**CV601** Professional 340W or 650W per channel; 3RU; Convection Cooled; 100V, 70V or 4 ohm outputs. NexSys computer controlled; IGM, Short, Thermal, DC and Clip Protection. \$4695.00

**FCV220** Contractor 120W or 240W per channel; 2RU; Fan Cooled; 100V, 70V or 4 ohm outputs; NexSys computer controlled; Protection includes: IGM, Short, Thermal, DC, Clip. \$2295.00

**FCV440** Contractor 120W or 240W per channel; 2RU; Fan Cooled; 100V, 70V or 4 ohm outputs; NexSys computer controlled; Protection includes: IGM, Short, Thermal, DC, Clip. \$2795.00

**CROWN** Bose Australia (02) 9204 6111

**CT-200** 2 Ch (output mode 8/4 ohm, 70 Volt) 4 125W, 8 100W 70V Line 105W (48.3cmW x 8.9cmH x 40.6cm D, 13.3 kgs.) \$1679.00

**CT-400** 2Ch (O/Put Mode 8/4, 70V) 4 200W, 8 205W 70V Line 205W, (48.3W x 8.9H x 40.6D), 14.5 kgs. \$2355.00

**CT-800** 2Ch (o/Put Mode 8/4 70V) 4 490W, 8 350W, 70V Line 225W, (48.3W x 13.3H x 40.6D) 21.5 kgs. \$3453.00

**CT-1600** 2Ch (O/Put mode 8/4 70V) 4 870W 8 540W 70V Line 960W, (48.3W x 17.8H x 40.6D) 26.3 kgs. \$4489.00

**KINETIC** Horwood Australia P/L (02) 9585 1011

**PA150** Features 150 watts with 70.7/100 volt line output, LED VU bargraph, active clip limiter and resettable thermal circuit breaker. \$840.00

**PA300** This model is a 300 watt version of the PA150. Kinetic PA

series power amplifiers are designed for heavy duty commercial and industrial sound system installations. \$1370.00

**PEAVEY ARCHITECTURAL ACOUSTICS** Audio Telex Communications (02) 9647 1411

**PZS80** 5 Channel multi-zone mixer amplifier. Features 4 zones each with a 20 watt amplifier (100V, 70V, 8 ohms). Each channel features mic/line inputs and an insert point. Any input can be routed to any or all outputs. 600 ohm output for each zone allows larger amplifiers to be utilized if necessary. 3 RU. \$1811.00

**IRM8150** 150 watt mixer amplifier. Mixer stage features 8 dual mic/line inputs, each with a 3 band EQ, Aux and Mon sends. 9 Band graphic EQ with security cover is provided on the main output. 4 & 8 ohms, 70V and 100V outputs. 5 RU. \$1667.00

**QSC Audio A.R.** Audio Engineering (02) 9810 5300

**USA900** Two Channel. 550w/2, 450w/4, 270w/8. 3RU. 15Kg.

Two speed fan. Neutrik Combo inputs. Switchable limiter and low-frequency filter. Short-circuit, Open-Circuit, Thermal, Ultrasonic & RF Protection. \$1395.00

**USA1310** Two Channel. 1000w/2, 655w/4, 400w/8. 4RU. 24Kg. Two Speed Fan. Neutrik Combo inputs. Switchable limiter and low-frequency filter. Short-circuit, Open-circuit, Thermal, Ultrasonic & RF Protection. \$2095.00

**CX6T** Two Channel with internal output transformers. 250 watts/ch @ 100V. 3RU. 25Kg. Two speed fan. Low-frequency filter. Short-circuit, open circuit, Thermal, Ultrasonic & RF protection. \$2195.00

**CX12T** Two Channel with Internal output transformers. 500 watts/ch @ 100V. 3RU. 35Kg. Two speed fan, low-frequency filter. Short-circuit, open-circuit, thermal, ultrasonic & RF protection. \$3095.00

**UNIVERSITY** Mark IV Audio (02) 9648 3455

**A75** 75 Watt Mono @ 8 ohms, 70.7v Line, (HxWxD)mm 133.35 x 482.6 x 317.5, 11 Kg, Limiting, 300Hz Hi Pass filter, Thermal, DC & O/L Protection. \$949.00

**A150** 150 Watt Mono @ 8 ohms, 70.7V Line, 133.35 x 482.6 x 317.5 (HxWxD)mm, 14 Kg in weight, Limiting, 15dB Pad, 300Hz High pass filter, Thermal, DC & O/L Protection. \$1149.00

**REDBACK** Altronic Distributors (09) 328 2199

**A2001** 30W/100V or 8 . 3 Inputs; Aux and balanced mic level. Tape out, PTT Muting, optional Vox Mute, Bass & Treble, Thermal & Short Circuit Protection. 300W x 220D x 80H, 4.1 Kg. \$279.00

### Small, Inexpensive ... and made here



Altronic Distributors make the REDBACK amplifier range. Typical in the range is a 30W PA amplifier to cater for small PA or background music (BGM) installations. The A 2001 is a flexible piece of equipment, with 30W RMS output. Altronic say some "30W" amps in fact deliver as little as 60% of their claimed RMS power output.

It features three inputs which can accept mic or line level. They can be used as a combination of both (mixed), with the volume control acting on both the mic and auxiliary source connected to the inputs. Mic 1 has provision for 3-pin XLR or 5 pin DIN (with PTT muting pair) balanced mic input, or a 6.35mm jack unbalanced mic. Mics 2 and 3 have 3-pin XLR balanced inputs only. Auxiliary inputs are via stereo RCA connectors, which are monauralised internally. A "tape out" RCA output

is provided for recording or connection to another amplifier.

Attached loads can be either 100V line or 4-16 voice coil. Should the amplifier become overloaded, or suffer a shorted speaker line, shutdown protection is provided against short circuit lines, excessive current draw (overloading), and thermal runaway (insufficient ventilation around amplifier).

Tone adjustment is accomplished by separate bass and treble controls, active on all inputs.

An optional module is available for VOX muting (A 1996), which allows connection to telephone paging systems. This module has adjustable sensitivity and tail time. Altronic Distributors offer a 2 year warranty on the amp, and it is designed and assembled in Australia. The A 2001 retails for \$279 (including tax).

• Altronic, (09) 328-2199

### Mixer Amps

**A2003** 40W/100V or 8 . 2 Balanced Mic and 2 Aux inputs. 240VAC/240VDC Operation, 19" Rack mount kit option, Bass & Treble, Thermal & Short Circuit Protection. 435W x 225D x 95H, 5.5kg. \$399.00

**A2024** 120W/100V or 8 (Booster Amp), XLR Line In/Out, Volume Control, 19" Rack Mount, 240VAC/2+0VDC Operation, Thermal & Short Circuit Protection, 435W x 300D x 88H, 10.2 Kg. \$699.00 Also A2034, 250W/100V or 8 435W x 300D x 132H, 15.8kg. \$899.

**A2026** 120V/100V or 8 4 Balanced Mic and 2 Aux Inputs, Bass & Treble, Vox Muting, 19" Rack Mount, 240VAC/240VDC Operation, Line In/Out, Thermal & Short Circuit Protection, 435W x 300D x 88H, 10.2Kg. \$825.00/Also A2036, 250W/100V or 8, 435W x 300D x 132H, 15.8Kg. \$995.00

**ELECTRO-VOICE** Mark IV Audio (02) 9648 3455

**61PMX** Mono 6 channel Mixer, 200W @ 4 ohms, Lo & Hi, EQ P/Chan., 9 band graphic EQ, Phantom Power, Reverb, 174 x 445 x 394mm, 11.4 Kg. \$1665.00

**81 PMX** As per 61 PMX but with 8 Channels. \$1895.00

**100M** 8/10 Channel, 100W @ 8 ohm Stereo Mixer, 3 Band EQ, Dual 8 Band Graphic EQs, Switchable Mono FOH/Monitors, Phantom Power, 202 x 495 x 464mm, 16.4 Kg. \$2495.00

**FENDER** Fender Australia P/L (02) 9666 5077

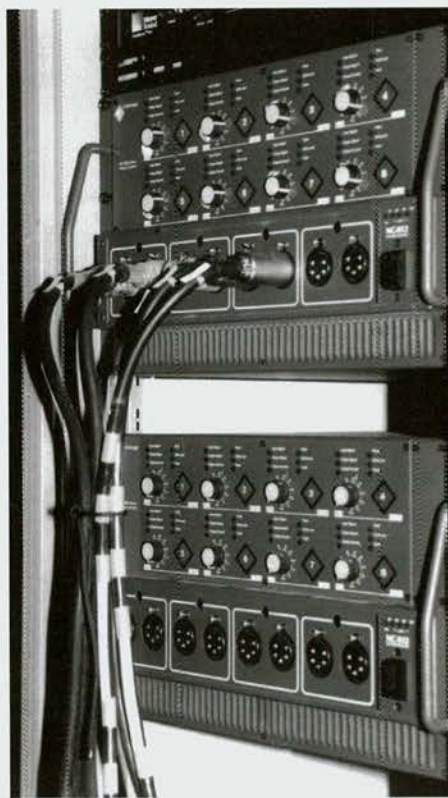
**PX-2212** Built-in stereo 12 channel desk; Stereo power amp (2 x 300W @ 4 ohms). Stereo 9-band GEQ, stereo digital effects, Road case come stand 2 FX sends, 2 F/b sends, avail. in 8 x 16 chan-

## CyberLogic system

CyberLogic make a range of multi-channel power amplifiers which are distributed by System Sound. The NC-800 series (right) are finding favour in theatre and PA live sound roles. The design aim is to minimise space, and maximise efficiency.

The system has a mainframe / power supply with 8 power channels, self contained on individual modules on the top half of the 6 r/u frame. The model MC-812 has a 14kVA power supply and 8 x 1,200 watt amp modules.

These will deliver rated power with each channel driven into 4 ohms. Smaller models including a 4 channel system are available. • Details from System Sales, (03) 03 9529-7755.



### Mixer Amps (continued)

nels. 5 Year Warranty \$4499.00  
**SR - 8520PD** 8 Ch. Mixer, 520W at 2 ohms (mono) digital effects, Deltacomp protection circuitry, 9 band GEQ, Phantom power, 1 F/B send 1 FX send, 3 band channel EQ. 5 Year Warranty. \$2299.00  
**SR - 6300** 6 Ch mixer/head, 300W into 2 ohms, spring reverb, Deltacomp protection circuitry, 9 band GEQ, 3 way channel EQ, 1 F/B and 1 aux send, phantom power. 5 Year Wty. \$1299.00  
**LX - 1504** 4 Ch. mixer/head, 150W at 4 ohms, spring reverb, 2 channel EQ 1 F/B send, 1 FX send, RCA tape inputs. 5 Year Warranty. \$899.00

**KINETIC** Horwood Australia P/L (02) 9585 1011  
**MA-6100** This integrated mixer amplifier features 6 mic/line input channels with 100 watts power output, 707/100V output, LED bar graph and forced air cooling. \$1100.00  
**MA-6200** This model is a 200

watt version of the MA-6100. Kinetic mixer amps feature voice operated switching, thermal circuit breaker and short circuit protection with 48v phantom power. \$1280.00

**ROSS** Central Musical Instruments (03) 9315 2244  
**PC-6400** 6 Mic/Line inputs, 400W RMS @ 4Ω, monitor send, reverb, phantom power, built in limiter, graphic EQ and protection circuitry, effects send and return, RCA inputs, mix out. "Head" style mixer. 3 year guarantee. \$1099.  
**PC-4110** 4 Channels, 150W RMS @ 4 Ω, balanced ip inputs and aux. input, reverb, 5 band graphic EQ, effects send and return. RCA inputs, "Head" style mixer. 3 year guarantee. \$599.00

**PEAVEY** Australis Music (02) 99698 4444  
**XRD 680 Plus, XRD 680S (Stereo) Plus.** Active 3 band EQ with +/- 15dB cut/boost on each channel. 9 Band graphic EQ with 12 dB cut/boost, switchable 48v phantom power stereo panning,

120 digital reverb & delay presets, dual power amps feature 300 watts into 4 ohms (600w total), Tobbox or RM. \$2399.00  
**MAQ300** Graphic-equalized power amplifier. Two channels at 150 W RMS of DDT (™) protected power dual 15-band, FLS-equipped, graphic equalizers. Optimized for feedback suppression, the equalizers provide 12 dB of boost and 18 dB of cut at 1/3. \$1395.00  
**MAQ 600** Graphic-equalized power amplifier. Two channels of 300 W RMS DDT protected power dual 15-band, FLS-equipped, graphic equalizers. Optimized for feedback suppression, the equalizers provide 12 dB of boost and 18 dB of cut at 1/3. \$1895.00

**SPIRIT** Jands Electronics P/L (02) 516 3622  
**Power Station 8** Mono mic/line inputs, 2 stereo inputs, 3 band EQ mid sweep, 7 band graphic, Lexicon digital reverb; 2 Aux sends, 265W per channel, PFL, Thermal and DC protection, Sub-Sonic Filter. \$3995.00

### PA AMPLIFIERS

**AB INTERNATIONAL** Production Audio Services P/L (03) 9415 1585  
**9620** 2 Channel pro touring amplifier. 1400WPC at 4 ohms. Front attenuation, LED meters, fan cooled, protection circuitry, 3RU. Also available in 800, 590 and 240 WPC versions. \$5995.00  
**600LX** Precedent Series 2 Channel power amplifier. 590 WPC at 4 ohms, balanced inputs, fan cooled, mono bridge, front attenuation, 3RU, cost effective system. \$1695.00  
**900A** Precent Series 2 Channel power amplifier. 590 WPC at 4 ohms, balanced inputs, fan cooled, mono bridge, front attenuation, 3RU and soft clip circuitry. \$2295.00  
**1100A** Precent Series 2 Channel power amplifier. 850 WPC at 4 ohms, balanced inputs, fan cooled, mono bridge, front attenuation, 3RU and soft clip circuitry. \$3295.00

**AMPOWER** Amps Unlimited (03) 9357 8580  
**AM1500B** 2 Channel 150W, (4 Ohm), 2RU, 10Kg, Input Level Controls Bi-Polar, Balanced XLR In/Out. \$825.00  
**AM4000** 2 Channel, 200W Per channel (4 Ohm) 2 RU, 12 Kg, Input Level controls, LED Ramp Indicators, Balanced XLR In/Out. Bridgeable to 400 Watts Mono and Thermal and short circuit protection. \$1299.00  
**ES2450** New Release! 2 Channel

450W per channel (4 Ohm) 3 RU, Signal present and clip LED each channel, Fan Cooled, Thermal Protection, Short Circuit Protection, Balanced, XLR In/Out Bridgeable. \$1295.00  
**ES2800** New Release! 2 Channel 800W per channel (4 Ohm) 3 RU, Signal Present and Clip LED each channel, Fan cooled, Thermal protection, Short Circuit protection, Balanced, XLR In/Out Bridgeable. \$1995.00

**ARX** ARX (03) 9555 7859  
**SX3000** 2 Channels, 660w/8 ohms, 100w/ 4 ohms, 2000w bridged/8 ohms. 2RU. 4 Fans, Ultra Fin Heatsinks, XLR In, plus total protection package. \$3150.00  
**SX1500** 2 Channel 490w/8 ohms, 700w/4 ohms, 1400w bridged/8 ohms. 2RU, 4 Fans, Ultra Fin Heatsinks, XLR in, plus total protection package. \$2580.00  
**SX800** 2 Channel, 300W/8 ohms, 400w/4 ohms, 800w bridged/8 ohms. 2RU, 2 Fans, Ultra Fin Heatsink, XLR & jack in. \$1980.00  
**Powerdrive** 3 Channel (A + B + Sub) Amp with built-in "Power Pro" speaker processor. Ch A & B 380w/8 ohms, 580/4 ohms each, sub channel 730w/4 ohms, 1050/2ohms. 2RU, 4 Fans, Total protection. \$3700.00

**ASHLY AUDIO (USA)** Production Audio Services P/L (03) 9415 1585

**MFA 6000** 2 Channel MOSFET power amplifier. 800 WPC (1200W version available) at 4 ohms. Class A front end, excellent protection, variable fan, Ashly powercard compatible, 2RU, LED metering and exceptional Ashly sound. \$5795.00  
**FTX 2001** 2 Channel MOSFET power amplifier. 500WPC at 4 ohms. Excellent protection circuitry, 2 ohm capability, LED meters, fan cooled, 3RU, classic Ashly sonic excellence and reliability. \$2995.00  
**FTX 1501** 2 Channel MOSFET power amplifier. 300WPC at 4 ohms. Excellent protection circuitry, 2 ohm capability, LED meters, fan cooled 2RU, classic Ashly sonic excellence and reliability. \$2395.00  
**FTX 1001** 2 Channel MOSFET power amplifier. 175 WPC at 4 ohms. Excellent protection circuitry, 2 ohm capability, LED meters, fan cooled, 2 RU, classic Ashly sonic excellence and reliability. \$2095.00

**AUSTRALIAN MONITOR** Australian Monitor P/L (02) 9874 9355  
**AM3002** High power FET amplifier capable of sustaining 1800 watts into 2 ohms (single channel) 1500 + 1500 RE 2Ω, over 4000 watts music bridged into 4. 3RU, 33 Kgs. Same features as AM Series. \$4400.00  
**AM1600** 800 + 800 RE 4Ω, High current capable linear supply, Class AB linear output, 3 RU Al-

### ARX PowerDrive

The ARX research team (*a sad gathering of time-expired old sound engineers*) decided that connecting up speaker processors correctly was a bit of a problem for many end users without a technical background. So they thought 'wouldn't it be great if it was all wired up *inside* an amp that was ready to plug in and go - a true Plug and Play PA system?'

The result is the ARX PowerDrive integrated system amplifier. Three channels of the PowerDrive amplifier are controlled by an onboard ARX PowerPRO speaker processor. This provides Phase Correction, EQ contour, Crossover (to the Sub) functions, and ISC Interactive System Control™. ISC continuously monitors the amplifier output level, and provides speaker protection functions to prevent overdriving.

Channels A and B have each 580 watts each, more than enough to run one or two 8 ohm cabinets such as an ARX PowerMax 1, 2, 3, or 4s per side.

The Sub channel has over 1 Kilowatt of power to run up to two 4 ohm Subs. The PowerDrive's switchable 'Enhance' function can provide that 'big system' sound.

Although the PowerDrive has been tailored to suit the PowerMax system, it's compatible for use with other similar speaker systems. The rear panel has balanced Inputs on XLR connectors; output options include a choice of traditional 5 way binding post outputs, or Neutrik 'Speakon' insulated speaker connectors for fast setups.

There are also pre-processed line outputs for Channels A, B and Sub, so your existing amplifiers are not made redundant when larger systems need to be assembled.

#### Technical Description

All channels of the PowerDrive use the new double die mosfets which are in effect two devices in the one pack. It's a great way of getting extra power, but it does increase the need for efficient heat transfer away, via super efficient heatsinks.



## PA Amps (continued)

low chassis, fully protected, Balanced Inputs, 10 segment level display, fault & thermal & status indication. 30Kg, 5 Year Warranty. \$3398.00

**AM1200** 4 Channel amplifier @ 300 watts per channel RE 4 Ω. Linear supply and output stage, 3 RU, rugged allow chassis, full protection features and indication, bridgeable pairs for high power stereo use. 29 Kgs. 5 Year Warranty. \$3398.00

**1K2** 600W + 600W RE 4 oh, 2 RU Alloy chassis, Dual 2 speed fans, linear supply and high performance AB output stage. True FTC rating, status & Protection & Indication. 19Kgs. 5 Year Warranty. \$2751.00.

**CINEMA PRO ARX** (03) 9555 7859

**CP500** 2 Channels with built in 2 way crossover. 200w/8 ohms, 270w/4 ohms, XLR in, 2RU. Ultra Fin Heat Sink, Rear controls. \$1825.00

**CP800** 2 Channels with built in 2 way cross over 300w/8 ohms, 400w/4 ohms. XLR in, 2RU. Ultra Fin Heatsink, Rear controls. \$2242.00

**CROWN** Bose Australia (02) 9204 6111

**MA-600** 2 Ch, 4Ω 325W, 8Ω 220W, 2Ω 400W. Size: 48.3W x 9.9H x 40.6D. Weight: 17.9kgs. P.I.P. Compatible, ODEP Protection, Input/Output comparator. \$2030.00

**MA-1200** 2Ch, 2Ω 675W, 4Ω 480W, 8Ω 310W. Size: 48.3W x 8.9H x 40.6D. Weight: 20kgs. P.I.P. Compatible, ODEP Protection I.O.C. \$2643.00

**MA-2400** 2Ch, 2Ω 1050W, 4Ω 800W, 8Ω 520W. Size: 48.3W x 8.94H x 40.6D. Weight: 23.5kgs. PIP Compatible, ODEP Protection. I.O.C. \$3310.00

**MA-3600VZ** 2Ch, 2Ω 1800W, 4Ω 1655W, 8Ω 1165W. Size: 48.3W x 8.9H x 40.6D. Weight : 25.1 kgs. Patented variable impedance

technology (VZ) enables to dynamically adapt to both signal and load requirements in real time. P.I.P. Compatible. \$5692.00

**CREST** Jands Electronics P/L (002) 9516 3622

**V Series 650, 1100, 1500** Cost effective 325W, 550W or 750W per channel; 3RU; Fan Cooled; 6.5mm inputs; Speakon outputs; ACL, IGM, AutoRamp and TourClass Protection. \$1995.00, \$2795.00, \$3495.00.

**Vs Series 900** Cost effective 450W per ch; 3RU; Fan Cooled; 6.5mm inputs; Speakon outputs; ACL, IGM, AutoRamp and TourClass Protection. \$1895.00

**CA Series 4, 6, 9, 12.** Cost effective 450W, 600W, 900W, 1200W per channel; 2RU, 2RU, 2 RU, 3RU; Fan Cooled; XLR inputs; Speakon outputs; ACL, IGM, AutoRamp and TourClass Protection. \$2395.00, \$2895.00, \$3895.00, \$4795.00.

**Pro Series 3301** Heavy Duty Professional; Wide range of power from 200W to 5000W per channel. Fan Cooled; XLR inputs; ACL, IGM, AutoRamp and TourClass Protection; NexSys computer controlled. From \$3995

**CYBERLOGIC** System Sales P/L (03) 9529 7755

**NC-812 System 8** channels high power amplification in 6 RU, 89 kgs 1200W/4 Ω Interchangeable high/low power modules. Touring and Install versions available. \$22,158.00

**MC-807** 8 Channels high power amplification in 6 RU, 81 kgs 700W/4Ω Interchangeable high/low power modules. Touring and Install versions available. \$19,091.00

**MC-412** 4 Channels high power amplification in 4 RU, 48 kgs 1200W/4 Ω. Uses same high/low power modules as NC-800 series. Touring and Install versions available. \$11,653.00

**NC-407** 4 channels high power amplification in 4 RU, 43 kgs 700W/4 Ω. Uses same high/low power modules as NC-800 se-

ries. Touring and Install versions available. \$9,684.00.

**EASTERN ACOUSTIC WORKS** Production Audio Services P/L (03) 9415 1585

**MA Series** Professional series 2 Channel power amplifiers. From 380-2200 WPC at 4 ohms. Widely toured, exceptional sound and protection, rugged build and front attenuator. \$3395.00

**PX Series** 2 Channel cost effective power amplifiers. From 275-600 WPC at 4 ohms. Front attenuation modular and rugged construction, excellent protection and exceptional quality. \$1995.00

**LX-9** 2 Channel PA hire/installation power amplifier. 900 WPC at 4 ohms, (1200W available.) Excellent protection, modular construction, front attenuation, fan cooled, 2RU. \$3795.00

**LX-6** 2 Channel PA hire/installation power amplifier. 600 WPC at 4 ohms, (400 and 200 versions available). Excellent protection, modular construction, front attenuation, fan cooled, 2 RU. \$2895.00

**ELECTRO-VOICE** Mark IV Audio (02) 9648 3455

**P600** 2 Channel Stereo/Dual Mono, 180W @ 8 ohm, 280 W @ 4 ohm, 320 W @ 2 ohm per chan. Stepped Attenuators Output Limiting, Hi/Lo cut Filter, Fan Cooled, 88.1 x 483 x 426, 14 kgs. \$1595.00

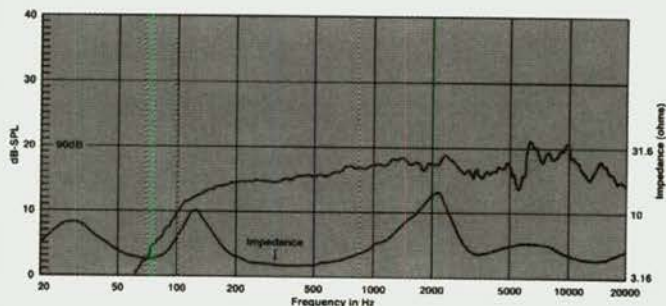
**P1200** 370 Watts Per channel @ 8 ohms, 550W @ 4 ohms, 650 watts @ 2 ohms. Other Specs as per P600, 88.1 x 483 x 426mm, 17 Kg. \$2495.00

**P2000** 2 Channel, 560W @ 8 ohm, 900W @ 4 ohm, 1200W @ 2 ohm, Dual Torroidal Transformers, 4 Mid mounted Fans, other specs as per P600, 132.5 x 483 x 426. 26 Kg. \$3395.00

**P3000** 2 Channel, 850w @ 8 ohm, 1400W @ 4 ohm, 1800W @ 2 ohm per chan. 132.5 x 483 x 426, 28 Kg. Other specs as per P600. \$3995.00

(continued over)

Frequency Response at 1 W, 1 meter; Impedance



## DON'T FORGET YOUR PROTECTION!

By Nick Orsati, Jands Electronics

Why does your amp cut out when you drive your two ohm subs hard?

A likely cause may be that the actual impedance of a speaker can deviate significantly from its normal impedance depending on a number of factors including frequency. Have a look at the diagram at the top of this story.

This diagram shows the frequency response of a JBL Control 1 - which is a four ohm cabinet. If it drops nearly two ohms, what do you think a two ohm load can drop to?

Now some 'brand X' amplifiers work in such a way that when you subject them to an extremely low load, their short circuit protection actually dis-connects the speakers - not so great for an audience!

Crest Audio's solution to this problem is called IGM, for Instantaneous Gain Modulation. Part of Crest's Tour Class™ protection circuitry, IGM works to reduce the gain of the amplifier for that instant that the impedance drops, ensuring those woofers keep woofin! Naturally, if a short circuit does occur, the amplifier will go into protect mode to prevent speaker damage against periods of continuous loads.

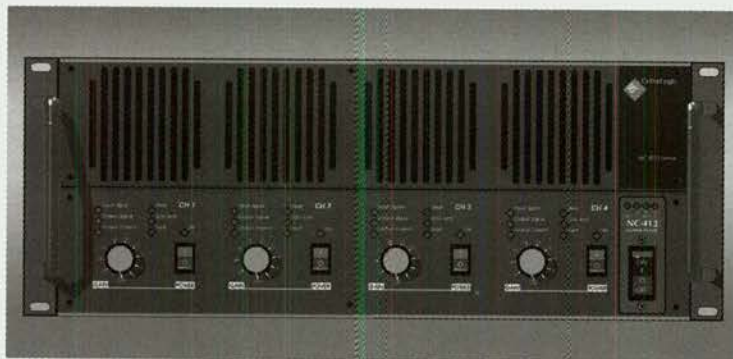
Originally developed for Crest's revered Professional Series amplifiers, TourClass protection is available on every Crest amplifier including the latest V and Vs MI ranges.

If you would like to know more, contact Jands (phone (02) 9516-3622 and ask for the technical info, or you can email me on nickors@magna.com.au - or check out Crest's Web sight.

## Cyberlogic solves your power & space problems

### Introducing the new NC-400 Series Amplifier

- 4 channels of high power audio amplification in 4RU package: replaces 2 conventional power amplifiers
- NC-412, 1200W/4 Ohms; NC-407 700W/4 Ohms per channel
- Uses same Power Channels as the field proven NC-800 Series
- Exclusive all N-Channel, Vertical MOSFET output ports



**SYSTEM SALES**  
LEADING NAMES IN SOUND

Distributor: System Sales Pty Ltd  
Tel: +61 3 9529 7755  
Fax: +61 3 9529 4897

CYBERLOGIC

Write in Reader Service Number: 188

PA Amps  
(continued)

**FENDER** Fender Australia P/L (02) 9666 5077

**SPL - 9000** Stereo 450 into 4 ohms, 900w into 8 ohms bridge mode 3 R.U. high, extensive protection circuitry, dual speed forced air cooling. 5 Year Warranty. \$1999.00

**SPL - 6000** Stereo 300w into 4 ohms, 600w into 8 ohms bridged. 2 R.U. high, extensive protection circuitry, dual speed, forced fan cooling switchable limiter. 5 Year Warranty. \$1499.00

**SPL - M300** Mono 300w into 2 ohms, 3 band sweepable notch filters, high and low band pass filters, Deltacomp protection circuitry dual speed forced air cooling. 5 Year Warranty. \$1199.00

**SPL - M500** As for SPL M300, but with 500w into 2 ohms, both designed for monitor applications. \$1399.00

**GEMINI** Disco World (03) 9735 0588

**GEMINI XG-2000** 250 Watts at 4 ohms RMS per channel - 500 Watts at 8 ohms Bridged Mono Stereo Fan Cooled - Level Control. \$1100.00

**GEMINI XG -1750** 180 Watts at 4 ohms RMS per channel - 360 Watts at 8 ohms Bridged Mono - Stereo. Fan Cooled - Level Controls. \$926.00

**GEMINI XG - 1100** 120 Watts per channel at 4 ohms RMS per channel - 240 Watts at 8 ohms Bridged Mono. Stereo Fan Cooled. \$799.00

**MACKIE DESIGNS** Australian Audio Supplies 043 291 711

**FR - SERIES M-1200** 1200 Watts into 4Ω Bridged, 600 + 600 watts into 2Ω, sweepable horn compensation sweepable low cut filter, switchable sub woofer crossover subsonic stabilizer, clipping eliminator, T-Design constant gradient cooling, Balanced & Unbal. inputs. \$1495.00

**PEAVEY ARCHITECTURAL ACOUSTICS** Audio Telex Communications (02) 9647 1411

**IPAC** Power amplifier, dual 250 watts @ 2 ohms, dual 210 watts @ 4 ohms, dual 130 watts @ 8 ohms. Fan cooled, balanced inputs, jack and screw terminal connections. Features SPS speaker protection. 3 RU \$1124.00

**IP8-5C** Power amplifier, dual 550 watts @ 2 ohms, dual 425 watts @ 4 ohms, dual 270 watts @ 8 ohms. Fan cooled, balanced inputs, jack and screw terminal connections. Features SPS speaker protection. 3 RU. \$1446.00

**IPS800** Power amplifier, dual 400 watts @ 4 ohms, dual 240 watts @ 8 ohms. Fan Cooled. Features SPS speaker protection. 3 RU. One of the best selling amplifiers in the USA. \$1837.00

**IA400** Power Amplifier, 200 watts per channel into 100v, 4 & 8 ohms. Unique grounded bridge design eliminates the need for an output transformer, meaning improved bandwidth and lower distortion. Features SPS speaker protection. MediaMatrix controllable, allowing full monitoring and control from a MediaMatrix DSP processing system. 2 RU.

\$2295.00

**PEAVEY** Australis (02) 9698 4444

**VX (TM) 1.5K** Compact-two rack space, Class "BG", 750 Watts RMS @ 2 ohms per channel, 1500 Watts @ 4 ohms bridged, DDT Amplifier Compression with LED indicator, 2 speed fan cooling, Accessory socket for PL-2 input transformer module, Slew rate of 40 V/&micro;sec. THD <0.04%, 20 Hz - 20kHz, Hum & noise -100 dB unweighted. \$2699.00

**CS@1200X** New 2 ohm power performance, 900 Watts RMS @ 2 ohms per channel, 1800 watts @ 4 ohms bridged, DDT Amplifier Compression with LED indicator, 2 speed fan cooling, Crossover module island, Power bandwidth 10 Hz - 50 kHz, Slew rate of 40 V/&micro;sec. THD <0.03%, 20 Hz - 20 kHz, Hum & noise; -100 dB unweighted. \$2999.00

**CS@800X** New 2 ohm power performance, 600 Watts RMS @ 2 ohms per channel, 1200 watts @ 4 ohm bridged, DDT Amplifier Compression with LED indicator, 2 speed fan cooling, Crossover module island, Power bandwidth 10 Hz - 50 kHz, Slew rate of 40 V/&micro;sec., THD <0.03%, 20 Hz - 20 kHz, Hum & noise; -100 dB unweighted. \$1849.00

**DPC750/DPC1000** Single rack space, 90% efficient output stage, output protection circuitry, stereo or bridge mode capability, 2 speed fan, balanced input capabilities, digital phase modulation MOSFET design, LED status and level indicators, digital DDT compression, low feedback design, 6.5mm jacks and binding posts, linear phase bessel amplifier response. Rated power (DPC1000) per channel into 4Ω both channels driven - 500wrms, bridged into 8Ω - 1000wrms, thd - LESS THAN .2%, tid - 0%, DIM. 19" w x 1.75" h x 14" d. 5.5kg. \$2599.00

**PHONIC** CMC Music P/L (02) 9905 2511

**MAR 2** 2 Channels, 200 watts/4 ohms, 2RU, Fan-Cooled. \$995.00

**MAR 4** 2 Channels, 400 watts/4 ohms, 2RU, Dual Fans, Front & Rear (super quiet), includes Speakon Connectors. \$1250.00

**MAR 6** 2 Channels, 600 Watts/4ohms, 3RU. \$1550.00

**Power Pod - New.** 3 Channels, 250 Watts per channel @ 8 ohms. Switch Mode Power Supply, only 2 kgs. To complement Phonic MM122, Mackie MS-1202 etc. \$1195.00

**QSC** Audio A.R. Audio Engineering (02) 9810 5300

**MX1500a** Two channel. 750w/2Ωm 600w/4Ω, 400w/8Ω. 2RU. 19Kg. Two speed fan. Open input architecture for internal limiters, cross-overs, EQ etc. Short-circuit, open-circuit, Thermal, Ultrasonic & RF protection. \$2295.00

**MX3000a** Two channel. 1600w/2Ω, 1300w/4Ω, 850w/8Ω. 3RU. 31Kg. Variable speed fan. Open input architecture for internal limiters, cross-overs, EQ etc. Short-circuit, open-circuit, thermal, ultrasonic & RF protection. \$3995.00

**PowerLight 1.8** Light weight 8.2Kg! Two channel. 900w/2Ω, 700w/4Ω, 450w/8Ω. 2RU. Dual variable speed fans. Neutrik

combo inputs. Data-port. DC, Sub Audio and Thermal protection. \$3395.00

**PowerLight 4.0** Light weight 13.6Kg! Two channel, 200w/2Ω, 1600w/4Ω, 100w/8Ω. 3RU. Variable speed. Neutrik combo inputs. Data-port. DC, Sub Audio and Thermal protection. \$4995.00

**ROLAND** Roland Corporation (02) 9982 8266

**SRA-260** New. 120W x 2 at 8Ω, 200W x 2 at 4Ω, 20Hz to 20kHz at less than 0.1% THD. Limiter circuit and multiple protection circuits eliminate output distortion and protect speaker systems. Balanced phone jack and XLR inputs. Weight : 12.5kg. \$1095.00

**SRA-540** New. 240W x 2 8Ω, 400W x 2 4Ω, 20Hz to 20kHz, 0.1% or less THD. Weight 14.5kg. Built in Limiter circuit and multiple protection circuits safeguard amplifier and speakers systems while eliminating output distortion. Balanced phone jack and XLR inputs. \$1395.00

**SRA-800** New. 360W x 2 8Ω, 600W x 2 4Ω, 20Hz to 20kHz, 0.1% or less THD. Weight 14.5kg. Built in Limiter circuit and multiple protection circuits safeguard amplifier and speakers systems while eliminating output distortion. Balanced phone jack and XLR inputs. Weight : 17.5kg. \$1895.00

**ROSS** Central Musical Instruments (03) 9315 2244

**MEGA 400** 2 Channel, 200 W RMS per side into 4 Ω, XLR and 1/4" inputs, ground lift switch, clip LEDs, 20Hz - 20kHz. Extensive protection circuitry, 2 RU. \$1099

**MEGA 800** 2 Channel, 400W RMS per side into 4 Ω, XLR and 1/4" inputs, ground lift switch, clip LEDs, 20 Hz - 20kHz extensive protection circuitry, 3 RU, 38 lbs. \$1349.00

**MTA 1200** 2 Channels 405W RMS per side into 4 Ω, 1200W RMS bridged - mono @ 4 Ω, THD 0.01 @ 1kHz (Typical), balanced XLR and 1/4" input connectors, state of the art protection circuitry, switch mode-digital power, 2 RU. 18 lbs. \$1699.00

**YORKVILLE** Dynamic Music (02) 9939 1299

**AP3400** 2 Channels, 1200W (x2) at 4 ohm, 750W (x2) at 8 ohm. Not applicable at 2 ohm. 2 Rack units high, 18 kg, fan cooled, fully protected, unconditional 2 year transferrable warranty. \$2995.00

**AP3000** 2 Channel - 1200W (x2) at 2 ohm, 750W (x2) at 4 ohm, 475W (x2) at 8 ohm. 2 Rack units, 18 kgs, fan cooled, DC load & thermal protection, unconditional 2 year transferrable warranty. \$2895.00

**AP 1200** 2 Channel - switchable 2 or 4 ohm, optimum load operation allows 600W (x2) into either 2 or 4 ohm. 2 Racks high, 16 kg, fully protected and switchable limiter prevents audible clipping whilst maintaining full output. \$2395.00

**AP800** 2 Channel - switchable 2 or 4 ohm max operation gives 400W at each resistance. Includes limiter, subsonic filter, mono/stereo/bridges modes & ground lift switches. Unconditional 2 year transferrable warranty. \$1595.00

## Australian Monitor Debut Biggest Amp

Australian Monitor have expanded their product range with the addition of the AM3002, arguably the most powerful amplifier on the market. Designer Stuart McLean told Connections the amp is possible only through using a 'double die' lateral mosfet device, which offers half the current loss of a conventional 'fet'.

The device is made by SemeLab, who also make conventional mosfets, which the firm now use in place of the previous and discontinued Hitachi mosfet. Until the DD 'fet came along, the AM 1600 was approaching the upper limit of power handling.

The AM3002 delivers 1500 watts per channel into 2 ohms, which it can sustain. With one channel driven it delivers 1800 watts. AM now also quote output at a less conservative total harmonic distortion (THD), in which case the AM 3002 will deliver 4,000 watts total. The argument regarding out-

put standards is one which would make a good and very lively seminar at ENTECH! Essentially Australian Monitor claim very conservative specifications.

The one downside to the DD mosfet is heat, it delivers an addition 15 - 20° at the heatsink. Reorganisation of the device layout, and an extra fan (each heatsink has two) has enabled the AM 3002 to operate in all expected ambient (and hellish) conditions. The new amp weighs just 1kg more than the AM 1600, which itself continues on sale as arguably the most popular single amplifier ever made and sold in Australia. To get to this point it had to surpass the classic Jands 600.

McLean returned to AM earlier in the year after a long absence, and is acknowledged to have brought stability to the firm's market, which was under pressure due to both outside competition and previous internal problems.

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## AmPower add models

Three new models join the AmPower range, featuring lower prices, more output, and now powered with bipolar output devices.

The ES2450 retails at \$1295 with 2 x 450 watts at 4 ohms. The front panel is blank other than the main switch and signal lights. A trim pot for each input is on the back, making presetting a 'hands off' option for installations. Fan cooling, balanced XLR inputs, short circuit and thermal protection complete the specs.

A 2 x 800 watt version is called the ES2800, (\$1995 retail) and the third new model is the ES4250, with 4 x 450w output at 4 ohms. Price is around \$2600.

Ampower use an aluminium front panel, they say folded steel cabinets offer questionable strength, especially with larger amplifiers.

In addition Ampower offer 14 models in their Installer Range - from small mixer / amps to 100v line contracting amps. They have just taken on distribution of Philips professional audio products.

• Amps Unlimited, 03 9357-8580

Apogee Sound announce power amplifier software control package with truly intelligent monitoring and control.

For the first time, bi-directional amplifier monitoring and control is available. "Apogee allows a virtually limitless number of amplifiers to be individually monitored, grouped and controlled from a personal computer, and then goes further," says National Sales Manager James Lamb. "Any adjustment performed at any computer or any amplifier on the network will be simultaneously displayed on the computer monitor and the amplifier on the front panel. This degree of accurate information delivery is unprecedented."

The system starts with Apogee's DA Series Digitally Controlled Amplifiers Every DA Series amp features an on-board microprocessor and front panel displays that monitor amplifier temperature, line voltage, load impedance, output voltage, attenuation value and other critical parameters, in real time, Diagnostics, such as monitoring of impedance, can be performed in seconds. •ESA: (03) 9562-4605

## STUDIO AMPLIFIERS

**AB INTERNATIONAL** Production Audio Services P/L (03) 9415 1585

**200** 2 Channel monitor power amplifier. 100 WPC at 4 ohms. 1RU, balanced inputs, headphone, jack, mono bridge, front attenuation, convection cooled. \$1195.00

**1450** 2 Channel studio/PA power amplifier. 240WPC at 4 ohms. 2RU, balanced inputs, soft clip circuitry, stereo/parallel/bridge switch, front attenuation, convection cooled. \$1775.00

**ARX ARX** (03) 9555 7859

**SX300** 2 Channels, 100w/8 ohms, 150w/4 ohms, 300w/8 ohms bridged. 2RU, 'On Demand' Fan cooling, Jack & XLR in. \$1195.00

**ASHLY AUDIO** Production Audio Services P/L (03) 9415 1585

**CFT 1800** 2 Channel MOSFET power amplifier. 300 WPC at 4 ohms. Class A based front end, LED meters and 2 RU. Designed for recording studios, broadcast control rooms. Exceptional sound and quality. \$2395.00

**SRA 120** 2 Channel power amplifier. 60 WPC at 4 ohms. Class A based front end, convection cooled, front attenuation, excellent protection, 1RU, exceptional sound and quality.

\$1295.00

**AUSTRALIAN MONITOR** Australian Monitor P/L (02) 9674 9355

**IK2 - Studio** 600W + 600W RE 4 ohms, 2 RU Allow Chassis. Dual 2 speed whisper quiet fans. Linear high current capable supply, true FTC rating. A highly reliable, high performance amplifier. 19kgs. 5 Year warranty. \$2824.00

**K88 - Studio** As per IK2 - Studio but 400 + 400W RE 4 ohms. THX Approved. 17Kgs. Balanced inputs, bridgeable, plug-in sig. processing slot, fault & status indication, fully protected. 5 Year warranty. \$2562.00

**OPAL 2802** 280 + 280 RE 4 ohm, 2 RU Alloy chassis. Convection cooled amplifier with fan assist under high signal conditions. Linear supply, highly linear output stage. 15kgs. 5 Year Warranty. \$1537.00

**OPAL 1202** As per Opal 2802 but with 175W + 175W per channel RE 4 ohms 13Kgs, balanced inputs, bridgeable, fault & status indication, fully protected. 5 Year warranty. \$1397.00

**BRYSTON** Syntec (02) 9417 4700

**3 B-ST** The Bryston 3B-ST 2 channels offers 120 watts per channel into 8Ω featuring gold plated input and output connectors, switchable balanced XLR

and unbalanced RCA inputs. Also a 20 year warranty. \$2459.00

**4B-ST** The Bryston 4B-ST offers 2 channels at 250 watts per channel into 8 ohms and 400 watts per channel into 4 ohms. The unit features balance and unbalanced inputs, regulated power supplies and a 20 year warranty. \$3739.00

**5B-ST** The Bryston 5B-ST offers 3 channels at 120 watts per channel into 8 ohms. Ideal for powering Dolby Surround systems. Featuring independent power supplies and a 20 year warranty. \$3999.00

**8B-ST** The Bryston 8B-ST can be used as a two, three or four channel amp. Producing 4 x 120w, 1 x 400w and 2 x 120w or 2 x 400w into 8 ohms making for a very versatile amplifier, again coming with a 20 year warranty. \$4699.00

**CREST** Jands Electronics P/L (02) 9516 3622

**CC 151, 301** Professional 350W or 540W per channel; 3RU; Convection Cooled; NexSys computer controlled; IGM, Short, Thermal, DC and Clip Protection. \$3495.00 - \$4695.00

**Pro Series 6001** Heavy Duty Professional; Wide range of power from 200W to 5000W per channel. Fan Cooled; XLR inputs; ACL, IGM, AutoRamp and TourClass Protection; NexSys computer controlled. From \$5495.00

**MAS200** Modular amplifier, choice of output modules. From \$2260.00

**CROWN** Bose Aust. (02) 9204 6111

**Macro-Reference** 2Ch, 4Ω 1160W, 8Ω 780W. Size : 48.3W x 17.3H x 40.6D. Weight : 27.6kgs. Sonic accuracy patented ODEP circuits, P.I.P. expansion compatible, accurately reproduce 20 bit digital recording. \$7063.00

**ELECTRO-VOICE** Mark IV Audio (02) 9648 3455

**7100** 2 Channel, 100W @ 8 ohm, 150W @ 4 ohm per chan. XLR & TRS In puts, Binding Post Outputs, Stepped Attenuators. 44.4 x 48.3 x 325mm, 8.16 Kg. \$1195.00.

**7200** 2 Channel, 140W @ 8 ohm, 230 @ 4 ohm. 88.9 x 48.3 x 406mm, 16.8 Kg. Other specs as per 7100. \$1445.00

**MC² AUDIO** Audiorep Australia 0411 183 158

**MC650** Digital control intelligently monitoring all dynamic parameters, complementary class AB, phase compensated floating drive stage, soft start, user selectable clip limiter and bridging, mute with fade up, optional crossover card, 2 x 650 watts @ 4 ohms. \$3700

**MC450** Digital control intelligently monitoring all dynamic parameters, complementary

class AB, phase compensated floating drive stage, soft start, user selectable clip limiter and bridging, mute with fade up, optional crossover card, 2 x 450 watts @ 4 ohms. \$2700

**QSC AUDIO** A.R. Audio Engineering (02) 9810 5300

**USA400** Two channel. 250w/2Ω, 200w/4Ω, 125w/8Ω. 3RU. 11Kg. Convection cooled. Neutrik combo inputs. Switchable limiter and Low-frequency filter. Short-circuit, Open-circuit, Thermal, Ultrasonic & RF protection. \$1095.00

**1100** Two Channel. 90w/2Ω, 70w/4Ω, 45w/8Ω. 1RU. 8Kg. Convection cooled, XLR inputs, 2 Headphone outputs. Short-circuit, Open-circuit, Thermal, Ultrasonic & RF protection. \$1295.00

**ROSS** Central Musical Instruments (03) 9315 2244

**MEGA TECH 250** 2 Channel, high current reference amp, 125 W RMS per channel into 4 ohms, extensive protection circuitry, ground lift switch, front panel gain controls, peak LEDs, XLR and 1/4" inputs, 1 RU, 22 lbs. \$829.00

**SYNCROTECH** Hi-Definition Syncrotech Systems Design (02) 9417 5088

**SSHD 200** High quality, high definition amplifiers designed to fully

complement the range of KRK studio monitors, providing full bandwidth, low noise, fast transient response with stable imaging. 2 x 100 watts @ 8 ohms. \$1395.00

**SSHD 400** High quality, high definition amplifiers designed to fully complement the range of KRK studio monitors, providing full bandwidth, low noise, fast transient response with stable imaging. 2 x 200 watts @ 8 ohms. \$1841.00

**SSHD 600** High quality, high definition amplifiers designed to fully complement the range of KRK studio monitors, providing full bandwidth, low noise, fast transient response with stable imaging. 2 x 300 watts @ 8 ohms. \$2325.00

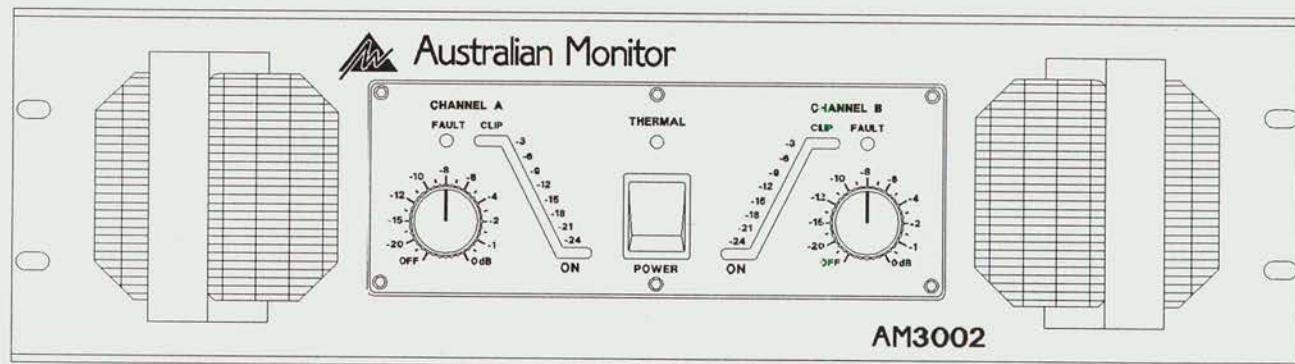
**SSHD 100** High quality, high definition amplifiers designed to fully complement the range of KRK studio monitors, providing full bandwidth, low noise, fast transient response with stable imaging. 2 x 490 watts @ 8 ohms. \$3100.00

**YORKVILLE** Dynamic Music (02) 9939 1299

**SR 300** 2 Channel - 75W (x2) at 8 ohm, 150W (x2) at 4 ohm, 150 (x2) at 2.7 ohm. Built in peak and average limiter. Silent convection cooling, low hum toroidal transformer, balanced in and 2 year unconditional transferable warranty. \$899.00

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Write in Reader Service Number: 127

# BEYOND THE DARK SIDE

## The Ups and Downs of a Pink Floyd Cover Band

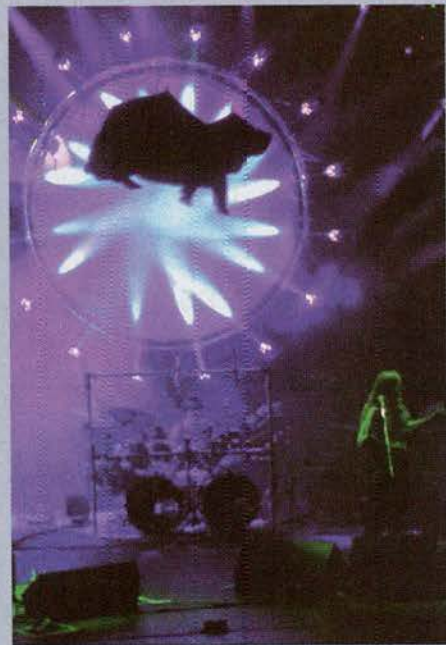
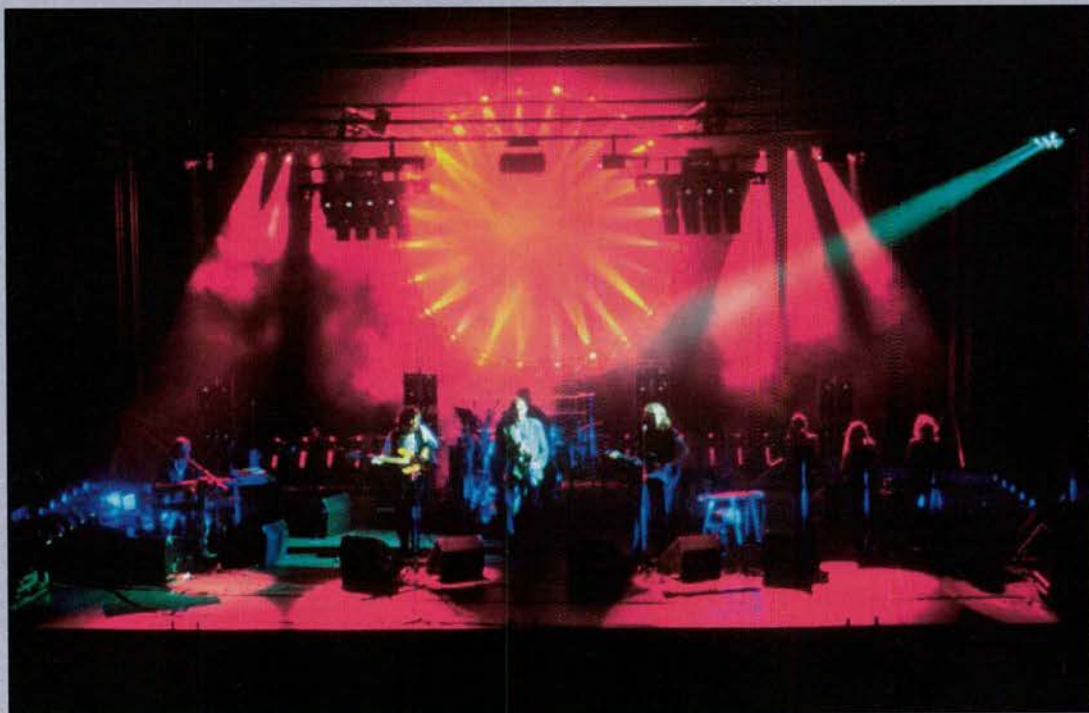
In 1991, an ambitious production appeared on the Australian touring circuit that promised to recapture some of the magic of Pink Floyd.

"*Floyd the Concept*", masterminded by Birmingham-born Kevin Hunt, set out to recreate the visual extravaganza of a Pink Floyd live concert. In 1995, Hunt introduced a new Pink Floyd homage entitled "*Beyond The Darkside*" based on Floyd's *Pulse Tour*.

Sound Engineer Brendan Keen is based at Australian Concert Productions who supply the sound gear for the show. The 1996 tour was the first that Brendan has done for the band and he described it as great fun.

"We had a month of pre-production which we had to squeeze in between all the

other jobs," he said. "We used the JBL Sound Power system from ACP but not with the original subs. A guy here, Brian English, designed and built triple chamber subs which we took out with us. We had eight subs, eight top boxes. For FOH amps we had Jands 920's and SR3000's for the subs. For FOH we had a Yamaha M2000 mixing console. For running



the actual drive rack we had Yamaha 1027 Eq's, DBX RM160 compressors, Brooke Siren FDS 360 crossovers. I was running four separate sends, two FOH and two rear stacks. Effects included eight compressors, eight gates for inserts - one D1500, SPX90 Mk1, two SPX90 Mk2s, and a Rev 7 out front."

On stage were EV150Zs running passive and the amps for them were Yamaha 2201s. A Yamaha 2410 monitor board was used. Microphones were a selection of 58s and 57s plus a couple of M88s.

"There were a lot of hard days on the tour," said Brendan. "We often did like six shows in a row. Set up would take six hours minimum and we could pull it out in two and a half hours. The show runs for three hours in total including a twenty minute interval. The second set we do the whole of *The Dark Side of the Moon*. We had a lot of people think that the advertising video was doctored, they thought we took the real members of Pink Floyd out and put our members in! They didn't believe there was a show like this in Australia."

The tour had its problems. At Margaret River there was not enough power to do the show even though a generator was bought in. The show had to be cancelled as the power kept tripping.

"It was a weird situation where we had an 80 amp circuit breaker on the generator which

kept going not our 64 amp breakers," said Brendan. "The electrician couldn't work it out so we pulled the show as there was a chance of blowing up some lighting gear. In Carnarvon in WA, the venue booked by the promoter was not big enough to get the show in. They had a floor to ceiling height of 4.5m and that's the diameter of our circle which sits 6.2m at the top."

The outdoors show at Broome did not draw as big a crowd as expected and the set up for the show was rather long.

"We had to scale down the grid from 12m at the front and 8m at the back to 8m x 8m," said Brendan. "We had to level the ground and build plates to put the truss legs on. That was a 12 hour set up time. It still looked good outside but the smoke disappeared. Straight after bumping out we drove all the way to Adelaide for one show."

Athol Sargood, lighting designer, is Kevin's partner in the business of impersonating Pink Floyd. Athol started out as a drummer gradually falling into the technical side of touring.

"I worked out that the road crew got paid more than the band did!" he laughed. "I've been with the Pink Floyd show since 1991. It was their first tour and I was doing the monitors as well as driving the truck."

Once Kevin has decided on which Pink Floyd concert they are going to copy, Athol records each song into his Pentium 133 computer,



which has a video adaptor, and then plays the video back frame by frame.

"I take every scene off it writing it down into a spreadsheet program," said Athol. "Going down I've got all my cues and going across I've got all the sections of a light show. I then program the complete show in the Martin lighting control program. It takes four months to program a three hour show. I do a lot of research into what has been done on Pink Floyd shows and what they have built. I find the big things are easy, it's all the little ideas you don't read about. The colour rays out of the *Delicate* show are basically like an Emulator except they shoot out eight beams with eight colour changes on them. I think they were designed by Floyd's LD Mark Brickman and built by Vari-lite."

After a tour in early 1995, Kevin and Athol decided to buy their own gear rather than hire it. They approached Show Technology in Sydney, and through them they received sponsorship from Martin.

"In the course of the five years of doing the Floyd show we've had Coemar robots and Colour Pro's, as well as Emulators and Intellabeams, but the Martin lights are the ones which keep going," said Athol. "They are also the only ones which are small enough to put up huge numbers of them and still be able to rig it safely. I've designed all my own trussing, the circle is 4.5m diameter tri-truss with mounting brackets for the fixtures welded onto the trussing so the lights don't come off the circle and stay in the same position every night. The more lights I can do that to, the less programming and focus I have to do. We can now put 111 fixtures up in four hours."

The lighting gear includes 56 Martin 812 Roboscans; 52 Martin Pro 518 Roboscans; 3 Martin PAL fixtures; 1 high grade 1 to 5 watt air-cooled laser + bench (imported from the US); 4 Pro 2000 smoke machines; 1 heavily

modified Penn System 1000 trussing system; 1 opening mirror ball with a 3kW Q.I light inside; 1 4.5m circular truss and screen; 1 flying space pig with laser pointer eyes; 32 pyrotechnic explosions per show; 1 Sony projector; 2 Panasonic AG4700 S-VHS video players (computer controlled); and 1 34 and 32 amp 3 phase distribution boards.

"Hopefully we'll be on the road again next year although a tour hasn't been confirmed yet because we're in a bit of financial difficulty at the moment," admitted Athol. "It's because we toured the country and no-one believed how big and good the show was. The general public seem to be very disheartened by the Australian music industry. The regional areas don't get the full production. We play places like Mt. Isa, Bendigo and Bussbury."

According to Athol, the public and venue management at their gigs were constantly commenting on how they had underestimated the show and consequently hadn't promoted it enough.

"You spend four months programming a show, build it and no-one appreciates it or believes it," lamented Athol. "We haven't played large cities because it's a three hour sit down show and metropolitan theatres charge so much. We're looking for a major promoter to take the show off our hands, we can't do that part of it as well as everything else. It costs \$10,000 to stage the show every night and we were doing four shows a week. That's \$40,000 we have to find before we make any money. We have a wage bill of \$6000 - \$7000 a week for band and crew.

"The right kind of exposure costs a lot of money and when you're funding the project with family money, it's difficult to keep throwing money at it all the time."

Kevin Hunt sources the material for the projection including a little bit of Floyd footage and animation. Most clips are only about two minutes long and Kevin uses a combina-

tion of video machines and animation programs to create them.

"It's all computerised and linked in with the rest of my system," explained Kevin. "I've got a \$100,000 keyboard rig which basically runs the whole show. I've got all the songs sequenced - I make the sequence sound like the CD by putting everything in from drums, percussion and base. When it comes to show time, I start to pull the various bits out. That way, if I make sure I copy the music correctly I get the feel of the music with the rest of the keyboard lines that have to be put in. Floyd use a mass of technology and have a mass of people doing it but we can't afford that and have to cut corners. We put more into the sequence as we don't have the live players but the whole show runs itself. We press a button

which fires all the computers, lines up the video and sets the samples up. From that point we play along with it. The drummer gets counted in and out with a click track.

"We have our fair share of problems, say when the sampler draws too much power for a certain venue. A lot of places had problems keeping up with us at times. We're right on top off it and we can reset everything if there's a problem sometimes without the audience noticing. Other times I make a joke about it. I've seen Floyd a few times and they have the biggest nightmares in the world too."

Kevin repeatedly told me how much the public loved their show and constantly thanked him for it. Apparently it's the most amazing show most of them have ever seen.

"They come up to me and apologise at the size of the crowd," admitted Kevin. "Most shows we only pulled 250 people at \$35 a ticket. A lot

*continued page 89*



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# ON TOUR

## ROAD WARRIOR FELIX



After writing last issue about getting into a gig, I thought I'd talk a little about what to do once you're in there.

In larger rooms, just roll all the cases in there and arrange them in a neat order, lids open. Place lighting together, stage gear out of the way, amp and racks in place etc. In smaller, tighter rooms, you may want to bring in a case, unpack it and get it out of the way.

I believe the best way to set up is the opposite of how you would want to pull down for a quick get away. Start with arranging trees and truss (if necessary) and putting up PA stacks and wedges. Then run three phase, stage, PA power etc. Next comes multicores, speaker and mic leads, while you're fighting with the lighting guy over space to run his leads, floor lamps etc.

Try to keep sound and lighting leads on different pathways and cross at 90 degrees. I'm a believer in running cables in the most direct and neatest way possible for easy trouble shooting and quick packing up. Pulling up endless pieces of gaff at the end of the night really slows you down, so don't go overboard with it. If you've done a proper job on running your cables, then you should hardly need any.

Luckily most venues these days have two 3-phase outlets for sound and lights (even the little ol' Tathra Hotel), so keep at least one 3-phase extension and one 3-phase GPO converter. If the venue doesn't have a second 3-phase, and the power looks dodgy, find the distribution box and with lights plugged into the outlets, flick the breakers to check how many circuits you have available - 2 x 20 amp circuits is normally enough. Do the right thing and mark these circuits for future crews. Try not to turn off the poker machines as some guy's about to win the jackpot. It has happened.

Setting up your PA of course depends on the shape and size of the room, but here's a few tips.

If you expect a decent crowd, get the mid-hi boxes up as high as possible, at least above the height of punters' heads (and always strap or gaff stacks). It may look silly in an empty room but you'll really appreciate it when it's full.

If you've got enough PA, maybe place a couple of full range boxes inside the main stack for the first 20-30ft of punters. Try to keep the

stacks between say 4 to 6ft in front of the vocal microphones to cut down on feedback. If the stage is low, a row of bar cases across the front, or even some tables laid

on their side and gaffed, can make suitable punter barriers.

How much PA you bring in really depends more on the number of punters you expect than the size of the room. The same size PA can sound quite huge in Revesby Workers and quite dead in a packed Castle Hill Tavern.

Most lighting guys try to bring in all their lights every night, whether it's Quaker's Hill Inn or Central Coast Leagues. I'll probably get in trouble from the lighting fraternity here, but I think it's a waste bringing in a huge light show in a small room, particularly if it's got a low ceiling. No one will notice except maybe the people in the front row. Save it for the real gigs with real stages and put on a killer show then, otherwise you're just expensively heating up the stage.

Multicores I try to fly whenever I can. I keep a stock of 10 cr so hooks for poking into ceilings or on disco bars etc. It only takes one high-heeled show or one chair leg to ruin your expensive multicores, so if you do run them on the ground, stick close to the wall and well away from chair legs.

Placing the front of house is often a difficult proposition. Managements want you to take up as little space as possible, hidden away in a corner. At the General Bourke, front of house is now side of house! In this situation, place a full-range bin or foldback wedge behind you with a FOH mix to stop yourself constantly running out to hear what the mix is like.

You may find a big 'honk' in the normal FOH position, for example at the Fairfield Leagues. In this case, moving to the left or right is desirable. Then again, at the more chaotic venues you might want to barricade yourself into a corner for protection. Experience of a particular room should govern the amount of punter barrier around you needed. Usually the later-night venues need more protection.

If a punter leaves a drink in a silly place (you know where), then stay calm, remove the

## BEYOND THE DARKSIDE

*continued from page 87*



of people didn't realise how big the show was especially as we took it to places not used to seeing something like this. We don't want any misunderstanding next time round because at the end of the day, everybody told us the show was more than worth the ticket price. I can guarantee that when people see our show they'll leave shaking their heads because they can't believe it"

At this point it was obvious that the last tour must have lost a lot of money. I asked Kevin and he was more than forthcoming.

"We lost a fair amount of money on the last tour but we've got assets," he said. "We're in the process of selling some land to pay our debts off. We've just got to keep people a little calm and tell them to wait because it's a sure thing that we're going to get it. It's a sad story but next time everybody, like the newspapers, wants to get behind us. All I've got to do is ride out this rough ride and it will all pay me back next tour. In the mean time people are getting anxious, you know how our business is - they think you're going to rip them off. This is a personal thing for us, we have got ways to cover our funds if they'd just hang on while it's being sorted."

Kevin then told me how he has plans to 'go original' soon.

"I don't want to be a rock star jumping on stage, I want to put on a show which blows people away and they'll love me for it," he said. "I'm a bit shy and I like to hide, like Floyd. This is like an apprenticeship for us. People are always asking me if we have an original CD to sell them. All I care about is the public and they are plaguing me for original material."

Shy? Modest? Never.

● **Cal Forcer**

### Production Personnel

**Tour Manager** Peter Cook **Lighting Director** Athol Sargood **Sound Engineer** Brendan Keen **Stage/Drum Tech** Jeff Hadsley **Lighting Tech** Jason Willy **Lighting Riggers** Craig Schimming, Brett Murden.

### Tour Production

**Stage Equipment** Darkside Holdings **Lighting Production** Darkside Trading **Trucking** Darkside Trading **Sound Equipment** Australian Concert Productions.

## ROAD WARRIOR FELIX

*continued*

drink and politely let them know that you don't go round their house leaving drinks on their stereo or TV. Don't fling their drinks off in disgust; this just incites them to be more stupid. Of course, leave lots of little notes 'No drinks here, please' etc.

At the end, always pack up all of the FOH gear first as this is the most vulnerable, followed by the mics. Then work backwards from the set-up, looking out for broken glass and drinks left on top of stacks and other silly places.

Finally, and most importantly, is the idiot check. It's amazing what gets left behind in the rush to get out of a venue - ladders, lighting desks, drunken band members. Have a REAL good look over the stage, FOH position and dressing room. Let the management know you're leaving and maybe hit them for a six-pack if you're quick. Happy gigging rock on.

Felix has his own company *Danger Sound Production Hire* 015 497 761.

# ROUGH RIDERS

Welcome to Rough Riders an occasional column taking a light-hearted look at Artists' Riders: information sent out to promoters and venues detailing an act's requirements in terms of catering, technical needs etc..

Back in the days when a roadie was referred to as an "acoustic cabinet relocation engineer", a bands Rider usually requested enough beer to keep the crew happy. Meat in the sandwiches was a necessity, anything from tinned spam to pressed chicken was fine, just so long as there were plenty.

On the day of the gig the bandmembers and their couple of roadies cum techs cum drivers (usually somebodies brother-in-law and friend who had been conned into it on the basis they would be swamped with nubile groupies) would show up in the trusty transit van and be thrilled to find that the backstage facilities included running water and a three phase outlet!

How times have changed! Riders are now multiple page documents that request a terrifying list of "must haves" that leave venue staff with their heads spinning. And if these sometimes outrageous demands aren't met the artist has the legal right to spit the dummy and lock themselves in the dressing room. The gig gets cancelled, the audience riot and the venue or promoter get slapped with a law suit!!

I was told recently about a peculiar request from a world famous pianist on a nationwide tour. His Rider was very straightforward except for the request for a dozen crucifixes and plenty of raw garlic. A stunned tech was dispatched to the local greengrocery store and not being much of a chef he was confused when asked how much garlic he wanted to buy; his response was, "enough to circle a 9ft grand piano".

The pianist was apparently going through a paranoid phase and was nervous about evil spirits getting to him when he was performing, so he had this idea that if he draped garlic on the floor around the piano and covered the lid in crucifixes, he would be safe. My advice would have been to have a few more piano lessons!

## Rufus B.

*If you have any wacky or funny requests from artists, please send them in. Remember, no tale is too bizarre!!!!*

Check out the new

# MOVERS AND

# SHAPERS

of the lighting industry



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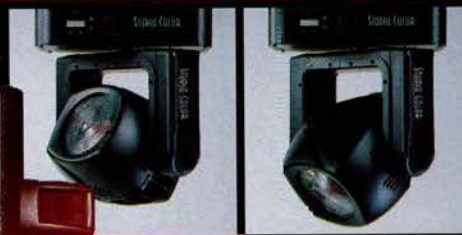


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# LIGHTING MONTHLY

October 1996

Edited by Catriona Forcer

## LXbizzBITS

### PRODUCTS from PLASA

PLASA

Please note that not all products from PLASA are featured this month. Some will be in next month's issue.

#### IMAGESCAN

PLASA

Premiered by Martin at PLASA is Imagescan, a 200 Watt MSD projector which allows the user to project his own images.

These can be ordinary 35mm slides, or large format transparencies, overhead film or



a choice of two standard gobo sizes. Any of these can also be rotated in addition to being animated by the Imagescan's dynamic mirror.

Imagescan runs cool so the material can be changed without switching off and without the need for any tools. It has remote focus and can be operated from any standard controller running DMX-512. Imagescan is expected to be popular as an attention-getter for promotional purposes in shops and stores and for messaging in clubs and bars.

Enquires to: Show Technology (02) 9896 1111.

#### JANDS TOURING DIMMER SYSTEM

PLASA

The Jands Touring Dimmer System is designed to accommodate up to five Jands HP12 dimmer racks.

The system can be factory fitted to suit specific requirements in regards to metering, output socket type, mains inlets etc.

In its most basic form the Jands Touring Dimmer System would be fitted with five HP12 dimmer racks together with the basic power distribution system

In a more elaborate format the System could also be fitted with either an analogue or digital metering module, a master dimmer source patch, up to five output patches, looping mains input connectors, an auxiliary three-phase outlet, and three general purpose outlets. Residual current devices (RCDs) can also be fitted to protect all dimmer rack supplies and auxiliary outlets.

Enquires to: Jands (02) 9516 3622.



## LITTLE SHOP OF HORRORS

### The refurbished Enmore Theatre hosts the latest David Atkins production

David Atkins latest production *Little Shop of Horrors* has been packing them in at the newly refurbished Enmore Theatre in Sydney. Lighting designer Gavan Swift worked closely with Daniel Tobin who designed the sets and costumes.

Production rehearsals were held over three weeks but Gavan told me they were plagued by a series of technical problems and the sheer physical aspects of putting the show in the

Enmore. Gavan admitted he only got, on average, three hours sleep a night during those three weeks.

"It was no-one's fault in particular, it just took a lot of time," he said. "We were running a fair bit behind. The lighting took forever to put in - three days to rig 250 lamps. We had power and DMX problems too. Once it was up, it worked fine. Everything that was supplied, worked first time.

"The first week was devoted to putting the set and lights in, the second week David Atkins started doing blocking calls on stage from 2pm to 10pm and then together we'd start plotting the lights until about 4am. David would then return at 2pm the next day but I'd be in at 8am. I think one night I got six hours sleep and felt atrocious the next day, the next night I got two hours and felt great. I think I was getting conditioned to it all."

Of course being in theatre, not rock'n'roll, Gavan couldn't take drugs to help him.

Because the proscenium arch at the Enmore is 3 metres upstage of the downstage edge of the stage, the upstage bars of lighting cannot fly in. Instead the lights, including scrollers and moving lights, had to be rigged off a tallscope and dead hung at six metres. Further refurbishments at the Enmore include upgrading the flying system.

The rig has two Super Scan Zooms and two

*continued page 92*

## PLASA AWARDS

At PLASA, five awards of Product Excellence and five Commendations were bestowed. The three lighting Product Excellence awards went to: *Avolites* for the **ART dimmer**; *Altman* for their **Par Plus**; and *Lightfactor*, UK dealers for **High End Systems' Studio Color**.



Four Commendations went to lighting products: *CCT Lighting* for the **Freedom** range of profile spots; *ENTC Audiovisual* for the **PIGI Universal Single Scroller**; *Stage Technologies* for the **Acrobat 3D!** computer control system; and *Teatro* for the **Colour Box** colour change and mixing system.



LITTLE SHOP OF HORRORS *continued from page 91*

Golden Scan 3's as well as 28 Colorset Scrollers (10 for the cyc, 10 for the top light and 8 for the side light which is very high due to the position of the proscenium). Three DMX-fadeable strobes are operated from the Expression 2X control desk. Two Voyager long throw follow spots are used. Dimmers total 220, all 2.4K, 100 are house dimmers and the rest are Chameleon's dimmers. Added to these are a heap of set lights, 20 circuits come off the shop itself including six circuits of budlight. Three colour light boxes are in the benches and there are fluorescent tubes.

"Everything that comes on and off the stage has some kind of electrical wiring in it," said

At *Little Shop of Horrors* I caught up with Jason Waide who has started his Barratt Lighting scholarship stint in Sydney and is having a great time.

He has been working on *Miss Saigon* as well as working in Chameleon's warehouse, a good learning experience to see how a rental company of that size functions.

"My first day here I was doing a Suburu corporate gig at the SEC," said Jason. "I walked in and started operating the board on my first day! I've been doing heaps of stuff."

Jason has already had job offers but at the moment he prefers to leave his options open.

Jason is going to spend time at the Sydney Theatre

Company followed by The Ensemble Theatre and maybe Marion St Theatre. In October he's due to go to Brisbane to help with the transfer of *Phantom* into QPAC for Cam Mac. In November, Jason travels to the UK.

Donations are still required, please help. Pledged received last month are:

- VISION DESIGN STUDIO** (Gordon Richmond \$100)
- PETER A. HAYLEN** (\$100)
- ARENA MANAGEMENT P/L** (Arthur Carruthers \$250)
- DON GUNN** (MEAA \$100)
- NETAA** (\$659.13)



Gavan Swift and a little *Audrey II*

Gavan. "There is a little florist pot that is carried on and has random flash strobes plus MR16's in it. The dentist's cabinet has lights inside it."

The spaceship which transports the plant to Earth was made by the set designers brother, Matt, who runs a company with him called Urban Artist. The spaceship is made of spun aluminium and has an Astroraggi built into it's underside. Adapted snakelights and random flash strobes add to the effect.

"It's very cheap and tacky!" Gavan said. "We run three Martin Pro Magnum smoke machines as well as a one Rosco 4500 and two dry ice machines which gives us a reasonably large smoke show. The air conditioning is on for two hours before the show and it's switched off for fifteen minutes before the curtains go up. That way the smoke hangs around. The air conditioning is then switched back on when the show starts, I don't know if it's legal but we do it!"

The Rosco 4500 is ducted up through vent grates in the trap on the stage floor. Getting enough truss and motors were a nightmare for Gavan as every hire company was flat out.

A concert truss was flown out front with its bottom edge level with the bottom edge of the followspot position. A hinge in the middle allows the truss to follow the line of the Enmore roof.

"I got them to put in two end circle front positions which had to be independent of the circle front itself because it's cantilevered and the whole thing wobbles," explained Gavan. "So to save all the lights bouncing, the circle ends are bolted to the side wall with no support on the end near the circle. One Altman Shakespeare is attached to the circle and if someone crosses their legs behind it, it'll wobble."

After the refurbishments (new carpets, seats, paint etc.), the staff at the Enmore had to reinstall the theatre box booms so they ran five permanent circuits to each of them as well as ten circuits to cover the circle front. The orchestra pit had to be excavated further for

*continued page 94*

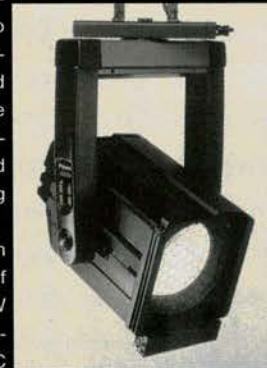
LXbizzBITS

PRODUCTS from PLASA

PIROUETTE



Strand Lighting announces the introduction of "Pirouette", an automated spotlight that brings increased operational benefits to theatres, television studios and multipurpose venues, maximising efficiency and reducing rigging time.



With a maximum wattage of 2500W (2000W at 120V) the fixture uses PC

Spot optics for a

soft edge and low spill light. Beam spread covers from 4° to 58° Also the Pirouette can be adapted for use with a fresnel lens, as well as accepting a 1200W lamp.

The Pirouette uses remote pan, tilt and focus. Precision repositioning, accurate playback, compatibility to any DMX colour scroller and flexible speed control are also features. It is also DMX (16 or 8 bit) or PALS MRL compatible, thus integrating with a wide range of Strand consoles including "430"/"530"/"550" boards, as well as those of other manufacturers.

Enquires to: Bytecraft (03) 9587 2555.

STATUS CUE 3.0



High End Systems released version 3.0 of their Status Cue lighting control software at PLASA. Revisions include Cuelists (with separate clock sources for up to 8 cuelists at one time); SMPTE support; CD-ROM control and clock source; the ability to drag/drop cues and to drag scenes or sequences into Cuelists; support for a wider variety of automated lighting fixtures; and a series of "Shortcuts" designed to expedite complex programming operations.

Enquires to: GUVT (07) 3358 5022.

ETC's SENSOR CE



The ETC Sensor CE is a high specification modular dimming system with basic fault reporting to any ETC console as standard. The Advanced Features option also provides channel by channel information on lamp failures, load changes and dimmer performance.

Dual DMX512 digital control inputs provide failure protection, houselight control or simultaneous use of two control consoles whilst the ETCLink network, which comes as standard on all units, provides feedback between each control module and each rack unit.

Enquires to: Jands Electronics(02) 9516 3622.

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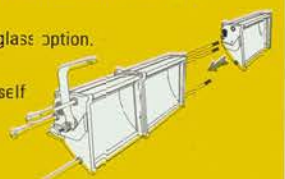
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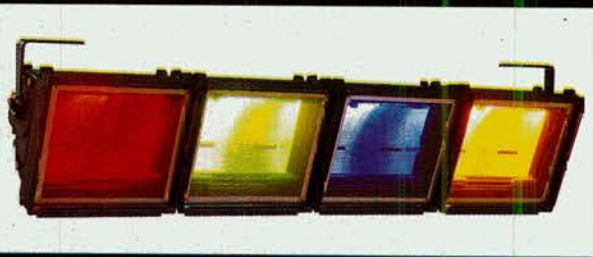
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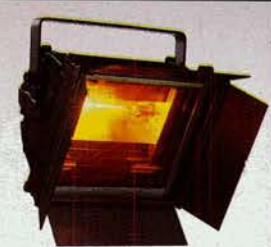
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**SELECON**



**LITTLE SHOP OF HORRORS** *continued from page 51*

the show.

With the small wing space at the Enmore the final Audrey II plant, which is pretty large, is flown. A par can bar has to be lowered before the show to enable the plant to be flown before the bar is replaced.

As it was almost impossible for Gavan to get any decent side lighting, he installed two booms at each side of the stage floor.

Although Gavan's contract as lighting designer had finished when I saw him he was concerned about a scroller problem he had.

"Checking back the DMX transmission speed from maximum to fast, obviously the latest desk I'm using is too fast for the scroller power supply that is maybe a couple of years old," he said. "So I checked back the DMX transmission speed and now the two can talk a lot better and the scrollers move when they're meant too."

The show travels next to Adelaide with plans for it to do Perth and Melbourne in the future. Lighting equipment was supplied by Chameleon and the sound was by Coda Audio.

• Cat Forcer



*Hoisting Audrey II up behind the lamp bar*

**LXbizzBITS**

**PRODUCT from PLASA**

**OPTIKINETICS CATALOGUE**

PLASA

The release of the new Optikinetics Effects Catalogue brings together the image content of two earlier catalogues, the Blue catalogue and the White catalogue. The 75mm (3in) cassettes are shown including two new cassettes, as well as in their component form in 50mm (2in) format for use in the separate gates of the DMX controlled Solar System. The 150mm (6in) wheels are shown as a complete range including two new Wheels "World" and "Weather". The Black and White screen printed 50mm (2in) effects for the Solar System are all listed for the first time.

A significant change is that the 150mm (6in) liquid wheels, the most popular effect in the entire range can now be selected with a specific catalogue number for each of the 5 different colour combinations. This will clearly make psychedelic lighting designers happier.

Contact Lightmoves Technologies (02) 9560 0000.

**FAL 2000**

PLASA

FAL have released a new lighting projector - the FAL 2000 which has two colour temperature correction and a three-facet rotating prism. It utilises an HSD 200 lamp with a 2000 hour lamp life though the advanced optics are supposed to make the output comparable to a 575 lamp.

The FAL 2000 offers: nine dichroic filters (plus white) and 30 dual-colour combinations; four variable speed, bi-directional rotating gobos with three fixed gobos; and a fast action strobe shutter. Control is via DMX512 or automatic music activation. Enquires to: ELSTA (02) 9568 2100.



**RAPTUS**

PLASA

Programmi Sistemi Luce showed several new products at PLASA including the Raptus, designed and built for club and mobile disco applications. Two fast moving mirrors create a twin effect covering a wide area. Fitted with built-in electronics, the Raptus rotates its beam in sync with the music and colours them continually with its built-in colourchanger's high quality dichroic filters. Price is \$990. Enquires to: Black Express (02) 9559 4363.

**LITEDECK 20/20**

PLASA

Litestructure's new LiteDeck 20/20 aluminium staging system is designed to fill the gap in the market between the many light duty stages available and major concert type structures. LiteDeck 20/20 uses an all aluminium frame with the familiar Lite Structures lacing and is finished throughout the exterior in 19mm birch ply. Enquires to: LSC Electronics (03) 9561 5255.

**HAZIE**  
from  
**ROSCO**



The Hazemaker produces a texture in the air where vision is clear under normal lighting and focused beams of light are accentuated. The fluid is water soluble and does not leave oily residue on equipment, filters, and technicians lungs. Self-contained in a sturdy road case the Hazemaker requires no warm up time and is very economical to operate. For further details see your Rosco dealer.

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**LXbizzBITS**

**PEOPLE**

**OLAF DIEGEL AT SELECON**

In an unreported move earlier this year Olaf Diegel joined the R&D team at Selecon as Product Manager.

Olaf's primary responsibilities lie in the refinement of existing luminaires and development of new products.

Olaf has extensive skills in CAD (and sushi tasting) developed during three years working in Japanese theatre venues and he is developing Selecons Web site.

**NEW FACE AT MARTIN PROFESSIONAL**

Highly popular, and a familiar face to everyone in the lighting industry, Pio Nahum has joined Martin Professional. Pio was formerly with Clay Paky.

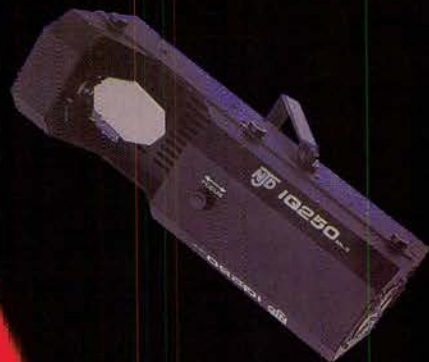
Pio will set up Martin Southern Europe in Bergamo, Italy with a brief to support Martin distributors in the region.





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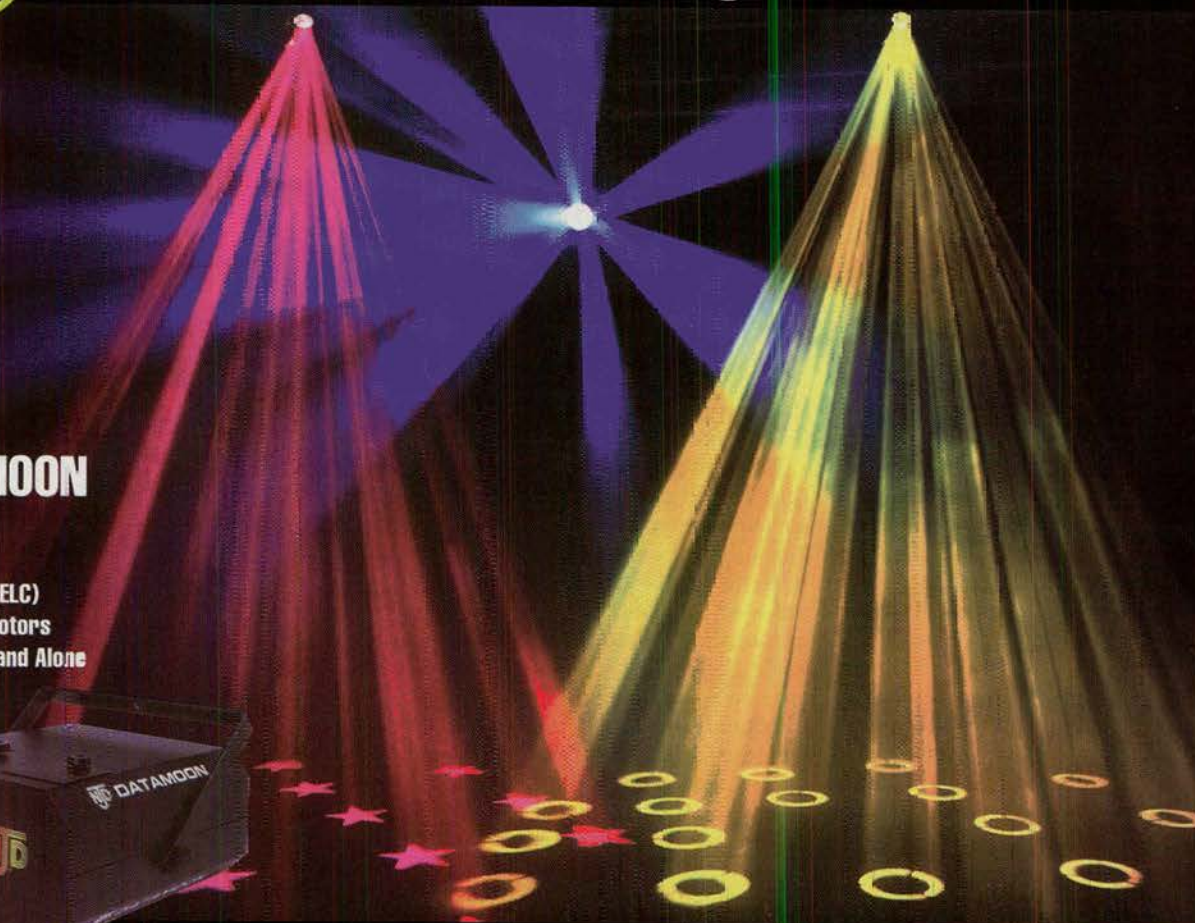
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# PLASA HOT PRODUCTS

## CELCO VENTURA 1000 PLASA

The talk of the PLASA show, according to Caroline Grafton, was the new Celco lighting control console - the Ventura. The Ventura is Celco's response to the demand for fully-integrated multi-purpose show control on a lighting desk.

Although designed to compete head on with the Wholehog 2, Avolites Sapphire and Compulite control desks, Celco have designed additional features into the Ventura 1000. For example, as on-site programming and rehearsal time are generally limited, they have devised a library of defined, animated looks, such as Jungle Greens and Ocean Waves.

"It's a genuine all-purpose desk," said Celco business manager Keith Dale. "While we've made it easier for operators to busk a show in a live situation, we have also included a digital fader and keypad entry with a 'Go' button for theatre operation."

The Ventura 1000 can control 1000 channels of up to 100 automated fixtures, along with 240 dimming channels and 18 playback faders to a single board.

The list of features found on the Ventura also includes 240 dimmer channels arranged over 10 pages, with 1024 DMX channels ar-



ranged on two lines and 16-bit internal resolution, with eight or 16-bit output, depending on the protocol selected.

Built into the memory are 500 multi-parameter cues, with up to three sequences per cue; 99 sequence patterns of up to 99 steps and 99 stack/lists of up to 999 entries.

Four *unconfirmed* orders for Ventura desks have been placed by Australian companies so expect to see them soon.

The Celco stand was also very popular due to the beer they were serving - called The Dogs Bollocks. A certain Australian hire company manager was very impressed by this beer and was seen downing it for his breakfast.

*Enquires to: Electrosonic (02) 9870 7155.*

## OPTIKINETICS K4 PLASA

Optikinetics Ltd presented a new projector at the recent PLASA show in London, the K4, and three new accessories for the K Series of projectors.

The K4 projector is housed in the same aesthetically pleasing, high quality, pressure die-cast body as the K1 and K2 projectors and harnesses the power of the 575 MSR lamp. This provides significant light output for long throw applications or in areas of high ambient light.

Most of the well-known range of accessories, effects wheels and cassettes can be utilised with the K4. Although the 575 MSR lamp provides significantly higher light (and therefore heat) output, the K1, K2 and K4 have been specifically designed to handle the lamps requirements with a huge fan and a series of cooling ducts to separately protect the optical train, lamp and projection gate. Stock graphic wheels and cassettes must have the 575 safe logo imprinted on them to guarantee that they have been made using high temperature glass components.

Of the accessories released the most significant were two Motion Mirrors. They are both designed to fit onto the front rails of the projector and allow an adjustable mirror to consistently and accurately sweep across a selected image area (no programming or controller re-



quired).

The Linear Motion Mirror uses a rectangular mirror, with high or low pitch and adjustable stroke adjustments to provide a straight line movement of the selected image.

The second of the motion mirrors is the Circular Motion Mirror which utilises a circular mirror on an adjustable gimbal mount. The mirror describes a circular path for the projected image. When combined with an image which is rotating the possibilities are endless and further stretch the brain as have proceeding Optikinetics projectors and their image systems.

Other new accessories released and suitable for use with the K Series projectors included a deflection mirror with full tilt and rotation adjustment for which can be used for reflecting images into difficult locations or when hiding the projector is essential.

*For more information on the above products please contact Lightmoves Technologies: (02) 9560 0000.*

## LXbizzBITS

### PODUCTS from PLASA

#### ROBOCOLOR III

PLASA

The compact Robocolor series has always been a top seller in the Martin product range. Recently, the standard Robocolor made way for the Robocolor II with its much improved facilities, now Robocolor III brings the advantages of brighter discharge lamp technology to the range plus the benefits of DMX control and sheds the remote power supply of previous models.

Robocolor III delivers the high color temperature of the 150 Watt HTI lamp which has a rated life of 750 hours.

Robocolor III has 11 rich dichroic colors plus white and blackout. Adjacent colors can be mixed for spill effects and colors can be sequenced at programmable rates from very slow to fast. The controllable shutter can also be used as a highly effective strobe, and the strobe effect is available between neighbouring colors.

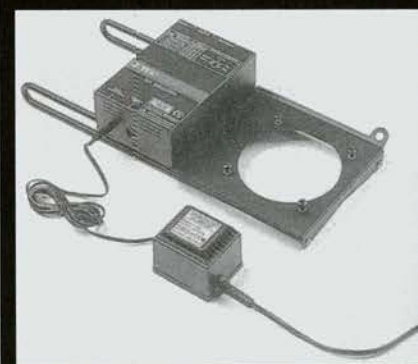
On the control front, Robocolor III is unshackled from the previous shared power supply format, and so can be individually addressed by any programmable DMX-512 controller or Martin RS-485 protocol.

*Enquires to: Show Technology (02) 9898 1111.*

#### TEATRO VERSA-DISC

PLASA

Teatro's new Versa-Disc is a colour wheel and effects wheel aimed primarily at the smaller venues, educational establishments and amateur users.



Principle operation is a microprocessor controlled stepper motor, the spindle of which accepts a small cardboard disc. This disc forms the 'hub' of the wheel which can either be made of a selection of colours, cut into pie-slice sections and taped together, or created from a disc of black aluminium foil.

Versa-Disc is supplied as an analogue control device as standard, with an add-on DMX card as an option. With both control options, the direction of rotation and the speed of movement can be remotely controlled. A hand-held remote control box is also available.

*Enquires to: Lightmoves Technologies (02) 9560 0000.*

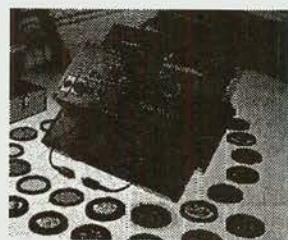
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# NEW BLOOD DOMINATES IES GATHERING

## Entertainment Lighting Firms Take Up Architectural Lighting Challenges

If ever proof was needed that architectural lighting is a brightly burning beacon, then the Illumination Engineering Society New Products Night was it.

IES is an august and long standing body which brings together industrial lighting people worldwide. The Australian and New Zealand chapter is strong, and the new products night in September was well attended.

Firms who once solely concentrated on entertainment and theatrical lighting were out in force amongst the 21 displays in the auditorium of a Sydney club. Products were shown to the several hundred IES members present, then an evening 'show and tell' session ran on the stage. Each firm had four minutes to spruik their wares, then the gong rang. Next...

Dynalite and Q Engineering displayed dimming product, located incongruously next to each other on a trestle. Dynalite executive Guyvan Holden was joined by newcomer Michael Rohanna. Between them was Tony Musico of TCP, in front of him an AMX LCD control. This was the dimming and energy management part of the show. Across the room was a display manned by Peter McKenzie

of ShowLight Australia (Show Technology) - with Clay Paky and Martin automated fixtures drawing some attention. Many of the older illumination engineering types were looking sideways at these, trying not to let on they didn't understand...

Circling proceedings were all the lamp manufacturers, industrial lighting vendors and widget merchants. A bazaar of things electrical. Herkes Electrical Supplies were there too, Wayne Kellet pursuing Selecon business.

Lightmoves had an eye catching display with Optikinetics K1 and K2 projectors, LightPoint ultra violet floods and systems, and fibre optic displays. Jonathan Ciddor says the firm is increasingly working in the design and construction field, joining the architect and the interior designer as the third part in the design team.



Just a few years ago these faces familiar in the entertainment lighting business wouldn't have considered being seen at an IES function. Times are changing, with new ideas and smart people percolating up towards new projects and new markets.

For more information on joining the IES write to: Executive Officer, PO Box 495, Kogarah NSW 2217.

• Julius Crafton

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# BUYERS GUIDE

# FOLLOWSPOTS

## DISCHARGE & OTHER

### STRAND LIGHTING

Bytecraft P/L (03) 95872 555

**Solo CSI/CID** 1kW discharge source with 9°-15° beam angle, produces 2.5 times more light than 2kW Tungsten Halogen version c/w colour frame, iris, strip shutters, aiming sights, external ballast. \$5074.

### LIMELIGHT

Bytecraft P/L (03) 9587 2555

**Limelight 2000W** Xenon followspot for the professional user. Systems include body, electronic ballast, leads, fan-cooled colour changer, lamp and stand. Supplied with Yumex 1500 hour lamp. From \$27,000.



### COEMAR

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

**Testa 1200MSR** Beam Angle 6 - 11.5, 20m - 50m Working Distance, 5 colour magazine option, Smooth Iris, Separate dimming shutter, 18.2 kg weight, 17.1kg ballast, Easy lamp replacement, Standby mode. \$4149.00 ex-tax

**Testa 2500SHA** Beam Angle 7 - 13.5, 20m - 70m Working Distance, 4 colour magazine option, Smooth Iris, Mechanical Louvred Dimmer, 41.3 kg weight, 28 kg ballast, Easy lamp replacement, Standby mode. \$10513.00 ex-tax

### TAS

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

**Inse 1200MSR** Beam Angle 8 - 22, 15m - 40m Working Distance, 4 colour magazine option, Smooth Iris, 13.4 kg weight, 13.2 kg ballast, Easy lamp replacement, Mechanical louvred dimmer option. \$2,121.00 ex-tax

### DOUGHTY

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

**Roller Race Spigot Bearing** mounted spigot to suit most followspots allows for totally jerk-free pan of the fixture. Variable tension allows for custom adjustment. Suits all professional applications. \$260.00 ex-tax

**Professional Followspot Stand** Heavy duty steel & aluminium construction, casters, height adjustable legs fold up storage, excellent stability, suits all professional spots. TBA

**Followspot** 2 stage telescopic, sturdy construction, suits all types of professional spots. \$345 ex-tax.

### SLS

Quantum Efex Pty Ltd (08) 8351 9085

**Follow Me** automated followspot tracking system capable of tracking up to 8 performers with up to 24 moving lights via DMX, MIDI feedback is available to trigger pyrotechnics, par cans, smoke machines etc. P.O.A.

### SELECON

Various distributors, see advert in this issue

**Performer MSR1200** high powered Axial MSR1200 followspot "3335175 CD" 100 foot candles @ 57 metres. 5.5°-9° zoom, mechanical fader, iris, horizontal cutter, hour meter, fan cooled, ATCO ballast draws 7 amps, c/w stand, lamp, 6 colour changer and ballast. \$6240.

**Performer MSR1200 short throw** high powered Axial MSR1200 followspot "1512900 CD" 100 fc @ 38 metres. 10°-15° zoom, all features as per MSR1200. \$6240.

### STRONG

See advert in this issue

**Super Trooper II (NEW)** 2000W Xenon followspot, high powered giving 100fc @ 100 metres. Black 4°-12° linked zoom, mechanical fader, iris, horizontal cutter,

hour meter, fan cooled, hot restrike, 190-240v electronic ballast 25A c/w stand, lamp, 6 colour changer and ballast. \$19,000.

**Gladiator III** 3000W Xenon followspot, high powered giving 100fc @ 141 metres. Black 3°-10° linked zoom, mechanical fader, iris, horizontal cutter, hour meter, fan cooled, hot restrike, 190-240v electronic ballast 30A c/w stand, lamp, 6 colour changer and ballast. \$24,000.

### LYCIAN

Jands Electronics P/L (02) 9516 3622

**SuperArc Model 1267** long throw followspot, HTI 400/24 lamp 5600degK. Truss or stand mount. Internal PSU, 7 colour internal magazine, uniform flat field, adjustable brakes for pan and tilt, coated optics, nichrome steel iris. \$16,495 inc. tax and stand.

**SuperArc Model 1266** medium throw followspot, HTI 400/24 lamp 5600degK. Truss or stand mount. Internal PSU, 7 colour internal magazine, uniform flat field, adjustable brakes for pan and tilt, coated optics, nichrome steel iris. \$14,495 inc. tax and stand.

**Starklite Model 1272** 1200W MSR HMI lamp. Stand mount. Internal PSU, automatic self cancelling, 7 colour internal magazine, uniform flat field, adjustable brakes for pan and tilt. Gobo slot accepts rotator, internal space for board operated options. \$15,995 inc. tax and stand.

**1290XLT** 2kW Xenon long throw, dichroic 'cold mirror' reflector, optional grade lenses. Gobo slot. Nichrome iris, single lever trombone, left or right handed. Ammeter, Hours meter, self

contained PSU. \$25,995 inc. tax and stand.

### CLAY PAKY

Show Technology (02) 9898 1111.

**Shadow** available with HMI 575 or HMI 1200 lamp for projection distances up to 50m in both normal and wide angle versions. Features built in control over: colour selection; rotation; iris; dimmer; strobe effect and colour correction. \$5900.

**Shadow QS** has built in control panel as well as remote control from any desk. More than one Shadow QS can be controlled simultaneously via the Dip switch on each spotlight. Short and long throw versions available. \$9488.

## CONVENTIONAL 2K & OVER

### SELECON

Various distributors, see advert in this issue

**Performer Quartz 2500** medium throw 2500W tungsten followspot "520200 CD" 100 fc @ 22 metres. 80-140 zoom, mechanical fader, iris, fan cooled, c/w stand, lamp, 6 colour changer. \$3300.

### STRAND LIGHTING

Bytecraft P/L (03) 9587 2555

**Solo 2000W** tungsten halogen with 9°-15° beam angle c/w colour frame, blackout iris, horizontal strip shutters, aiming sights and spigot. For theatre and TV applications. \$2932.

### COEMAR

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

**Testa 2000** Beam Angle 5.5 - 12, 15m - 35m Working Distance, 5 colour magazine option, Smooth Iris, Separate dimming shutter, 20.5 kg weight, Easy lamp replacement, Complete with lamp. \$3142.00 ex-tax

**Testa 1000/1200** Beam Angle 7 - 13, 7m - 25m Working Distance, 5 colour magazine option, Smooth Iris, 17 kg weight, Easy lamp replacement, Complete with lamp. \$1788.00 ex-tax

### TAS

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

**Inse 1000/1200** Beam Angle 8 - 22, 8m - 23m Working Distance, 4 colour magazine option, Smooth Iris, 12.8 kg weight, Easy lamp replacement, Convection cooled - completely silent. \$1096.00 ex-tax.



### PROLITE

Various (076) 327 312

**PR12-FS/2K** 2000W compact follow spot (small size - 6" lens). Price includes colour magazine and fan cooling. Stand is \$185 extra. \$1225.

**PR22-FS/2K** 2000W full size follow spot. Price includes colour magazine and fan cooling. Stand is \$185 extra. \$1375.



**BUYERS GUIDE**

**FOLLOWSPOTS**

**CONVENTIONAL UNDER 2K**

**SELECON**

Various distributors, see advert in this issue  
**Chorus 1200 Quartz** short throw 1200W tungsten followspot "310000 CD" 100 fc @ 16 metres. 8°-16° zoom, iris, c/w lamp. \$1250.  
**Chorus Condensor 1200 (NEW)** short throw 1200W condensor followspot "3347900 CD" 100 fc @ 18 metres. 9°-21° zoom, iris down to .5°, condensor projector optics for gobos c/w lamp. \$1299.

**PROLITE**

Various (076) 327 312  
**PR12-FS/1.2K** 1200W follow spot with colour magazine and fan cooling. Stand is \$185 extra. \$1035.

**STRAND LIGHTING**

Bytecraft P/L (03) 9587 2555  
**Cantata** 1200W tungsten halogen followspot with 11°-26° beam angle c/w blackout iris and spigot for stand mounting. Ideal for smaller venues, schools and clubs. \$1422.

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**Minuette Pursuit** 650W condensor source complete with blackout iris. Suitable for left hand and right hand operators. Ideal for schools and small auditoriums. \$900.

**LYCIAN**

Jands Electronics P/L (02) 9516 3622  
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Ashton Admor Pty Ltd (09) 479 3800  
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**Next Months Buyers Guide: Fog Machines**

**Dynalite Refresh Range**

**Intro Ballast Dimmer CE Compliance Across The Board Prompts Improvements**

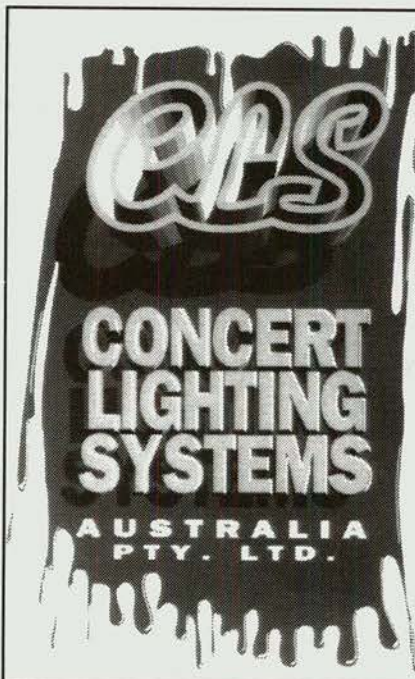
Sydney based dimming and energy management firm Dynalite, run by John and Jenny Gunton, has relaunched its entire range this year to conform to strict new EEC regulations. Dynalite has a growing European export market so CE compliance was always on the cards.

New for the firm is a Sinewave Voltage Controller otherwise known as a dimmer for ballasted and difficult loads. This is a two channel unit offering 2 x 10a loads. Dimming metal halide and fluorescent fixtures is possible, control can be either 0-10v analog or via DyNet™, the firms proprietary protocol. DyNet can be bridged to LON networks via a Dynalite DimTek gateway.

Dynalite have moved closer towards AMX control systems. Having always offered AMX compatible dimmers they have recently moved away from producing their own LCD touch panel controllers. Increasingly AMX installations feature Dynalite dimmers and switching products anyway, they say.

A parallel but related market for Dynalite is Smart Home control, where virtually all the electronics in a house are centrally and even remote controlled. Security, heating, air conditioning, irrigation, stereo, video and other things can be turned on, off and even operated via the system. Dynalite say a 3 bedroom home could become a Smart Home for as little as \$2,500.

• Dynalite: (02) 9319-5055



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# Free Radicals

The Sydney Dance Company's latest offering travels to the Brisbane Festival

Free Radicals is the latest work by the Sydney Dance Company and it has just finished a successful run at the Brisbane Festival. Lighting designer was John Rayment (one of last years Entech Award Winners) who needed a rig that could tour easily as he explains,

"The show needed to tour easily and efficiently particularly for Europe and the American market," he said. "We need to comfortably get the show up overnight. Consequently the rig is much simplified and, horrors of horrors, Par cans have found their way into my rig. That's because they're very quick to focus."

The set design incorporates a large wall surround which can fly up easily. In the Drama Theatre at Sydney Opera House, the trim reached the ceiling, about 19.5 meters, but at Brisbane it was trimmed at 13 metres.

"It's designed to be light and airy," John said. "I've done a lot of work to ease the set up. A lot of stuff is lit off the floor with low voltage gear and dichroics rigged in series to give a 120 volt pull. I've put transformers on them so when we go to Europe or America, we can take them off and they'll work straight off the 110. I use them like side beams because with a full semi-circle wall surround going up to 13m you don't get a lot of side light in. Basically there's a lot of top light giving big shafts in the air - the design is in the air."

On the floor there are also Par cans in little cradles that can be used like floor followspots by the dancers. Booms with dichroic lamps on fishing rods add a surprise element.

"Not every theatre we go to will have a fly tower so it's designed to be up static," said John. "There are no moving lights or scrollers to give you grief in the set up. Apart from nine specials and the gobo wash, it's really all just black. But stylish black of course!"

The dancers move the lights around themselves including the six 2m high booms which can be used for cross light or back light. John said that the first part of the design of the show is the 'toys' that he gives Graeme Murphy to play with.



"He choreographed with them well before the lighting design of the piece was created," said John. "Graeme is great like that. It stretches back to *Synergy* when we were using cherry-pickers for followspots on the stage. He tried to choreograph a dancer with one, a pas de deux, but a cherry-picker doesn't move well musically!

"It's an abstract work which is harder to get a handle on than say *Fornicon* or *Eerlin*. Finding the initial idea is difficult."

Greg 'Possum' Knowland is the touring tech.

At the Brisbane Festival, John did the master rig for all the visiting dance companies - Sydney Dance Company, MOMIX, Parsons Dance Company and Meryl Tankard Australian Dance Theatre.

"The Festival was just manic," laughed John once it was all over. "You're on your feet the whole time. With the four companies and the Dance Gala - a once-only performance bringing all four dance companies together devised and directed by Graeme Murphy, it was massive. I was still sitting in the Lyric Theatre auditorium trying to plot lights for the Gala at 7.40pm. It was supposed to start at 7.30pm! There were 2000 people in the foyers. We had to make the rest up as we went. While we're doing one act, I'm throwing groups of chan-

nels onto submasters on the Avab so that I can wing the rest of the show with 12 submasters.

"What was wonderful about it was the celebration of the art form and the willingness of all the dancers, technicians, and people to make it happen. Some people didn't even get a tech rehearsal onstage. I must give the highest praise to the Lyric Theatre technical crew. I don't think we would have been able to do the dance festival, and certainly not the Gala, without them. We worked from 8am until midnight on the Gala day and nobody got even a meal break. They were just magnificent."

• Cat Forcer

Photo: Branco Galca

## PARSONS DANCE COMPANY

The nine member Parsons Dance Company presented several works in Sydney and the Brisbane Festival. David Parsons himself choreographed and danced a piece called *Court* which used a strobe in an extremely effective way. Basically David appears to never touch the ground as he triggers the strobe himself but only when he's in the air. You never see him touch the ground - a choreographed set of freeze frames. The difficult part is getting himself into the freeze frames and musically.



Photo: Lois Greenfield

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# Pulp Opera

Tasmanian company IHOS stage their latest performance in a saw mill



Tasmanian based IHOS Opera tend to pick unusual venues - factories, wharf sheds, railway yards and concrete tarmacs are all ideal. In September they premiered their new work *Pulp*, staged in a vast factory shed in Burnie, on Tasmania's north-west coast. *Pulp* was commissioned by Amcor's Australian Paper to celebrate the 60th anniversary of the paper mill. The company managers wanted to mount some kind of performance on the mill site and to involve as many members of the community as possible.

IHOS were the ideal choice as all their productions have been staged in cavernous wharf sheds. Con Koukias, co-founder and artistic director of IHOS, favours the acoustics and space in these post-modern industrial sites.

Lighting designer Jan Wawrynczak has the difficult task of working in these environments. Jan has an extensive background in all aspects of theatre. In Adelaide he ran Youth Theatres and Community Theatre where he started doing lighting design out of necessity because there was no budget to employ anyone.

Since then Jan has worked with several companies across Australia and Europe, also as an organiser/producer.

"I like to operate my own designs as I like to see what's actually happening," said Jan. "Because I'm using computerised boards there are always things going on which are not right for you and you what to alter it. There's a lot of manual over ride to do. I have less interest in lighting straight theatre shows. With IHOS I'm one of a creative team and there's a whole process of negotiation as to

what's going to be seen or heard.

"Because the environments we work in are so hostile with unsuitable resources, I opt for using a lot of Par cans," said Jan. "Mainly it's because of the intensity of the light and the fact that you can paint with them as you go. They're also very rugged, not many accidents happen with them. Typically we'd go into a shed after having worked out what is going to happen, and then decide where we can put lighting bars. We end up putting a lot of Par cans in different places in the hope that there will be enough of them to produce enough different quality of lighting to create images. They rely on the distant perspective you get in a shed because sometimes the audience is 200m away from what's happening. If you have enough lighting sources you can use them on a very low level and create half-light effects. The dark parts are also a lighting effect for me."

Usually Jan doesn't see the venue before they start rigging but as this is the fifth show he has done with IHOS, there are similarities he can rely on. He knows that there are things that are likely to go wrong or change. The one thing that nearly always catches him out is the number of electrical leads required. In *Pulp* they have rigged close to 4km of leads and they have to be all done by hand due to the nature of the spaces.

"I know what elements there will be and what sort of action will take place," Jan said. "Power is a big issue. In this show we've been lucky because we've been speaking to the pulp mill for quite a while. I told them I wanted 600 amps per phase and they fell over in their

## LXbizzBITS

### PRODUCTS

#### ALTMAN UV-703

PLASA

The Altman UV-703 is a 400W Ultra Violet fresnel developed for use in specialist applications where a highly concentrated, yet accurate beam of Ultra Violet light is required. By utilising the fresnel lens the luminaire gives you control and accuracy of the beam, whilst the 400 watt lamp ensures a high output of Ultra Violet at all times. Enquires to: Chameleon (02) 9310 5333.

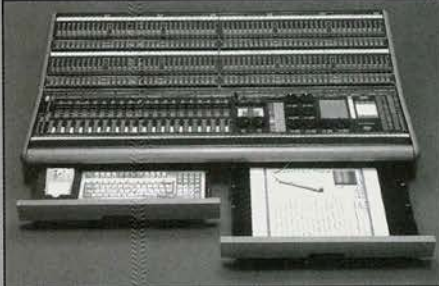
#### DIAMOND III

PLASA

Retaining the most popular features of the Diamond II, the new Diamond III from Avolites has 3,072 channels, control of up to 400 moving lights and 120 faders of generic control. One of the major features is the large number of directly accessible preset focuses.

The parallel access palette of gobos, positions, effects etc., can be applied to any fixtures or groups, making a 'fluid' programming tool.

Enquires to: LSC Electronics (03) 9561 5255.



#### ADMIRAL PARSAFE

Ever had a shock or a burn adjusting a Parcan? The 'Parsafe' provides a solution to discomfort and potential hazard faced when aligning a PAR lamp.

Now available ex stock in Australia from Herkes Pro Lighting or your Selecon dealer, the Parsafe can be fitted to all professional PAR 64 fittings in a matter of minutes. The Parsafe places



the GX 16d lamp base inside a polycarbonate heat resistant housing which also houses the wiring connections.

A fitting using Parsafe satisfies safety regulations EN60835-1 and EN60598.

#### JANDS DD-8

New from Jands is the DD-8, an opto isolated DMX512 splitter designed to provide distribution of one DMX input to eight opto isolated DMX outputs. Enquires to: Jands Electronics (02) 9516 3622.



chairs. I also said I wanted it in three places along the shed because if you don't split up the distribution, you end up running incredibly long lengths of leads. Fortunately for us they did all this."

The last show IHOS did was *To Traverse Water* at the Melbourne Festival where some of the leads were over 100m so there were lots of

voltage drop problems. Safety is an issue with electricians on site during the bump-in. The show *To Traverse Water* flooded part of the shed and so great caution was undertaken with the electrical components.

"We always give a safety talk to the cast," said Jan. "A number of us check gear before every performance and that seems to work. In terms of the loads on power, that's been worked out in advance so we don't generally have a problem with that."

Other lighting sources on *Pulp* included arc welders, angle grinders and fuoro tubes. A few theatre lights are used for minor effects but basically the Par cans do the job. A Jands Event Plus is used for control.

"I like to have a desk I can run totally manually," explained Jan. "Although I program scenes, chases etc there are a lot of occasions where I like to ride the faders myself. In fact whole segments of this show are me improvising on the desk."



Heavy duty smoke is required in these types of venue and is an ongoing issue for Jan. Each shed is completely different and, depending on the weather conditions and the barometer, a decision is made during the day as to what is used. For *Pulp*, conditions are quite good and so two F100s cope with the task of filling the shed and retaining the smoke. In Melbourne with *To Traverse Water*, six smoke machines and a large oil cracker were needed and they still lost the smoke in fifteen minutes on one occasion.

"We don't always want to focus on the fact that we're in a shed and so the smoke allows a concentration on what's happening," said Jan. "You can use lower light levels too because of the reflected light off the smoke."

Lighting equipment was supplied locally by Toucan Lighting as well as CLS and Phase Shift in Melbourne.

• Cat Forcer

# LXbizzBITS

## PRODUCTS

### SUPER OVATION

Super Ovation consoles are now available with several new features. An internal hard drive storage compliments the current floppy drive for permanent installations. Ethernet communications allow for full access or inking of consoles, monitors and remotes throughout a venue for multi-site access and communications. Increased channel configuration - up to 1536 control channels to 1536 dimmers + an additional 512 moving light channels on top of this when using the Moving Light Acceptor wing

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Enquires to: Coemar De Sisti (03) 9467 8666.

### DISCOVERY 400 HTI

This powerful scanner is suitable for large pubs or clubs and features a 400W Arc lamp with a long life.

The Discovery features the following: 10 colours (9 dichroic, 2 split colours plus white); roto colour spin at 16 speeds; 20 unique gobos; strobe effect in 6 speeds; pan and tilt micro stepped for smooth movement; and control is via Serial RSP or DMX/MIDI

converter 16 channels of control. Price is \$2,699 inc. tax.

Enquires to: Disco World (03) 9735 0588.



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# LXbizzBITS

## CONTRACTS/ NEWS

# WA Rock'n'Roll Eisteddfod

### Jaqueline Molloy braves thousands of excited school kids

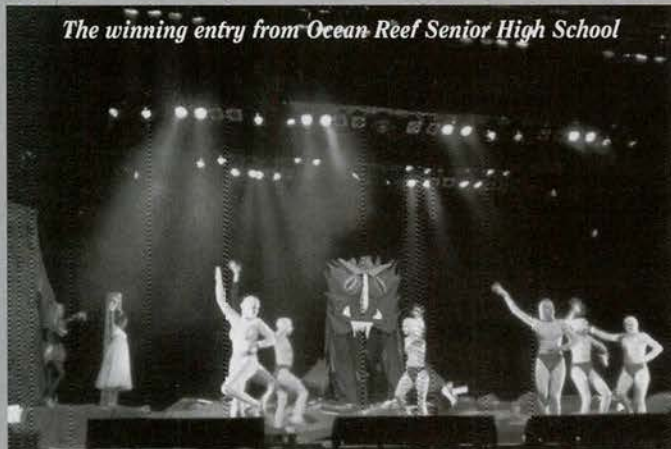
It's 7:30pm on a Saturday night and there's a capacity crowd at the Perth Entertainment Centre. The house lights go down and the hysteria starts, 8,000 people stamping their feet or screaming their heads off. The curtain is about to go up on a phenomenon that has kept teenagers in a frenzied state of anticipation. It could be any band that is the current hot favourite, but it's not. It is however, the finals of the 1996 WA Rock'n Roll Eisteddfod.

To be eligible to enter, a school must create a dance/theatre based performance that can be up to eight minutes in length. It must be choreographed by a student or group of students with teachers only able to act in an advisory role. Scenery, costumes and lighting must be designed by students but kept parents and teachers may help with the building and sewing. This is serious business for some schools to the extent that eisteddfod activities appear on the curriculum.

Props and scenery may be conceived and built during art classes while the performance theme, choreography and music choices are part of theatre arts. Some schools put so much energy into the Eisteddfod they only enter every second year.

There is a prize for the school judged to give the best overall performance and prizes for the best lighting design, best stage manager and best backstage crew. Many of the students who perform these roles intend to make it their career, hoping to study at one of the institutions around the country that specialise in technical theatre and design.

Ten schools make it through to the finals from



the forty or so that enter and there is an intense week of heats before the finalists perform before a sell-out house. Eight schools are booked in each day for the heats and from 9-11am the crew hang the scenery required for that day, with each school permitted to use two fly bars.

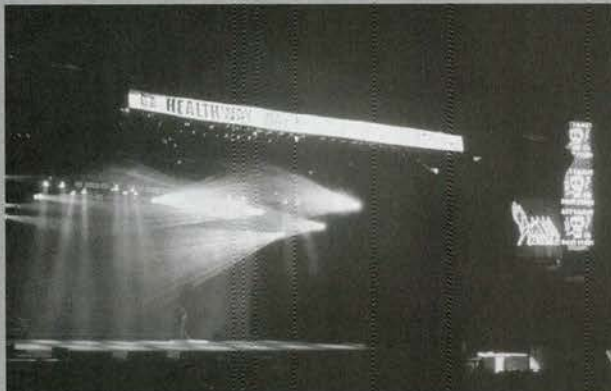
Lighting Designer Steve Wickham, has the unenviable task of designing a rig that can allow up to 40 student lighting designers plenty of variety. He sends the students out an information sheet and encourages them to ring him if they have any unusual requirements.

"The students always request things like strobes, UVs, and mirror balls. The first year there was only sufficient lighting budget for 60 parcans but as the Eisteddfod has grown so has the budget. We now have the budget for a generous standard rig with side light, top light etc plus some extras like a few 5ks, colour-scrollers and robotics. It's a pretty flexible rig".

Robotics have been a standard part of the rig for the last three years and house electrician Steve Saunders, operates the Scan Commander desk which controls the 12 Super Scan Zooms. The robotics are popular with the students but there is barely enough time to plot two or three unique sequences for a school. Alternatively the student designer can choose from a pre-plotted series of sequences which Saunders has devised.

In addition to designing the rig, Wickham judges the lighting design award and has done so since he started working with the eisteddfod six years ago. Now based in Sydney, he travels back to Perth each year for the event.

"The first year I did the Eisteddfod, I sat at the pre-



### PLAYHOUSE GALAXY GOES WEST

When the Galaxy lighting desk in the Playhouse at the Victorian Arts Centre was replaced with a Strand 530 system, the retiring Galaxy was not given a moments respite before being whipped off to the West Coast and installed in the Main Theatre at the Western Australian Academy of Performing Arts. Former Victorian Arts Centre Trust General Manager Sue Natrass arranged for the gift of the much loved desk to WAAPA as part of the system upgrade. Bytecraft's Darren Irving and Joe Krnjak de-commissioned and reconfigured the Galaxy to suit WAAPA's system prior to sending it West. But before Academy staff could even look at their desk, parts of it were ripped out of crates and loaned to His Majesty's Theatre after an electrical storm partially disabled the Maj. Galaxy. The photo shows the Galaxy in its new home as WAAPA's Andy Ciddor explains to lighting student Alison Sewell why he thinks that the "THRU ON" button is the greatest thing since sliced bread.



### LIGHTING UP PAPUA NEW GUINEA

Entertainment Lighting Supplies on the Gold Coast recently exported several Abstract lighting effects including Abstract Futurescan 2 CEs, Twister 3s, Galactic Moons, Wildstars and Monster Moons to a nightclub in Papua New Guinea. Enquires to: ULA (07) 5532 9922.

### FRONTIER PURCHASES

Frontier Lighting have recently purchased 5 Clay Paky Water columns that were exported to New Zealand. Frontier also purchased large quantities of Geni Shimmers. Enquires to: Frontier Lighting 0419 888 710

### CASULA ART GALLERY

Herkes have sold Selecon display lights to the Casula Powerhouse Gallery in western Sydney. This is the second gallery to use these recently released specialist display units.

### SELECON ON THE NET

Selecon have embraced the 20th century and have a web page and E mail address. Home page address is: <http://selecon.co.nz/~selecon>. Email address: [selecon@selecon.co.nz](mailto:selecon@selecon.co.nz). Simon promises to change his photo due to complaints.



## THE LX MONTHLY NEWS

duction desk from 8am to midnight without a break and I vowed never to do it again, it wasn't worth the pressure, but they asked me back and six years later I'm still doing it. It is much more organised now from a production point of view and that takes some of the stress out of it."

Wickham recognises that the student lighting designers can be a bit overawed at having access to such a large lighting rig. "I try to be patient and take into account that some of these kids have little or no lighting experience".

In fact some of them, like Ashley Porter from Bunbury Senior High School, have never even seen a lighting desk before. He said, "We have some lights in our performance hall but you can only switch them on and off and that's it. We couldn't do anything with a lighting board even if we did have one."

To raise money for costumes and sets Porter's school gave a public performance of their eisteddfod piece in their tiny school hall without any lighting. They charged fifty cents for admission and to augment their funds sold chocolate bars around the school.

Each school is allocated 30 minutes of stage time during the heats in which to do a spacing run and two complete runs with music, lights, scenery and props. Plotting the lighting is very intense and limited to about ten minutes. Each student lighting designer operates the desk for their piece and with the time pressure the experience can be a fraught one.

Wickham sits patiently next to the students encouraging and talking them through problems. He is also within easy reach of the desk masters in case of an emergency. With the students having such varied backgrounds Wickham's input varies enormously. He may have to virtually plot the piece or sit back and let the experienced ones take enthusiastic control. For this reason it is not always the best looking lighting that Wickham gives the award to.

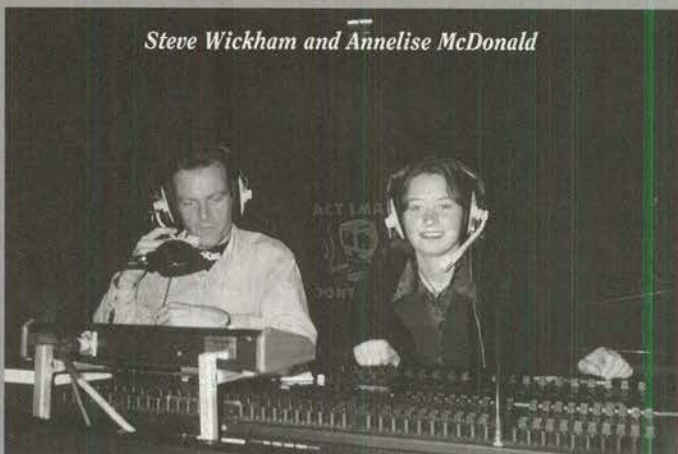
"I have to consider how much input the student actually had into the lighting and how much I had. I look for the students who show some flair, who have thought about how they want their lighting to work with the performance piece and I also take into account how they operated the desk".

A Celco Series 2, 60 channel control desk is used and each student is allocated 10 sub masters and it is up to them how they use them. Those who are more experienced use them in the conventional way with a different

cue recorded under each fader. Other designers use them to store different colour washes. There are also eight chases available plus the flash buttons. If a student is confident they will operate their own chases if not, Wickham lends a hand.

Last year Wickham held lighting workshops for all 45 schools who were entering the eisteddfod, an activity he found useful but time consuming. "I managed to teach them some basics such as it's not a good idea to light dancers wearing red costumes with red light and then put them against a red cyc. The workshops were beneficial but at the end of the day there is still only ten minutes to plot!"

The winner of the lighting design award this year was Annelise McDonald, a 17 year old



Steve Wickham and Annelise McDonald

student from Ocean Reef Senior High School. McDonald lights most of her school's productions and hopes to study something to do with performing arts, possibly lighting. The title of the piece was "Ocean Dreams" and was lit in a melodic low key style, using mainly blues and lavenders. "I wanted to give a peaceful blue ocean look but with threatening clouds to show all is not well".

Wickham was very impressed with her subtle and theatrical style. "Her lighting was lyrical and a bit different to some that have a lot of colour changes, chases and employ a lot of effects, which is not necessarily a bad thing but it's great to see something more subtle. It challenges the other students to think about their own approach when they can see beautiful and appropriate lighting that doesn't rely on a lot of changes or movement."

After sitting through several hours of watching the finalists rehearse I was amazed at the level of skill and energy the students exuded. Some of the scenery, lighting, costumes and choreography would not have been out of place in a professional production. Quite a contrast to the last school production I took part in, where I thought it was a thrill to wear a red crepe-paper skirt stapled to a black leotard and the set was constructed from used cornflake packets.

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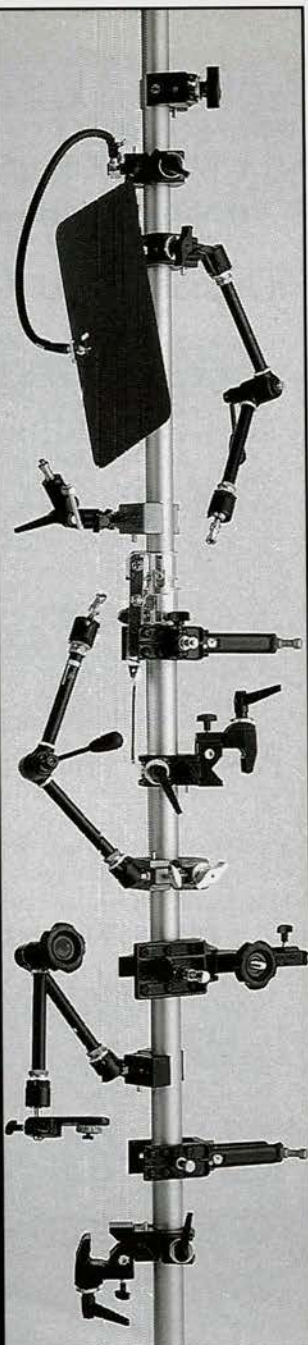
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## Irideon AR5 wins Award



At Lightfair International in San Francisco, the Irideon AR5 interior wash luminaire was named the 1996 Best New Product.

The Irideon AR5 colour changing luminaire represents the state-of-the-art in specialised indoor floodlighting. It features a patented, computer-controlled, dichroic colour changing assembly and robotic pan and tilt, and an optional diffuser or douser mechanism.

The radial colour changer has permanent dichroic filters to produce smooth colour crossfades through the entire colour spectrum.

User replaceable lenses provide a wide range of beam spreads from 7.5° to 60°. Automated beam control is available via either diffusion or dousing time variable adjustments. The diffusion mechanism provide precise and dynamic control of the beam distribution. The douser mechanism provides full-field dimming of beam intensity.

The AR5 luminaires controlled by Irideon composer control system which allows system configuration and programming from an IBM compatible PC. The AR5 luminaire can also be controlled by a DMX512 controller via an Irideon interface.

*Enquires to: Inlite (02) 9417 3422.*

## LATEST DEVELOPMENTS WITH TUNGSTEN HALOGEN LAMPS

Osram Australia supported by IES of Aust. and NZ (NSW) cordially invites you to a seminar on this topic.

Speaker is Dr Peter Dobiasch from OSRAM GmbH Germany. Key topics to be covered during the seminar will include:

- Existing Tungsten Halogen lamp technology
- Recent developments with Tungsten Halogen lamps
- Future directions

*Date: Thursday 28th November 1996*

*Time: 5.30 for 6.00pm*

*Venue: Pacific Power Energy Services, 172 Silverwater Rd, Silverwater NSW 2141.*

To book your seat, talk to Nicole Ross at OSRAM Australia, on (02) 9481 8399 before 22nd November 1996.

# LXbizzBITS

### CONTRACTS/ NEWS

#### PASSIONATE BLACK EXPRESS

Black Express have been involved in the fitout for the new Passion nightclub in Sydney. Martin gear used included: 8 x Pro 1220, 4 x PAL, Club 20 Smoke Machines and a host of other effects. The boys have also supplied extra PRO 400's to Petersham RSL.

*Enquires to: Black Express (02) 9559 4363.*

#### JANDS HP DIMMER RANGE

Jands Electronics' assembly line is clocking up the hours trying to keep pace with orders for the Jands HP dimmer range. The four weeks from mid August to mid September saw the delivery of over 100 units of HP dimmers to local and overseas customers alike.

*Enquires to: Jands Electronics (02) 9516 3622.*

#### GOING KOSMIC

Kosmic Electronics in Perth sold 10 x Abstract Futurescan 3 CED's and a Numark DM 2160 mixer among other products to the new look Floyd's Nightclub.

*Enquires to: ULA (07) 5532 9922.*

#### CHEERS TO TCP

Total Concept Productions have just provided Cheers nightclub in Campbelltown with 8 x Golden Scan 3's, 4 Studio Due Predators and 2 x CP10 controllers.

*Enquires to: TCP (02) 9648 3444.*

#### CHAMELEON TOURING SYSTEMS

Last month was a very busy month for Chameleon after using 12 x Martin PAL's and Martin controller for the Kosta Tsyzu fight. The Darling Harbour launch of the Olympic 2000 logo was highlighted with Studio Due Magnum. The big project is the production of The Hunchback of Notre Dame, it will be the first Australian production to use the brand new Martin MAC. The 10 MAC's were specially airfreighted to Sydney for the production which commenced at the end of September.

*Enquires to: Chameleon (02) 9310 5222.*

#### HOOTERS

Supervision Electronics have sold 8 x Abstract Futurescan 3 CE to Hooters Nightclub in Gladstone.

*Enquires to: ULA (07) 5532 9922.*

#### REGENT THEATRE FOOTLIGHTS

Selecon's new Acclaim Cycs fitted with tempered glass colour have been chosen by Vision Design to provide the underfloor curtain wash in this newly refurbished venue.

#### LIGHTING THE SHARKS

Wayne Kelleff from Herkes reports the sale of Selecon's new 150W Metal Halide Condensor profiles to the Sydney Aquarium.

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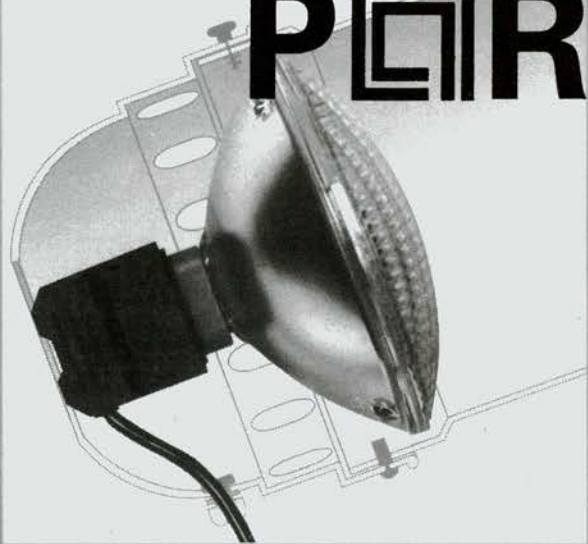
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# STRAND IN AUSTRALIA

## Before the lights went out

by Madeleine Murray



Alec Brown arrived in Australia in the scorching summer of 1950. Brown came from impeccable English theatre stock; his father was one of the first employees of Strand Electric which dominated British theatre. Brown had been head electrician at the London Coliseum, when he was asked out here to work for J.C. Williamson, the main players in Australian theatre.

### The first Strand branch

Reg Jones, the JCW electrics chief wasn't too keen on a supercilious pom turning up, and taking over, so he sent Brown off on the *Oklahoma!* tour. At the end of the tour, Brown's contract ran out, and wasn't renewed. Brown was out of work, but he'd seen enough theatres around Australia to know they could use some better lighting equipment, so he set up a branch of Strand in Malvern Road, Melbourne.

He didn't have much stock, or money. But an English theatre company on tour here left him two complete lighting rigs, and dimmer boards. Strand did some local work such as the Melbourne Xmas lights and Carols by Candlelight. Brown was regarded as an outsider but he was persistent and travelled around the country giving lectures, and meeting possible clients. He met Dennis Irving while lighting a Sybil Thorndike show. Brown hired Irving permanently in '53.

Meanwhile, Reg and Judy Bartram had set up another Strand outlet, along with their own hire service, in Sydney. Both stores did reasonably well. Business improved drastically in '56, the year of the Olympics, and the Royal Tour. Television was beginning, and this meant a new demand for studio lighting.

Strand Electric (Australia) was formed as a wholly owned subsidiary of Strand Electric London. The theatre business grew, but in '58, the government brought in import restrictions. Strand had to import parts to be assembled

here. A manufacturing workshop was set up in Melbourne, where they made lanterns, accessories, and slider resistance dimmers.

Strand now represented Hall Stage Equipment and Stagesound London, and had agents in Sydney, Adelaide, and Perth. Strand held lighting seminars and fitted out three TV stations. By the mid '60s, Strand employed more than a dozen people in Melbourne, and nine more around the country. Imports restrictions on lanterns were lifted, so lantern manufacturing stopped.

### Strand expands

In '69, the company moved into 7000 sq. ft. of purpose built premises. Strand fitted out new theatres, the SGIO concert hall in Brisbane, and the Perth Concert Hall. Australian business now made up 10 per cent of Strand's annual turnover. There were outlets in Canada, Germany, Hong Kong, and the US.

Rank Organisation bought Strand in late '69. Strand (Australia) became better at marketing and production planning. Theatre projects included the Adelaide Festival Theatre, the Seymour Centre and Theatre Royal in Sydney, and the early stages of the Victorian Arts Centre.

By '75, colour television had virtually replaced black and white, so the TV stations were all changing their lighting systems. Strand won most contracts with their locally manufactured dimmers and racks. The principles for the Galaxy switchboard were being developed by Australian employees, expressly for the Canberra Theatre and the Victorian Arts Centre. The broad ideas for the Galaxy

were developed in Australia, but the machine itself was made in England.

Strand Electric Australia was dissolved by Rank and merged into a group called Rank Electronics.

In '81 Rank Australia sold off many divisions, including Rank Electronics. In that division was

the remnants of the Strand Electric people. It was a very convoluted corporate move.

Then Rank UK bought Century Lighting in the US, and combined them with Strand in Britain. That combined group bought Rank Electronics back in '86, created Strand Lighting Australia, and later closed it. An agent was appointed in Australia in '91. Strand business world wide is now split into three areas, Europe, America, and Asia.

Former Strand employees form a significant part of the lighting companies around Australia.

### Footnote from Julius Grafton

Rank killed a great firm. Strand had an unassailable domination of the Australian market through until the late 1970s. In the mid 70's Rank appeared as corporate owners.

The atmosphere inside the Strand Australia division became strained. A succession of stupid and incomprehensible senior management decisions drove experienced staff away.

I recall being flown to Melbourne in 1973 to appraise a job offer inside Strand. The Strand Division people were fine, but I needed to meet the smurf in overall charge. Upon introduction his only question was which division had paid my airfare! I declined to work there.

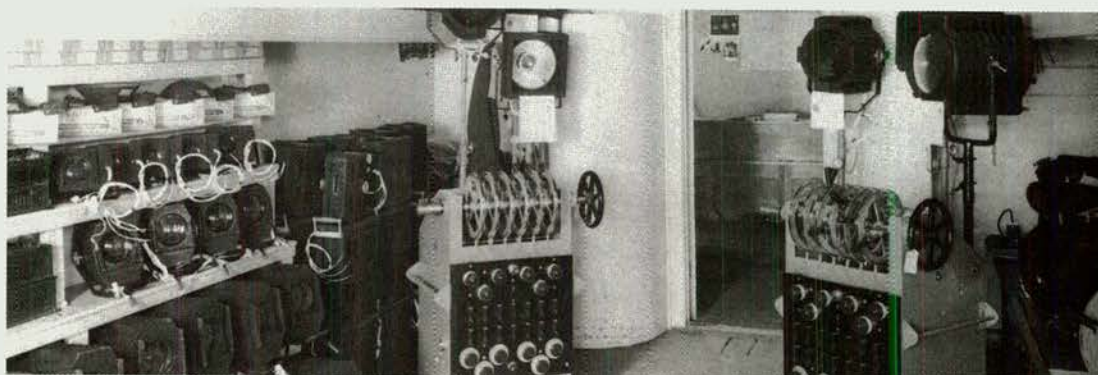
By the late 1980s, CCT and Selecon had chiselled away a great deal of the Strand market. The changes at the top were continual, with accountant types alienating customers and staff on a regular basis.

When the end of local operations came, there were questions of probity and process, as the entrails were auctioned off. The hire businesses

were purchased and became Premier Lighting.

The Strand Agency was awarded to a company headed by former Strand people, then somehow taken from them. Court actions reverberated through the early 1990's.

Bytecraft subsequently assumed the Strand agency, and have operated it extremely competently ever since.



# FOLIO



# SPIRIT



## THEY'D SAY...

The last word in state-of-the-art, multi-environmental mixing consoles for front-of-house and studio multitracking. SX has a massive 35 inputs as standard (inc. DC Input) and 30 outputs\*.

**Scud-proof sans pad Preamps** that give an embarrassing 1000-fold gain capability with 22dBu of head (and shoulder) room.

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**Bi-functional Direct Facility** – an almost totally unique feature that lets you decide the orientation of your outputs: twice the track-laying potential of conventional mixers.

**King-size Infinity Faders.** Every SX comes with 72" (1800mm) of low-friction carbon-track slides. [18 x 4"/100mm faders dor ates 72"]

**Herculean EQ:** Boy, does this system sub-structure work hard, using our near unique super sweep function there are infinitesimal sands to choose from.

**Archimedian Auxiliary Architecture** – we've got it! 90 golden combinations of FX and monitor sends. [Archimedes quotient = (15 x 3 Aux pots) x 2 combinations]

**Homogenous Track Potentiometers** permit undeviating rotational incrementation.

**Micro-Monocoque Construction** enables super-abundant component insertion. Geometric ergonomics facilitate a minimal rackmount footprint.

**EN50081-1-1992 Emissions and EN50082-1-1992 Immunity**  
Naturally, SX comfortably surpasses these standards.

\* Including all inserts, direct outs, groups, mono bus and anything else we could think of.



## WE SAY...

SX is a powerful, multipurpose mixer with DAT quality sound, housed in a freestanding frame with carry handle. It has 20 inputs (including 4 stereo channels) as standard – enough for most live and recording situations.

**FACT:** SX's 12 mono inputs have UltraMic™ preamps. 60dB of gain range and +22dBu of headroom, allows *any* mic or line device to be plugged in.

**FACT:** SX is a 4-bus mixer. In addition to the mix outs, two sub-buses allow you to record groups of instruments to multitrack, send them to additional speakers, or sub-group to mix. SX also has a dedicated Mono Out.

**FACT:** SX's 8 Direct Outs are switchable pre/post fader so they are equally useful when recording in the studio or at a gig.

**FACT:** 100mm faders throughout give you more resolution and finer control over your mix than the 60mm faders found on many more expensive mixers.

**FACT:** SX's 3-band EQ with swept mid is a real "British EQ". Custom-designed controls at carefully chosen frequencies produce a warm, natural sound. A steep 18dB/Octave High Pass Filter effectively reduces low end muddiness.

**FACT:** Of the 3 Auxiliary Sends, 2 can be pre- or post-fader. This makes SX equally suited to "monitor heavy" live performances or "effects heavy" mixes.

**FACT:** Unlike many small-mixer rotary controls, SX's have been custom-designed to give an even spread and consistent control around their sweeps.

**FACT:** By using the latest surface-mount technology, SX fits all these features into a rugged, compact frame which can be optionally rack-mounted into a 10U space in a matter of minutes.

**FACT:** SX meets stringent EC RFI requirements so that RF emissions are minimal. 

*IT'S SAD that some mixer manufacturers resort to hype and long, technical sounding names to describe features that every self-respecting company has used for ages but doesn't shout about. This jargon-mongering mentality only makes it harder for you to decide what's good and what isn't.*

*Judge Folio SX with your ears, not by words: visit your nearest Spirit dealer or send for the straight-talking brochure.*



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# W E N U E S

## CONVENTION CENTRE GETS GREEN LIGHT ON EXPANSION

Premier Bob Carr has announced the long-awaited \$57 million expansion to the Sydney Convention and Exhibition Centre which will include a 1000 seat auditorium, 1000 seat banqueting hall and a 3000 square metre integrated exhibition facility.

Ted Wright, Chairman of the Sydney Convention and Visitors Bureau (SCVB), expressed his delight at the announcement. "As far as we are concerned, today's announcement is the best news we've had since the Sydney Olympic Games win," said Ted Wright.

"The meeting, incentive, convention and exhibition (MICE) market is currently one of the fastest growing in Australia - a \$3 billion industry expected to treble by the year 2003 - and Sydney claims the lion's share (around \$1 billion)".

An independent study commissioned by the Bureau this year revealed that international convention delegates spent an average \$609 a day compared with the \$79 per day spent by the average international tourist. Sydney is currently one of the world's top 20 conference destinations, a position which the Bureau is continually strengthening.

Level 3 Refurbished

Refurbishment of the Skyline Level, formerly Level Three, within the Convention Centre is due for completion and launch, in late October.

Integral to the development of the Skyline Level has been the construction of the Centre's new, premier function venue The Skyline Terrace. Boasting panoramic views and a contemporary decor, the Skyline Terrace will cater for

up to 250 dinner guests or 400 for cocktail receptions.

Cockle Bay Bar

A reminder that The Centre's Cockle Bay Bar, located on Level 1 of the Convention Centre is opened to the public 7 days from 12.30pm - 7.00pm or as required for private functions. The bar has a daily blackboard lunch menu at \$7.50 per person including a complimentary beverage. Happy Hour is from Monday to Friday from 5.00pm to 6.00pm with regular promotional activities.

For those exhibiting at The Centre, a 10% Discount Exhibitor Card is available and is applicable to all purchases from the bar with the exception of Happy Hours.

Cockle Bay Bar is also available for private functions such as small meetings, breakfasts, lunches, dinners and cocktails. With spring now upon us, the outside terrace can be utilised for coffee breaks, lunch buffets and cocktail parties in an open air environment.

• Caroline Grafton

## LIQUOR LICENSING IN QUESTION

In Launceston **Tasmania** nightclubs and bars are fighting for extended liquor trading hours. The Playroom Nightclub currently has an application lodged with the Commissioner of Licensing to allow liquor serving until 3.00am Thursday and Friday, 4.00am Saturday with 4.30 closure on Sunday and Monday mornings. The Saloon Bar has reportedly lodged a similar application. The general feeling in the southern island city is that, if the Playroom is successful in its application the balance of the city's pubs and clubs will follow suit.

Meanwhile, the **New South Wales** Government is considering a curfew on licensing till only 2.00am for pubs and hotels in the view to curbing alcohol related violence. Publicans and hoteliers are retaliating, some arguing potential losses of up to 40% per while others saying patrons will adjust their habits and start drinking earlier.

The **Australian Capital Terri-**

**tory (ACT)** has extended it's (the ACT's) liquor trading hours for pubs and night clubs to 4.00am. No doubt if the NSW government succeed in their 2.00am quest the ACT will pick up a lot of trade from beyond their border.

Further south in **Victoria**, the Herald Sun reports, the Cadillac Bar faced a fine of \$2,800 with possible license suspension or cancellation after allegations of repeatedly overcrowding the then 650 head venue. They had been cited particularly for 740 persons in November and 935 in December which caused the club to surrender it's license in January only to obtain a new licence with a 533 patron limit. Police allege continued overcrowding this year particularly two nights in January when some exits "were closed or padlocked with no person near doors to unlock in case of a fire or other emergency". The club has a history of "gross negligence" according to the Liquor Licensing Commission dating back to 1991.

• Caroline Grafton

## CLUBSCENE AROUND THE NATION by Nicole Morris

**The Banta Room** on Oxford Street, **Sydney** has rescued the funk scene with "Bounce" Aimed at the Funk scene, Bounce opened on August 23, featuring DJ Lenno as their resident DJ. Live performances and Guest DJs will also feature. Cover charge is \$10, the club is opened 10pm until late. On Thursday nights at the Banta room you will find Pink Lint. From 10pm 'till late DJs such as Alix, Tommy and Squidge- fill you with House, while you guzzle the

\$2 schooners. Entry is Free.

In **Brisbane**, "Sin City" is a new club housed in **The Embassy Hotel**. Found on the Corner of Elizabeth and Edward Sts, "Sin City" is opened Friday and Saturday nights from 9pm and promises to play "tunes with exit wounds". The club opened the week of August 21 Featuring the sounds of bands such as The Fangin' Hoons and El Caminos. For information on who's on call (07) 3221 7616.

"The Studio" has closed, after

living a short life at **Sydney's Blackmarket Cafe**. Originally opened for the Hip hop scene of Sydney, "The Studio" was shut down due to a 'lack of attendees'. But Never fear, The Cafe still heats up the streets of Chippendale on Thursday Nights with Hellfire Club from 10pm with a \$15 cover charge. Saturday nights you are suggested to 'wear clothes' for The Blackmarkets Nightclub from 10

• Continues Page 116

## Colours Dance Club

Colours Dance Club has been voted the #1 nightspot in Sydney, by 2 Day FM's listeners. For the past 2 year Colours Dance Club has been a regularly sold out venue, catering for over 1200 patrons every Friday night.

Colours is also renowned for its membership prize draws, with major prizes including Cars and Holidays Abroad.

Colours also play host to major celebrity acts including the renowned Deni Hines.

Recently, Colours has had a Dance Club re-vamp with exciting renovations and the introduction of VIDEO NRG through the Q Master system. This concept involves TV monitors and video projectors placed throughout the room to bring video production to a new level.

The re-vamp has brought a new dimension to Colours Dance Club, enhancing its already phenomenal success. The re-vamp was devised by Uptown Promotions and the new production installed by Total Concept Productions.

Colours Dance Club operates every Friday night between 9pm-4am. Due to high demand, tickets are available every Thursday.

### THE AUDIO SPEC

Shure SM58 Microphones;  
Yamaha GC2020B Comp/Limiter;  
3 x JANDS SR3000 Amplifiers; 2 x  
Technics SL-1200 Turntables;  
Denon DN-2000 Dual CD Player;  
8 x PAR 56 300W/240V SINGLES;  
Sanyo VHR290 4 Head VCR; 2 x  
EV Deltamax Subs; 4 x EV  
Deltamax Satellite Speaker; Rane  
MP24; Yamaha GQ2031A; 2 x EV  
DMC1122A Audio Processors; 2 x  
EV DMC 2181 Audio Processors;  
TCP Audio Rack;

### LIVE STAGE DETAILS

Stage Dimensions 8.2m Wide X  
5.5m Deep with Stage Extensions  
7m Deep; 2 x Separate 3 Phase  
outlets available; Load in Access  
with freight elevator.

### LIGHTING AND VIDEO

8 x Coemar Microscan MSR  
400; 4 x PINSPOT; 2 x Coemar  
Strobes; 2 x 110V Blinders; 1 x  
Astro Raggi; Fluoro Mini Lite; 8 x  
sections of Customised Neon with  
customised trussing and trans-  
formers; 6 x Load Drivers; 1.5'  
Mirror Ball; ZERO 88 Mercury  
Controller; Coemar Microscan  
16ch Controller; Reel FX DF-50  
Diffusion Fogger; Smoke Proce-  
sor; TCP Customised Lighting  
Truss; 2 x Barco Video Projectors;  
2 x 9'x12' Technics Motorised  
Screens; 2 x (6'x 8') Pull-down  
Screens; 8 x Sanyo 51cm TVs;  
TCP/Showbiz Q Master Video  
Computers; Citronic VS-200 Video  
Sequencer; NEC Multi Sync XV15  
JC1538 J... ; 2 x Panasonic  
AG5700B VCRs; Palsonic PCT 400  
Video Monitors; IRT FR 722A VDA.



### THE PEOPLE AND THE PLACE

Promoter: Uptown Promotions -  
Contact Deze Urach - Ph: 0414  
886 996 Fax: (02) 9365 5482  
Audio and Lighting Designers:  
Total Concept Productions  
DJs: Supplied by Rock Circuit  
Promotions  
Decor/ Interior Design: Deze  
Urach, Michael Crieghton and

Richard Skarzynski  
Door Charge: Members \$5; Non  
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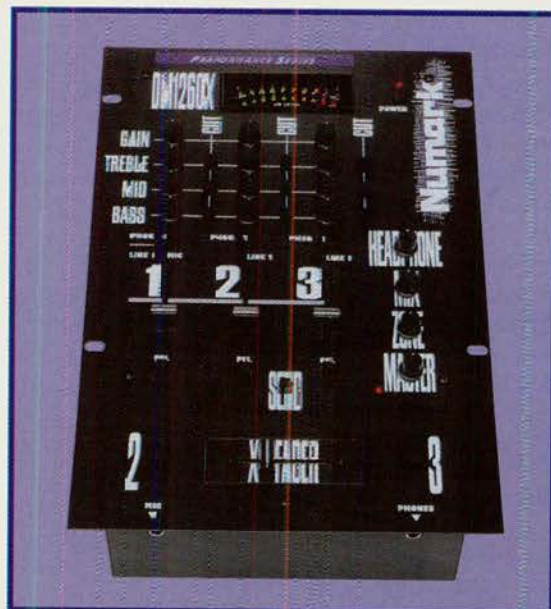
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# Venues

## CLUBSCENE Continued from page 113

with a \$10 cover charge and on Sundays the club is opened from 6am for day club, for those dressed smart casual (no sandals or singlets please) also \$10. You will find The Blackmarket Cafe on Regent St in Chippendale.

**The Golf View Hotel** in Geelong, Victoria has opened "Cazbar Night Spot". This night-spot is directed at the more mature, discerning individuals (over 28's). Cazbars opened on Friday August 23rd with live band The Mop Tops, and have featured The Canadian Chippendales, and Kate Cebrano in their opening week. Cazbars can be found on Thompson Rd in Geelong North. Phone (052) 78 2911 for more information.

A new underground live venue has opened at **Joey's** in St Kilda called "Underbelly". Found on Fitzroy St the new venue will feature new, original and underground bands at the small price of \$1 per band. "Underbelly" opened on Sept 1st with Caffeine, Tong and Come the Rubber Pig. Doors open Wednesdays to Sundays from 6pm to 12.30, with bands on stage from 9pm.

In **Brisbane**, "Popszene" has found a new home at **Channel 13**, after relocating from The Treasury Hotel. Popszene opened in its new and permanent home on Friday September 6th, and will be found upstairs at the Prince Consort Hotel every Friday night from 9pm. Cover Charge is \$6 (\$5 for concession) and you can find Popszene at The Prince Consort Hotel, 230 Wickham St, Fortitude Valley. Channel 13 is also opened on Wednesday and Saturday nights from 8pm.

**The British Hotel** in Port Adelaide has opened a new Thursday night blues room. Opening night hit off on Thursday the 5th of September with bands such as The Elmore (featuring Don Morrison) Esilon, Hoy Hoy! The Delivery Men and Blind Dog Taylor and The Healers. The promoters have asked the help of the SA Blues

Society to put together much of the talent which will feature on such evenings. You can find The British Hotel at 13 North Pde, Port Adelaide. Ph. (08) 8447 1539

**Retro** in Sydney has just added a new level of Techno on Friday and Saturday Nights. It is called "Tasty" and houses DJs such as Nik Fish and Tony Spencer and Shakespere. Tasty can be found at retro in the Bristol Arms Complex, 81 Sussex St Sydney, and is opened from 10pm 'till very late.

**The Sandringham Hotel** in on King St, Newtown, is about to turn Sixteen. After spending Sixteen years as a Live Music Venue, it is going to Celebrate with 35 Gigs being held from the 16th of September to 13th October. Bands include The Whitlams, Front end Loader, Killjoys, Shouties Magic Lunchbox and Many others. If you want to know more about whos on Phone them on (02) 9557 1254.

A new UK inspired club has opened in **Kings Cross**. Its called **Most Excellent** and you will find it at 'Sight', on Victoria St. Most Excellent will please its crowds with a mix of Indie, Electronic and Dance fare, all for only \$7.

A new venue is to open in **Thornbury**, Melbourne called **The Ballroom**. On Thursday nights the stage is open for anyone to "strut their stuff". So if you think you've got what it takes to entertain at The Ballroom Call John on (03) 9419 5500

**Joey's** in Prahan and Roosters management have teamed up in attempt to combine Melbourne's two most successful blues venues, The Jook Joint and Muddy Waters Blues Cafe. The result is **Roosters Jook Joint** and its the place to be on Sundays for some of the best blues and roots music in Prahan. Entry fee is only \$2 listen to the Blues at Joey's, 138 Commercial Rd Prahan, Vic. Call (03) 3521 3381 for more information.

At the **Underground Cafe** in Sydney, Start off the Weekend

with a free allnighter. Held on Thursday Nights, High Times provides you with an array of British House Music 'till 5am all for free. Bands Start at 11pm and the Free allnighter is set to run throughout summer.

A new regular Saturday Night club has been launched at the Komodo Club in **Brisbane**. It's called **The Liquid Room** and features the likes of Kesser, Master Lau, and Shane H. The Liquid room also features a Playstation Lounge, for those without one at home. You'll find the Liquid Room at the Basement of the Carlton Crest Hotel in Brisbane.

A new Venue has just hit Munster St in **North Melbourne**. Manager of Salamanda Entertainment and ex-band booker, Geoff Berry opened his Venue on the 29th of September, with a Musical and Theatrical Gig called "Spontaneous Combustion". The new Venue will Feature a Cafe, Gallery, Artists Studio Space, Photography Darkroom and Performances Spaces for Bands and Theatre. For more information regarding this new Venue call Geoff on (03) 9347 8447 or 018 359 981.

### Silver Service Package

For those who like to live their lives with a little panache the Sydney Entertainment Centre has introduced the "Silver Service". This package offers "the best seats in the house" for major shows. It also includes a 3 course dinner in an exclusive dining area, interval drinks and after show supper with beverage service, all while enjoying the ambience of the newly refurbished Capitol Room.

The minimum booking is for six persons, perfect for entertaining corporate clients, staff incentives or to use as prizes or fundraiser if you are involved with non profit organisations such as schools etc.

Upcoming presentations include **John Farnham** (October 16,18,19) \$135 per person, **Michael Flatley** in "Lord of the Dance" (November 5) \$165 per person and **Alanis Morissette** (December 6) \$145 per person. For bookings and further details please call Lee Kessler on (02) 9320 4205.

Well, in the great tradition of Connections we are diversifying this section of the magazine. Basically we thought the title Clubland was a bit limiting. So from now on if you've created an exciting installation anywhere, tell us. Be it a Dance Club, RSL, Convention Centre, Casino, Intimate Bar or any Public Venue, let us know about it. On a technical or interior design level we are interested. Call Caroline for details on (02) 9876 3530.

## Buyers Guide DJ SAMPLER MIXERS

**GEMINI Disco World (03) 9735 0588**

**GEMINI PS676** 3 Phono 3 Line and 1 Mic inputs. Bass Mid High & Gain Controls for each channel. Removable cross fader. Built in 12 Second Digital Sampler. Includes adjustable pitch. \$759.00

**GEMINI PS 812** 2 Phono, 6 Line, 2 Mic and 1 Aux Mono Input, 19" Rack Mount, Built in 12 second digital sampler with adjustable pitch. \$1129.00

**GEMINI PS 924** 2 Phono, 6 Line, 2 Mic, 24 second digital sampler with pitch control, 5 memory banks, (Two 2 second, Two 4 second and One 12 second). Battery Back up. \$1365.00

**GEMINI PDM 1012** 2 Phono, 2 Line 1 Mic, 10 inch rack mixer with built in 12 second digital sampler. Removable cross fader, master volume control. \$599.00

**ROLAND** Roland Corporation (02) 9982 8266

**JS30** Superb quality DJ sampling workstation with 36 built in samples, sequencer and 45 secs sampling time expandable to 90 secs with the ability to load sounds from SCSI while playing \$1995.00

**NUMARK** Universal Lighting & Audio (07) 5532 9922

**DM 2175 XLS** 13 Inputs, 45 sec or upgrade 180 sec sampling, 4 memory banks, gain, bass and treble on each channel, echo & delay ef-

fects, Master plus zone volume, Assignable cross fader, balanced outputs. \$3625.00

**DM2075 XS** 13 Inputs, 12 sec sampler, 4 memory banks, gain, bass and treble on each channel, 6 band graphic EQ, Master plus zone volume, balanced outputs, tape art. \$2475.00

**DM 1675** 8 Inputs, 16 sec.

sampler, 4 memory banks. Seamless sample looping, sample stutter effect, speed control, dual 6 band graphic EQ, crossfader. \$1319.00

**DM 1425** 8 Inputs, 8 sec. sampler, seamless sample looping, sample stutter effect, speed control, dual 6 band graphic EQ, talk over control, crossfader. \$1005.00

*Roland JS30 sampler*



## Buyers Guide DJ SAMPLERS

**AKAI** Australis (02) 9698 4444

**REMIX16** 16 Sounds (samples) from touch pads, 2mB standard up to 18mB, mixer for phono/CD reverse, sampler sequencer, optional HD. \$1995.00

**S2000** 32 Voice polyphonic, 2 mB standard up to 32 mB APM, Filters (resonant), 2 LFOs, SCSI, MESA Mac software, optional 4-channel multi FX. \$2995.00

**S3200XL** 32 Voice polyphonic, 16mB up to 32mB, up 48mB with flash ROMs, 4 Channel multi FX standard SCSI, SMPTE, Digital, 8

**E4K (64 Voice)** 64 Voice Polyphony, 76 note keyboard, 16 channel sequencer Dual stereo FX processors, 4 Mb RAM. Up to 128 megs RAM (736 stereo second @ 44.1 kHz) 270 Mb Internal hard drive with 150 megs of sound 8 outputs ASCII Keyboard input. S/PDIF digital I/O Option 64 voice card. \$7995.00

**E4K (128 Voice)** 128 Voice Polyphony 76 note keyboard, 16 channel sequencer, Dual stereo FX Processor, 4M RAM up to 128 megs of RAM 736 stereo seconds @ 44.1 kHz) 270

mount with built in 24 second digital sampler, 5 memory banks, Two 2 second, Two 4 second and One 12 second memory banks. \$575.00

**KURZWEIL** Music Technology (02) 9369 4990

**K2500XS** 88 Note weighted keyboard, 48 voice polyphony (up to 192 oscillators) Up to 128 meg of RAM (736 stereo second @ 44.1kHz) Large backlit display (Options : Up to 28 megs of RAM sounds, KDFX effect unit) Digital I/O AES/EBU, SPDIF, OPTICAL) 32 Channel sequencer. MIDI

32 Channel sequencer. Options KDFX Effects Unit. 5 Stereo Outputs. \$8495.00

**K2000S** 61 Note Keyboard, 24 voice polyphony 16 channel with a 32 channel sequencer. Up to 64 megs of RAM (368 stereo Second @ 44.1kHz, 3 Stereo Outputs Up to 24 megs of RAM Sounds. 8 Meg Standard Digital I/O AES/EBU, SPDIF, OPTICAL (IN). \$5995.00

**ROLAND** Roland Corporation (02) 9982 8266

**MS-1** Amazingly compact desktop phrase sampler featuring four different sampling grades, built in sequencer, 49 seconds sample time expandable to several minutes using flash RAM cards. \$895.00

**S760** Full professional sampler with renowned Roland reliability and quality. Expandable to 32 meg internal RAM, with built in SCSI and optional external screen display. Also features access to Roland's gigantic CD ROM library. \$3395.00



*EMU ES 132 sampler*

outs, Balanced in/out MESA, Mac software. \$6995.00

**CD3000XL** 32 Voice polyphonic, 8mB standard up to 32 mB, Analogue in (balanced) 4X CD ROM, Drive, 1 Akai CD ROM, 8 outs, MESA. \$5295.00

**EMU-SYSTEM** Music Technology (02) 9369 4990

**Emulator Four (EIV)** 128 Voice Polyphony, up to 128 Mb of sample memory (736 stereo second @ 44.1kHz) 128 6th - Order resonant filter/EQ ASCII Keyboard Interface. Good while playing Eight balanced outputs. AES/EBU digital I/O. Large graphic user interface. Options Ports & Option FX unit and more. \$10,995.00

Mb internal hard drive with 150 megs of sound 8 outputs ASCII keyboard input S/PDIF digital I/O. \$9995.00

**ESI-32 (with SCSI)** 32 Voice polyphony; up to 32 Mb of RAM (184 stereo seconds @ 44.1kHz) 10 trigger buttons, 32 4 pole digital filters. Akai 5100C/1100 sound libraries compatibility. Optional S/PDIF Digital I/O. 4 Outputs. 16 channel midi. \$2695.00

**GEMINI** Disco World (03) 9735 0588

**GEMINI DS1224** 24 Second Digital Sampler, Two 4 second, Two 2 Second and One 12 Second memory banks. Battery Back up. Connects to any line input mixer. \$539.00

Controller (Eight Slider/two ribbon) and more. \$10,995.00

**K2500S** 76 Note Semi weighted keyboard. 48 voice polyphony Up to 128 megs of RAM. Large backlit display (up to 28 megs of RAM Sounds) (8 Standard) Digital I/O, AES/EBU, SPDIF, OPTICAL. 32 Channel sequencer. Midi Controller. Eight sliders/two ribbon. Options KDFX effects Unit and more. 5 Stereo outputs. \$9995.00

**K2500RS** 3 High Rack mount, 48 voice polyphony, up to 128 megs of RAM large back lit display. (Up to 28 megs of RAM Sounds, 8 meg Standard) Digital I/O, AES/EBU, SPDIF, OPTICAL)

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Split Colours:	2	Tilt Degrees:	90
Gobos:	20	Stand Alone:	No
Gobo Colour Mixing:	Yes	DMX or MIDI:	Yes
Rotogobo:	Yes	Weight Kg Approx:	18
Rotocolour:	Yes		<b>\$2699 inc. tax</b>

### DISCOVERY 250 ELC



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Colours:	10	Pan Degrees:	180
Split Colours:	2	Tilt Degrees:	90
Gobos:	20	Stand Alone:	No
Gobo Colour Mixing:	Yes	DMX or MIDI:	Yes
Rotogobo:	Yes	Weight Kg Approx:	10
Rotocolour:	Yes		<b>\$1599 inc. tax</b>

### DEFENDER 250 ELC



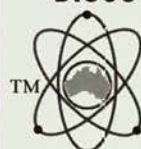
Lamp Wattage:	250	Strobe Effects:	Yes
Colours:	10	Pan Degrees:	180
Split Colours:	2	Tilt Degrees:	90
Gobos:	10	Stand Alone:	Yes
Gobo Colour Mixing:	No	DMX or MIDI:	Yes
Rotogobo:	Yes	Weight Kg Approx:	8
Rotocolour:	Yes		<b>\$1199 inc. tax</b>

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Colours:	0	Stand Alone:	Yes
Split Colours:	2	DMX or MIDI:	Yes
Rotogobo:	Yes	Weight Kg Approx:	6
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# THE PA PAGE

## Getting Down To Naming Brands

By Michael Orland.

I don't really think it's possible to write a helpful hints page for P.A. beginners without occasionally mentioning specific brands and models of gear. Otherwise it runs the risk of degenerating into so much generalised waffle. Early last year, for example, I wrote an article on the use and maintenance of JBL horn drivers. Such articles are not intended to be either endorsement or criticism. Just my way of saying "If you use this gear, here is stuff that may be of interest". The last thing I want to write is product review. Over the next few articles, I'll be focusing on specific brands and models of gear as much as possible, with the co-operation and assistance of the local manufacturers/agents. This month I'm spotlighting Electrovoice.

Many EV instrument microphones feature a grille down the barrel. Positioning the "vent" here instead of directly below the diaphragm is intended to minimise "proximity" bass boost. I've often seen these mics placed in clips so that the vent is covered. Wrong. As when a strip of gaff is wrapped around the head of a Shure 57, the mic loses frequency response and directivity. Always leave the vent exposed.

I've mentioned EV wedges briefly in a previous article. As in many EV cabinets, there is ample clearance between the maximum excursion of the speaker cone and the grille, provided the box isn't abused (see also trampled, jumped on, poorly packed, etc.). Once this happens, and the cone starts slapping against the grille (especially a curvilinear cone) it will crease, buckle and eventually tear. I've already suggested one precaution against such abuse, by doubling the thickness of the grill's wooden frame. The alternative simpler precaution is to glue a second cork/cardboard gasket to the speaker itself. Whenever I'm presented with a blown 15" driver, I try and remove the surround as carefully as possible to keep for such applications. Although the "Cobra"

cabinet was not an EV design, it did use EV speakers, and due to the number sold in the local market, they are worth mentioning in this context. Double gaskets within these cabinets are strongly recommend.

Original EV FM series wedges included a lightweight horn driver called a 2001. These had a 1.25" diaphragm which had to be used with ferrofluid in order to maintain its specified power rating. Ferrofluid is injected into the voice coil's gap to draw heat away from the coil, and companies like Meyer and Community have long sung its praises. When replacing a 2001 diaphragm, the ferrofluid should be inspected. If it appears dark and gammy, which occurs if the fluid is overheated and/or it accumulates foreign matter (dirt, carbon, pieces of coil, etc.) then it should be removed and replaced. This can be done by first running several pieces of blotting paper in and around the gap, and then following up with pieces of masking tape. Stubborn particles can be removed by using two pieces of tape and approaching them from opposite sides. Once the gap is completely clean, you'll need to re-inject fresh ferrofluid before installing a fresh diaphragm. Fill a syringe with 0.20ml of ferrofluid. Inject a small drop (about 0.05ml) just above the gap at four separate, evenly spaced, locations. The fluid will spread itself around the gap. If the gap doesn't completely fill, insert the needle into the open gap spacings to top up.

If all this sounds a little too fussy, you might consider using a newer series DH3 diaphragm, which lives in an identical driver to the older 2001, but does not require ferrofluid. The DH3 does however require a higher crossover point. EV specify the useable frequency response at 5K upwards. Fortunately, most of the more popular EV 12s and 15s have an extended top end response due to their lightweight, high efficiency cones. By replacing the existing

crossover with an upgraded one to suit, you can achieve a more rugged system without any real "holes" in the sound.

In recent years, EV have abandoned their original elaborate tweeter protection devices in favour of polyswitches. These are really cool things which really deserve an article to themselves. For now I'll just say they can be purchased really cheaply from any major electronics supplier and easily retrofitted. Regular readers know I'm a big fan of lightglobes as tweeter protection. The right combination of globes and polyswitches can make tweeter burnout a thing of the past.

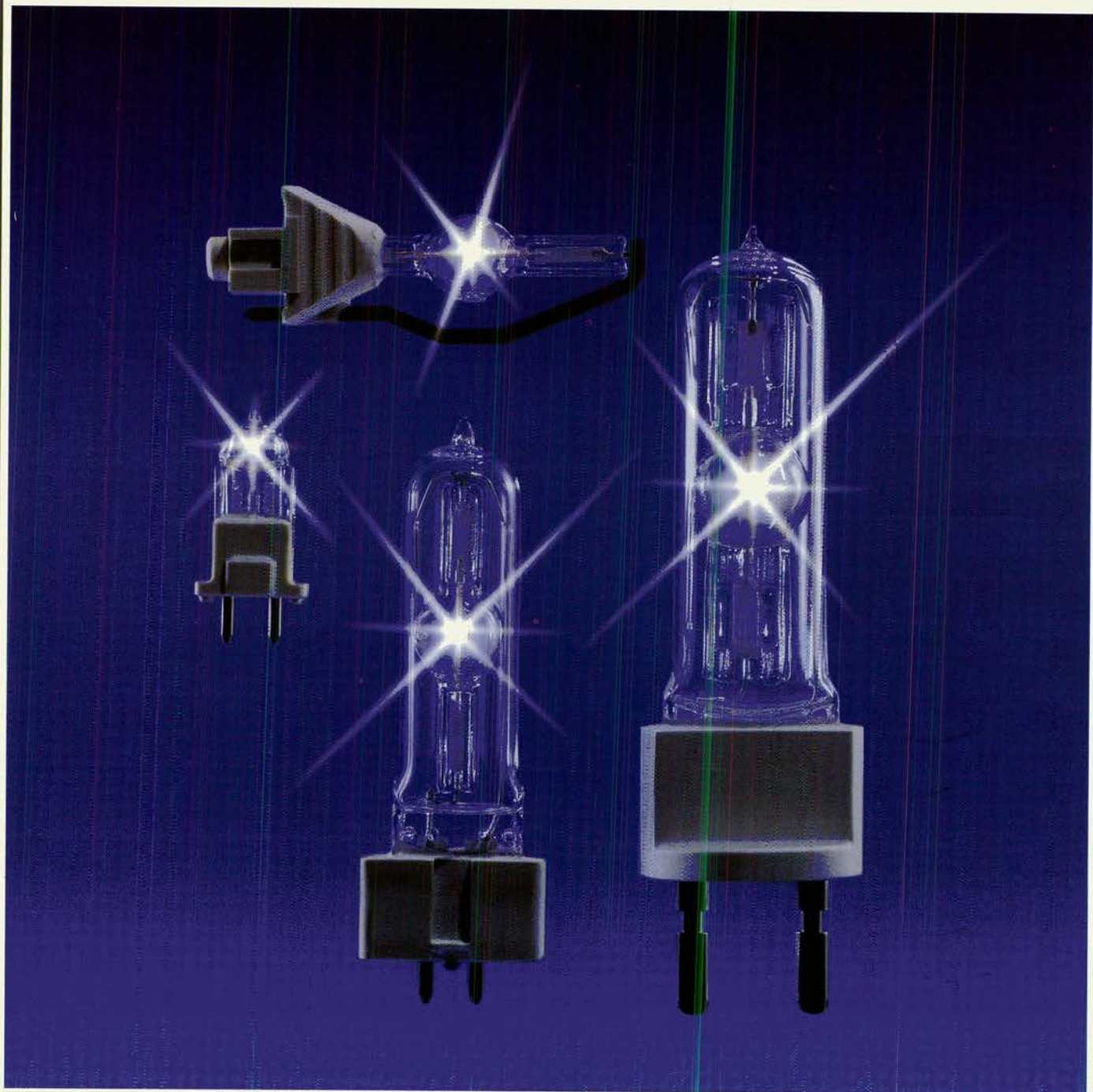
Another handy thing to know about EV horn drivers is that almost all their older large format drivers which were originally fitted with aluminium diaphragms (prone to fatiguing and consequent shattering) can be upgraded with titanium diaphragms. Both DH1 and DH1012 drivers, for example, can be fitted with DH1A diaphragms. The DH1 won't come up quite as big as a DH1A due to a slightly smaller magnet, but it's close. The old 1012 however, comes up huge, giving you a DH1A variant, as used in 12" Deltamax cabs (We use these in our A rig wedges). The centring pins on the drivers make diaphragm installation almost foolproof. As always, extreme care should first be taken in cleaning the voice coil gap with the appropriate combination of masking/double sided tape, good light and patience. Sure there are some folk who prefer the "sound" of aluminium. There are also those who prefer the sound of vinyl to CDs. No accounting.

Thanks to Bryan Davidson for his assistance in the preparation of this article.

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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The OSRAM HMI lamps put the sun in the shade. Metallogen® HMI lamps from OSRAM have a colour temperature equivalent to daylight and are so powerful that they provide sunlight every bit as good as the original. HMI lamps produce three to four times as much light as conventional tungsten halogen lamps, so considerably fewer lamps have to be used for the same effect. Success is based on innovation and OSRAM, as the leading supplier of specialty lamps, has innovative technologies at hand. For your nearest OSRAM distributor and lighting specialist call 02 - 9481 8399.

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**Give you perfectly circular beam and an even field?**



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- 32 brilliant, dichroic color combinations + warm color modifier
- 2000 hours lamp life, intense 200W discharge lamp
- Full-range, smooth mechanical dimmer built in
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