

HARD DISK RECORDING: WILL IT KILL TAPE?

Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

AUSTRALIA \$4.50

#36

SEPTEMBER 1996

AUDIO

Compression: TIPS

BUYERS GUIDE

Microphones
Fresnels & Floods

Music Association:

Debates a Levy

VENUES

Reef Casino

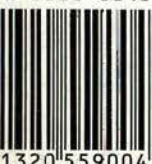
LIGHTING

Club Buggery
Peter Pan
Smokey Joe's Cafe

ON TOUR

Def Fx
Kate Cebrano

N 1320-5595



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06

SHOOTING PARADISE ROAD

DOP Peter James lights the stars

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ALWAYS full of NEWS

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to the sections!

This magazine is full of news.... and now better organised too (we hope!)

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- **Recording**, P37 • **Classifieds** now in the middle • **On Tour**, P53
- **LIGHTING**, our largest section..... P61 • **Club & DJ News**, P86.

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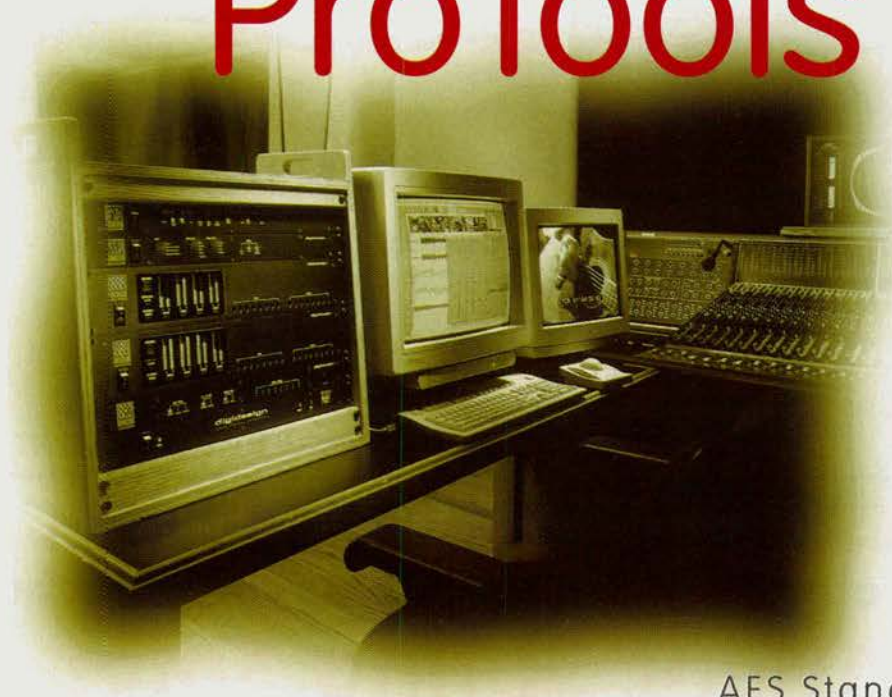
Audio > Bose 802 speakers > Meyer speakers > stands > Perreaux amps > mixers > equalisers > talk-back system > cassette decks > cases > sleeves > multicores > mics > and more!

Staging > backdrops > curtains (various colours) > tab-tracks > rostra > flats > props > & complete stage sets etc.

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Connections

SEPTEMBER 1996. Number 36

MUSIC ASSOCIATION CONTEMPLATES LEVY

AMA Investigates New Funding, 5 Year Plan

By Caroline Grafton

The Music Industry Development and Investment (MIDI) fund is firmly on the agenda of the Australian Music Association (AMA). The MIDI was the subject of an executive meeting immediately after the AGM last month.

MIDI is expected to be an optional fee on top of existing scaled AMA membership fees - which are themselves about to rise by 10%. It is rumoured that the fee will be a levy based on sales percentage, yet to be determined, charged to members which will be directed to fund "meaningful advertising and development projects". The outgoing president Margaret O'Loughlin stated carefully: "This type of campaign is revolutionary for our association and one that must be undertaken with the utmost of care and consideration by all concerned".

There is much interest in the equipment trade as to the outcome of the MIDI Fund. Who pays and how much? How much will be raised? Who decides on the avenues of expenditure?

Sara Hood of Yamaha Music Australia, an AMA Executive Committee member, told me: "We've looked at several ways to raise money for the MIDI Fund, as the 'levy' is called, and nothing has yet been decided except that it won't be compulsory.

It's because we want to make sure that we propose a collection system that is acceptable to as many members as possible that we are taking time to get it right. There are all sorts of rumours, many of which are totally off the wall, but please bear with us for a bit longer and it will be worth the wait".

Sarah continued "Currently the most important objective of the Executive Committee is to finalise a five year plan of action to grow the market for active music makers. Some of the things proposed in the plan will be able to run as part of the AMA's ongoing service to members but some things are going to need extra money. The MIDI Fund is designed to raise that extra money. Everything in the plan is clearly



Robin Macfarlane, new AMA President

designed to deliver results for members. On that basis, everyone can see what their money would be used for and can decide if it's something they want to be involved in". • New AMA committee: P8



Exit Gotham Audio

....while CD-R helps entrench home recording

The advent of cost effective burn-your-own CD drives on the personal computer has put home recording firmly into the home run.

Quality digital recording is now a pass-time, and the traditional recording space as we know it is either a specialist enclave or on the way out.

Gotham Audio, set in the trees at Warranwood is regarded as one of the finest recording establishments in Australia, is for sale as

either a going concern or in parts-equipment and real estate.

The studio is part owned by the entertainer John Farnham. It is on 4.8 acres, with a separate residence. Studio equipment includes an SSL 4064 72 input consoles, and Sony PCM 3348 digital recorder.

• *Hard Disk To Kill Tape? The argument, by David Corazza. See page 37.*

• *Eclipse to downsize: see P39.*

SPRING HAS SPRUNG

MAJORS TO SELL

Restructuring in the various and myriad entech industry has reached fever pitch.

Leading the list of venerable establishments looking for new owners is **Mark IV Audio**, the conglomerate which was placed on the block in January this year. A sale is close, and rumoured to offer enhancement to the group.

Strand Lighting is to have a new owner very soon, as Rank PLC have announced a restructure.

Strand and Mark IV Audio are market leaders in Australia but local representation of both is unlikely to change given new ownership.

Gearhouse Group have pur-

chased national AV hire & event staging company **Intercity Staging** from Fairfax. Gearhouse is a A\$50m UK company with AV affiliates in the UK, Europe, Dubai, South Africa and the USA. Intercity will become Intercity Gearhouse, and pursue business in Asia. (See AV section, p 20)

Michael White's **SOS Communications** have sold their rental and production division in Sydney to John L'Estrange and Peter Waite. That business now trades as L & W Productions.

At presstime, several other firms in the eastern states were understood to be either restructuring or were offered for sale.

-Julius Grafton

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INDUSTRY NEWS

Glenn Dodson Moves Up At Roland Australia



SYDNEY: Earlier this year, Roland Australia celebrated its twentieth anniversary and has just completed an excellent year, they say.

For some time John Egan - Managing Director - has been

planning to change his role within the Company, and feels the time is now right, to hand over the reins to Glenn Dodson, who will become Managing Director of Roland Corporation Australia on October 1.

Far from disappearing from the scene however, John will now fill the role of Chairman of Roland Australia and retains his Director's position of the other companies in the Roland group - Roland NZ, Roland DG, and Rodgers Australia.

Glenn Dodson has been Sales & Marketing Manager of Roland for the past five years. His skills are most appropriate to lead Roland in Australia into the future, which the company sees as very bright.

Glenn will be closely assisted by Chris Kalmar, Finance Manager. Glenn now joins the other Directors of the Company - Mr. Ikutaro Kakehashi and Mr Geoff Brash.



Cadillac trades on after Liquidation

SYDNEY: Road case & speaker box maker Cadillac Cases is still in business, despite a recent liquidation of its previous holding company, Knope Four Pty Ltd.

Now known as Cadillac Cases Pty Ltd, the firm is in the same premises, with the same staff, and the same equipment - purchased at auction from the liquidator.

Director Colin Skals told Connections the firm had been undercapitalised since it purchased Bonza Boxes some years ago, and that an accrued tax liability finally

forced the liquidation.

Skals has run Cadillac, in partnership with (Sneaky) Pete McFee for nine years, and says a succession of accountants handled the firms wk, but none ever gave guidance. He states that he actively sought help from various accountants over the years, and that his business expertise was learned 'on the job', leaving the firm unable to plan adequately.

Pete McFee has just moved to Singapore to take up a position with Jands (Singapore).

Correction: Soundtracs Omitted from Studio Mixer Buyers Guide last month

Last month's Buyers Guide suffered a notable omission, Soundtracs. The info was given us on disk, on time, and due to a stupid FUBAR in the editorial dept, left out. We apologise to Soundtracs and Syncrotech Systems.

Brand: **SOUNDTRACS**
Distributor: **SYNCROTECH SYSTEMS**
Tel: (02) 417 5088

Studio Mixers Under \$7,500

• **TOPAZ MINI**, RRP: \$995.00

4 Mono + 2 Stereo inputs, 3 Band EQ, 2 Aux Sends, +48V Phantom power, LED output metering, 2 Stereo FX returns, Solo, 2 Master outputs, Balanced throughout.

• **TOPAZ MACRO**, RRP: \$1,435.00

10 Mono + 2 Stereo inputs, 3 Band EQ, 2 Aux sends, +48V Phantom power, LED output metering, 2 Stereo FX returns, 60mm channel & output faders, Solo, 2 Master outputs, Balanced throughout. Rack mountable.

• **TOPAZ MACRO PLUS**, RRP \$2,315.00

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

• **TOPAZ MAXI 24-4 / 32.4** RRP \$ 4,494.00 / \$5,200.00. 22 or 30 Mono + 2 Stereo inputs, HPF, 4 Band EQ (2 mid sweeps), 8 Auxiliaries, +48 Phantom power, Inserts & Direct outs, LED metering on Aux, Groups & Masters, 4 stereo FX returns, Talkback, 4 groups Stereo + mono outputs, Peak LED's on channels, 100mm faders, Balanced throughout.

Studio Mixers Under \$15,000

• **TOPAZ MAXI 24-8 / 32-8** RRP \$ 7,964.00 / \$ 8,938.00. 22 or 30 Mono + 2 Stereo inputs, HPF, 4 Band EQ (2 mid sweeps), 8 Auxiliaries, +48 Phantom power, Inserts & Direct outs, LED metering on Aux, Groups & Masters, 4

stereo FX returns, Talkback, 4 groups Stereo + mono outputs, Peak indicators on channels, 100mm faders, Balanced throughout.

• **TOPAZ Project 8/24** RRP \$ 9,000.00

In line design offers up to 56 inputs in mixdown, 24 Dual inputs with 4 band EQ + EQ on 2nd I/P, 6 Aux sends, 8 groups, stereo master outputs, 4 stereo FX returns, +48 Phantom power, LED metering on groups, 100mm faders, comprehensive monitoring, Options: VCA automation or Moving fader package, Meterbridge.

• **TOPAZ Project 8/32**, RRP \$10,480.00

In line design offers up to 72 inputs in mixdown 64 with EQ, other specs as for Project 8/24.

Studio Mixers Over \$15,000

• **SOLITAIRE**, \$30,000-90,000

24 / 32 or 40 input frame sizes, Fully modular in line design, 4 band FdB Quasi parametric EQ, Assignable dynamics with simultaneous processing to all input channels (Gate / Expander / compressor / auto panner), 24 track routing, 4 stereo FX returns with EQ, LED metering, Comprehensive monitoring section, Options: 3 Frame sizes, Patchbay, VCA automation on monitors or channels, Moving fader package, stereo inputs,

• **JADE**, \$70,000 - 125,000

24 / 32 / 40 or 48 input frame sizes, Fully

modular in line design, 4 band FdB parametric EQ, Assignable dynamics with simultaneous processing to all input channels (Gate / Expander / compressor / auto panner), 12 Aux sends, 24 track routing, 4 stereo FX returns with EQ, LED metering, Comprehensive monitoring section, Options: 4 Frame sizes, Patchbay, VCA automation on monitors or channels, Moving fader package, Stereo inputs & Stereo FX returns modules, LCRS panning for surround sound.

• **VIRTUO DIGITAL** \$39,995.

64 input FULLY DIGITAL console, 32 Analogue mic/line inputs, 16 Digital inputs (ADAT format) 16 Return inputs, Assignable Parametric EQ and Dynamics on all channels, 24 track routing, +48 phantom power, 8 Aux sends, 8 Groups, Motorised faders, Dynamic automation and snapshot recall/reset, Extensive metering and monitoring, LCRS panning, AES/EBU or SPDIF master outputs, SMPTE/EBU Timecode, MIDI & 9 pin Machine control.

Syncrotech Systems Design also distribute **AMS** Logic 1, 2, 3 and Libra Digital consoles, **Calrec** Broadcast assignable consoles, **NEVE** Digital and analogue production consoles, Prices and specifications are available upon request.

AES THIS MONTH

September 10 - 12, World Congress Centre, Melbourne.

We published our in-depth AES preview LAST MONTH, to give you time to consider if you should attend, and time to book discount air tickets!

Wavelength Fire

SYDNEY: Wavelength's heritage listed premises, the Walter Burley Griffin designed Willoughby "Incinerator," was seriously damaged by fire in the early hours of Wednesday morning, 31 July.

"The Incinerator" housed Wavelength's production, client service and management teams. Staging and archives are housed separately at their Artarmon premises.

The fire gutted the top floor of "The Incinerator." Prompt action by the Fire Brigade limited damage on the bottom two floors to smoke and some water damage.

The project management skills that are well honed on all the major events produced by Wavelength became very useful in this "emergency".

Phones and faxes were diverted to Artarmon before 9am. All clients were informed of the fire by 10am. A production meeting with one client and several suppliers "went ahead" on the grass outside the office at 10.30am.

Wavelength production teams "squeezed" into the staging offices at Artarmon before noon, and in a chaotic way it was business as usual.

Within 48 hours, alternative premises had been sourced and leased, and temporary phone and computer cabling installed.

All computer data is "backed up" off site every night. This information was reinstalled on the rebuilt network, and operational by end of day Friday. In the seven days following the fire Wavelength produced and staged major events in Kuala Lumpur, Auckland, Sydney, Melbourne and the Blue Mountains. Film and video shoots took place in Sydney, Adelaide, Bourke and New Zealand.

The fire may be out, but they're still red hot!

Distribution

DRAWMER is now distributed in Australia by Studio Connections. In addition, Studio Connections have also taken on the Soundfield range studio of stereo broadcast and studio microphones. • Call Studio Connections: (02) 9873-3994 or (03) 9646-0544.

Wrong number

Anything Audio's phone number in Sydney is 9879-6788, not the number we published last month.

Moves & Changes

• AUSTRALIS MUSIC GROUP:

David Hines takes up the position of Sales Director for Australia, after heading up the Australis New Zealand operation for ten years. He'll need a crash course in linguistics when he gets here!

• EAST COAST AUDIO:

Tony Conroy takes up the position as 'new face' for Aphex signal processing equipment. He was previously with AWA Distribution.

• SHOWTECH RIGGING:

Have announced that their sales representative **Joanna Lloyd** is no longer working for the company. They would like to express sincere thanks and wish Joanna the very best for her future endeavours.

• AVID TECHNOLOGY (AUST)

... has announced the appointment of **Ian McKenzie** as Southern Region Manager, who will cater to the rapidly expanding AVID customer base in Australia's southern states.

• MARK GIBSON

... has left his position as production co-ordinator at Total Concept Productions to start his own production management company called Mk1 Productions. Call him on (046) 55-6647.

New Net Sites

QSC Audio Products: go to: www.qscaudio.com.

Solid State Logic (SSL): go to: www.solid-state-logic.com.

Connections have a site with lots of links, use it as a launching pad, go to: www.conpub.com.au

Births

Congratulations to Colin and Louise Rothapel of Custom Audio Installations & Lighting P/L, Newcastle on the birth of baby Nicholas John, 8.5 lbs on August 12th at the Christo Road Private Hospital. All are well and a roadcase has been made especially for Nicholas so he can keep Mum and Dad company at work. Joy oh Joy!!

Belated congratulations to Andy Ashford of Shrape International

and Marion on the birth of their first child, a baby girl, Sioban, born May 22 at Royal Hospital for Women, Paddington. All are extremely well and just rocking along nicely.

Congratulations also to Tim Kennard and Rebecca on the birth of their first child on August 2nd at the Royal Hospital for Women, Paddington; Jessica Ora, 8lb.3oz. Jessica is thriving and doing everything right - so far!

Murdoch takes on Connections – with UK format

Proving that anything is possible in magazine publishing, part Murdoch owned Pacific Publications are believed to be launching a new title this month called 'SOUND'. Edited by former Sonics and Connections journalist Greg Simmonds, and managed by

former Australian Digital ad flack Philip Spencer, the title will be a close match with the UK title, Sound On Sound. A UK format?

Connections welcomes the new mag, the fifth new competitive title since Connections started. Competition is healthy, yeah?

When we have some news... we run Gossip! But tell us your news... call us now, on: (02) 9876-3530, or fax (02) 9876-5715 or email to mail@conpub.com.au

• The worldwide audio trade knows him as a ponytailed, multilingual vendor of DJ mixers. **Our hero** is thus the subject of much innuendo, one story has the fatigued fellow on the bench, so to speak, in an Asian rub and tug shop. Some gentle body caressing transpires, whereupon the maiden enquires if Sir would like a happy ending. 'Yes please' he chortles. Maiden departs room, returning 15 minutes later – to see if he has finished!

• **John Clinton** is known as 'the beard', the Sydney based night club lighting and sound designer was the subject of an item on a network 7 show, 'Most Unusual Home Improvements'. Clinton was showing off his expansive concrete tube home, in bushland setting. A striking statement it is too, including the price tag: \$1.25m. There must be money in the club industry.

• Take nothing for granted. The seats at **Lennon's Circus** collapsed during a show at Eyer in SA, with 35 punters injured. A seating collapse at Pink Floyd's Earls Court show in 1994 saw several firms fined over A\$80,000 in a London court recently. Finally, the pyro operator at a festival in a town in Peru last month is in hiding after a rocket brought down high tension powerlines - on top of the crowd. 35 died. Safety is THE issue.

• The pressure is on, the foreman at 40 Kent Road Mascot in Sydney is under the intense daily scrutiny of the entertainment industries hardest taskmaster, Jands director (known in social circles as 'the oldest roadie') **Eric Robinson**. The massive new Jands complex must be ready by Christmas, so Jands Electronics, at St Peters, can move in. Jands have promised vacant possession of their St Peters factory to a purchaser. The new factory is at the existing Jands Production Services site, being built in stages to allow business to continue (almost as usual) there.

• Chameleon Touring boss **Tony Davies** tied the knot this month, his delicious spouse can rest assured that the very busy one behaved impeccably at his bucks night. A very sedate affair, clearly the two dozen lighting types there were on orders - - or has the flame gone from the rowdy side of the industry?

Gossip to Julius: (02) 9876-3530

Australian Music Association Renews

AGM aligns new committee, new president elected as Fender Australia chief steps down

The new AMA Executive Committee was elected at the 20th Annual AGM at the Furama Hotel in Sydney on Sunday the 11th of August.

The new committee consists of: Robin Macfarlane (President) - *Pro Music Pty Ltd*; Peter Hayward (Vice President) - *Australis Music Group*; John Morris (Vice President) - *Australian Academy of Music*; Philip Burn (Treasurer) *Print Music Australia*. Committee: Neville Chambers - *Ensemble Music Instruments*; Glenn Dodson - *Roland Corporation*; Sara Hood - *Yamaha Music*; Hans Meyer - *Hans Music Spot*; Janet Lidbom - *The Bassplayer*; Margaret Sonter - *Coast Music Place*; and Peter Noske - *Brash's*.

AMA farewelled two illustrious persons, the first being Margaret O'Loughlin of Fender Australia Pty

Ltd, who was association president for two arduous years. The second was Mr John Payton Senior who, for the first time in twenty years, will not be a member on the committee.

In the two years of her presidency, Margaret headed a committee that instigated new projects, including reductions in telephone charges, insurance premiums and credit card rates. The Music Industry/Education Alliance and the affiliation Australian Music Retailers Association (AMRA) are other initiatives undertaken under the presidential guidance of Margaret O'Loughlin.

The AMA also committed to real time research into the Music Player in the Home. The research was carried out by George Donovan of Griffin Advertising and the results will be available in Sep-

tember to all AMA members. The few statistics I saw were very interesting, producing age, social and geographic demographics.

The results should far outweigh the expense of the research allowing all music wholesalers and retailers the knowledge of where the music market is truly heading. Of course we all understand there has been a downturn in the musical instrument purchase market but interestingly the educators at the meeting voiced that their music classes were enjoying record numbers. But still, to have the household numbers specifically defined will be a valuable tool for future marketing and promotion.

The AMA has 62 wholesale members, and 147 retail members. There are 12 Associate members including *Connections Magazine*.

• Caroline Grafton

AMA PRESIDENT PORTRAIT

Robin Macfarlane began his career in the music industry, wholesaling musical instruments in Queensland in 1959. By 1969 his interests had formed a partnership with Rose Music Pty. Ltd. Melbourne, whose shareholders included Yamaha Japan.

Robin was instrumental in the National Marketing affairs of Rose Music/Yamaha, including the introduction of Yamaha Music Schools and International Competitions. In 1974 Robin sold his interests to Rose Music to attend to other business activities.

1978 saw the birth of Pro Music Pty. Ltd. In 1996 Pro Music has expanded to maintain a staff of 20 persons with offices in four states.

Robin is married, with five adult children, and a couple of grand children.



interM

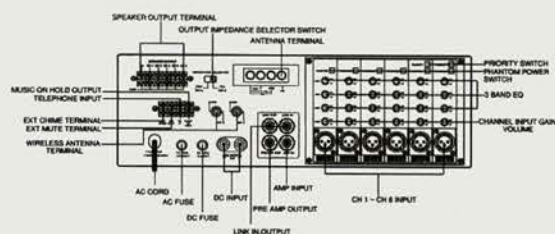
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- Amp + CD, (or deck)
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Features Include:

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

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Australia:
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A trading division of Silklore P/L. ACN 004 004 997
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Phone: (02) 417 1111 Fax: (02) 417 2394

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

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ENTECH Awards: Nominations Open

ShowSafe

The ENTERTAINMENT TECHNOLOGY (ENTECH) AWARDS move up in stature this year, with Nomination Kits going to 300+ distributors this month.

An ENTECH Award is a meaningful recognition of success in the market, as voted for by Connections readers in a proper ballot supervised by an accountancy firm. The actual award itself is a stylised transparent plinth or obelisk, mounted atop an ash veneer base. It carries the symbolism of ENTECH, a radiating energy wave, reproduced in red, gold and silver.

For 1997 the Awards will be in three categories; with product award nominations open to distributors, importers and manufacturers now.

Once nominations are received the products will be voted for by Connections readers on a form to be published in the February issue

of the magazine.

The award categories are now expanded, although the total number of awards are not expected to increase.

Products can be nominated as either:

- Classic products, - or -
- New products.

Classic Products are those which are 'most popular' on the market. A nomination in this category must be supported by three written references from real, genuine end users. So readers may expect a call from a distributor or two in the months ahead...

New Products are those which are released in calendar 1996, and as such not as likely to be known by readers. For this reason, a weighting system will be applied to votes for these, and preferential voting will be introduced for the first time at the ENTECH Awards.

The People & Institutions nominations will be open from next month as well, with all readers invited to nominate people, or companies which they consider worthy of an award for technical brilliance.

The Awards are now open to sponsorship, with company sponsor packages on sale this month.

A typical package will see a firm sponsor several awards, and named on the awards. For example, Film Sound Recordist of the Year could be presented by 'Company X'.

In addition, a sponsorship will include signage rights at the Awards Dinner, and logo inclusion in the ENTECH program, along with VIP 'ringside' seats at the Awards Dinner.

The ENTECH Awards dinner is on April 24th, during the ENTECH tradeshow, at a superb Melbourne venue. Stay tuned!



ShowSafe is the trading name of the Australian Entertainment Industry Health and Safety Association - which itself was formed following the ENTECH Safety Conference this year.

At the conference there was a wide consensus that the Entertainment industry would benefit from uniform health & safety guidelines across all states and territories.

The Entertainment industry is a complex and diverse industry comprising large scale operations, as well as small. It covers both private and public sectors and can overlap with other industries.

ShowSafe offers tripartite membership, representing employers, employees and industry associations. A 20 member Committee of Management will be established.

Connections will bring you more details next month on ShowSafe, watch this space.

FBX FEEDBACK EXTERMINATOR®: The Standard in Automatic Feedback Control

4 Most Frequently Asked Questions

WHY: Feedback is the number one problem in most sound systems, and the old graphic equalizer solution to feedback doesn't make sense anymore. The FBX controls feedback automatically, without taking a big chunk out of your sound. Digital FBX filters are ten times narrower than graphic EQ filters, so you get more gain before feedback and a dramatic improvement in your sound.

HOW: The patented FBX digital signal processor detects the feedback frequency and precisely places a super-narrow filter directly on the ringing tone, all in less than 1 second. FBX filters are automatically set just deep enough to remove feedback.

WHERE: FBXs are providing more gain before feedback in mains and monitors around the world. Theaters, concert halls, churches, conference rooms, and sporting venues all sound better with the FBX. Teleconferencing and distance learning centers also benefit from automatic feedback control and increased intelligibility.

WHICH: **FBX-SOLO Feedback Exterminators** — Choose the FBX-SOLO for targeted feedback control—one SOLO for one input channel: the SL-610 for insert points only, the SM-610 with a built-in mic preamp for mixers without inserts.

FBX-Feedback Exterminators — Use the FBX-901 for single output channel feedback control, or insert one on an input or sub-group; choose the FBX-1802 for two-channel applications, or when you want more control.

The new ADF-Workstations — The ADF-2402 is the ultimate feedback controller and digital parametric filter set. Control all aspects of the FBX algorithm, and program each of the 12 filters per channel as parametric or adaptive FBX filters. New features include graphic filter editing and Windows™ Remote Control Software. The ADF-1201 is the single channel version.

FBX and FBX Feedback Exterminator are registered trademarks of Sabine, Inc., and are the brand names of its line of automatic feedback controllers. Covered by U.S. Patent No. 5,245,865, Australian Patent No. 653,736, and Canadian Patent No. 2,066,624-2. Other patents pending.



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 Melbourne: Ph (03) 9562 8566 Fax: (03) 9562 8781
 Brisbane: Ph (07) 3852 1312 Fax: (07) 32521237
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 Hobart: Ph (002) 28 6373 Fax: (002) 78 1063 • New Zealand: Ph (09) 415 9426 Fax: (09) 415 9864



Editorial

Welcome Mr. Murdoch!

We think we've reached an interesting time in the evolution of Connections.

Long term readers will note we are always tweaking content here and there, and pushing to envelope. Unless I'm mistaken, I think we now cater to almost all the entertainment technology niche markets. Every month.

Pacific Publications are rumoured to be launching a new magazine soon called 'Sound', based upon Sound On Sound - a UK magazine.

To make this pay they will need at least \$40,000 in advertising per issue, and presumably it will all have to come from the pro audio sector. This is because initial newsstand sales could be sluggish, and revenue from these sales can't be counted upon in the short term.

Connections has competed against the following titles since our inception:

- Sonics
- Digital
- Broadcast Engineering News
- Encore
- Stage Whispers
- Australian Musician

- Music Trader
- Mixdown Monthly

.....and all the street papers in each city all aspire to run some pro coverage, or at least harvest some advertising.

Connections survives in the market because it is well read, our readers invest \$4.50 in Connections and in exchange expect fair, unbiased coverage. And absolutely no crap.

My advice to Mr. Murdoch and his advisors who are planning Sound magazine is

- * The U.K. format will not work here.
- * Don't run useless, fluffy product reviews which always conclude with praise.
- * Don't print every claim made by every manufacturer. For example, one magazine we compete against keeps promoting as 'Australian Made' a microphone which is assembled here from Chinese components. We do not accept every 'made in Australia' claim.
- * Finally, let me know how much you think the Australian Pro Audio market is actually worth. Clearly I've got the wrong figure, and you guys have got a figure worth about *six times* what I have!

Don't assume we know your news....

When we started we had problems getting industry people to communicate with us. Mostly because they were not accustomed to having an industry magazine in the first place.

Some years down the track we are here to stay, and happily do get a healthy swag of news each month. But not enough!

In 1996 the need to accurately promote and communicate your business activities is greater than ever before.

Look through this magazine and you'll see some brand which have lifted themselves to the top, or near the top, in the life of Connections. They've used marketing to do it.

Think about the service firms in the industry. Do you immediately think of one name at the top of each category?

Proper promotion doesn't mean engaging a PR firm to write a lot of press releases and an advertising agency to run a lot of adverts. In fact, the achievers you see in the pages of this magazine often do all this themselves.

So come on ... communicate!

-Julius Grafton, editor.

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

- Theatrical fabric
- Cinema masking systems
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Write in Reader Service Number: 115

ENTECH 1997 CONFERENCE

Pro Audio Seminar Consultant Wanted

We need an **audio professional** to help set Seminar Topics and Conference agenda at ENTECH 1997 next April in Melbourne. Our programme must be finalised in late November, then the sessions, speakers, papers and content actively supervised.

We seek to improve quality and content in our growing Convention. ENTECH 1996 hosted 20 seminars, a one day conference, expo, technical tours and other attractions for 110 exhibitors and 4,394 trade visitors.

You already work in / around Pro Audio, and you can put in some spare hours each week. You'll need to be able to meet with us in Sydney periodically. Then you'll be on the floor at ENTECH (April 22 - 25) to supervise the Pro Audio subject component of our Convention.

Contact Julius Grafton on (02) 9876-3530, by fax (02) 9876-5715 or email julius@conpub.com.au asap.

LETTERS

*#//@%&XX -?!>

Robbie McGrath & Meyer wedges

Having just read your July issue, I was interested to read the article on Robbie McGrath, Simply Robbie.

I was the local production representative for Michael Coppel Presents on this tour.

Robbie has passed on some incorrect information to you in this article!

A.C.P. supplied the entire PA and monitor system. Mick Hucknell was unhappy with the A.C.P. floor monitors and A.C.P. had to source Meyer wedges for the client. A.C.P. sub hired these through Ian Richardson at Audio and Recording who slugged Simply Red and obviously had A.C.P. by the short and curlies.

Jands who were the lighting vendor assisted A.C.P. in Perth on the first concert of Simply Red's

Australian Tour with rigging. A.C.P. had not supplied enough motors or rigging to get their new Flash Light / Flood Light system in the air.

I thought you should know the facts.

-Ian 'Spider' Digance.

DAT Hassles

I've had no end of grief with my DAT machine, which has been back under warranty three times and still has an intermittent fault - it stops, all by itself. I'm writing to warn all readers never to buy (brand withheld). -'Upset', ACT. * *Rather than sledge the brand here, I suggest you demand a new machine. If it faults the same way, we will then name the brand.* -Ed

WIRELESS OR WIRED?

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

The **Azden** 31XT converts **any** dynamic microphone with an XLR to wireless operation. Yes - you plug **YOUR** favourite mic receiver, below) - and **presto...**

microphone with an XLR to wireless operation. into the neat transmitter (shown sitting on top of the **Instant Wireless** with the true sound of your mic!

AZDEN



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

MADE IN JAPAN

- Makes ANY dynamic handheld microphone wireless
- Upgrade your microphone ANYTIME
- Quickly discard the transmitter and plug in a lead
- Available on ten VHF frequencies
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- Powered by a single AA battery (up to 10 hours operation)
- Sleek ergonomic design
- Durable ABS housing

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

Write in Reader Service Number: 149

Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH



SONY TUNES IN

ISDN AVAILABILITY FUELS TELECONFERENCING

If ever there's been a technology surrounded by confusion, teleconferencing is it. But the format is surprisingly simple if you have an integrated collection of equipment known as a rollabout.

SONY entered the market some years ago with the Trinitron 2000, which didn't sell terribly well for no obvious reason.

Last month they released the PCS-5000, an integrated system which has aroused serious interest with several key features.

Connections readers are exposed to this technology if they work in the events or business theatre sectors, where increasing use of teleconferencing is catching on.

Briefly the format provides a two-way communication medium where picture and audio are carried on standard ISDN lines.

One 128kB line will work OK, three lines can be used for 6 channel 384kB operation and better

picture resolution. The picture isn't broadcast quality, it is a continually scanned image which will redraw slowly if a lot of on-camera action is occurring.

The PCS 5000 comprises camera, monitor, processor and rollabout rack. An audio module contains microphone and speaker. The processor contains the CODEC, terminal adaptor, and hardware elements in one package.

Sony offer a 'quartet' feature, whereby a four way, split screen conference may occur between 4 Sony 5000 systems.

As to interconnecting standards, these were ironed out years ago. Most systems today will talk to each other under the H320 protocol. All you need is ISDN, which Telstra are expanding across the region.

• *More on Teleconferencing: see Main Event magazine from Connections, coming soon.*

Info: Call Integrated Vision, (02) 9929-5499.

Mackie: now the amp

2 x 800w; under \$1500 ... and coming in October

After putting the cat among the pigeons in the world of mixing consoles, Mackie have added a new power amp, the FR Series M1200, to their product list.

FR stands for Fast Recovery and refers to the M1200's ability to sound good when driven into rude and ugly reactive loads (loud speakers), says Mackie.

This is a PA amp, pure and simple. The approach taken by Mackie gives users a swag of features at a very, very, very low price.

Mackie say the manifold cooling duct seen in the picture distributes air evenly to the heatsinks, which means every output device cools uniformly. This is important, and they claim that the M1200 will operate normally at ambient temperatures of up to

113°F, truly warm if not average backstage at a pub gig in Queensland or anywhere north of Surfers.

Other specific features: 600+600 watts into 2 ohms; sustained ultra low impedance capability; built-in sweepable constant directivity horn compensation; built-in sweepable high-pass filter; built-in switchable low-pass subwoofer crossover; defeatable clip eliminator; ultra-low frequency subsonic stabiliser; 16.3kgs.

Back panel is fully featured with jack and XLR inputs, binding post and jack speaker outs, and amp mode / subwoofer mode switching, limiter switching.

Price? \$1495 (inc. tax).

• Australian Audio Supplies, call 043 291711.



WRITE IN 402 ON READER SERVICE CARD FOR INFO

TINY MULTIPIN

Amber Technology into the NanoCon 3-pole ultra-bloody-small connector. For pro audio, it's made by Neutrik, and is just 31mm in



length, shown at 100% size here. Neutrik also offer NanoCable, at 0.15 sq.mm (AWG26) for this connector.

• Details: Amber Technology, (02) 9975-1211.

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104 REASONS WHY YOU SHOULD CHOOSE A VEGA WIRELESS SYSTEM



Reason #1: The wireless you see on specials, award shows and live TV performances is almost always Vega.

Reason #2: Selectable receiver and transmitter provide maximum frequency agility, so you can use it anywhere.

Reason #3: Dual Mode Squelch prevents interference.

Reason #4: Vega's unsurpassed sonic quality and performance is now within your reach.

Reasons #5 - #104: An unprecedented choice of 100 UHF channels with just a few simple clicks.

For the dealer nearest you or for a free brochure, call
Mark IV Audio (Aust) Pty Ltd Tel: 02 9648 3455 Fax: 02 9648 5585
Mark IV Audio (QLD) Tel: 07 3854 1963 Fax: 07 3854 1881

U2020
100-Channel UHF Wireless System
VEGA
The Professional's Wireless Since 1960

Write in Reader Service Number: 128

SALES



JBL Digital Speaker System Controller

New from JBL is the DSC 280 loudspeaker system controller. What's the rub here? Well the DSC 280 provides stereo two, three or four-way crossovers, with optional mono-low output for subwoofers on one band.

The high and low pass filters can be independently set to Bessel Butterworth or Linkwitz-Riley response with slopes of 12, 18 or 24dB per octave.

Two sections of parametric EQ per band are provided and one section can be switched to give all-pass phase adjustment at the crossover frequency. One section can also be selected to act as a dynamic EQ.

The DSC 280's EQ range is 15Hz to 16kHz with +/-15dB gain adjustment, bandwidth adjustment: from 0.05 to 3 octaves for a Bell

response, and slope selection of 6 or 12dB per octave for low or high shelving response (for CD horn EQ).

Additional features include: delays up to 650 microseconds; mid-band limiters; polarity invert and phase adjust per band; an LED meter and mute for each output and 60 programmable memories.

Analog or digital audio inputs can be accepted according to choice of input card.

Inputs and outputs are electronically balanced, and via XLR's.

The controller is also pre-configured for JBL's Array Series and DMS-1 studio monitors.

• \$10,995 from Jands Electronics, call (02) 9516-3622.

WRITE IN 406 ON READER SERVICE CARD FOR INFO

BiAmp Auto Mixer

The DLA93 is a microprocessor based automatic mixer. It provides nine mic/line input channels and three independent outputs.

Automixing, phantom power, high pass filters and output assignments are selected on individual channels. Remote control of inputs and outputs is also possible as is the ability to link several units together. DLA93 \$2,275 incl. tax.

• Production Audio Services, call 03 9415 1585.

WRITE IN 407 ON READER SERVICE CARD FOR INFO

• Kosmic Electronic Industries in Perth are crunching a lot of Australian DSP sales - a DSP Postation complete digital audio post production unit sold to a facility in Jakarta, Indonesia. Kosmic: (09) 9242-3844.

• Mackie mixers are on top of the hit list of new sales for Entertainment Installations in NSW. They've shipped Mackie to a local video/post firm, and several production firms. They also have installed an ARX AFW-1 in a church. Call (043) 243-873.

• Speaking of which, Brisbane Revival Centre have a new DDA CS3 24 channel mixer, supplied by CPC Audio, call (07) 3816-1009.

• Top End Sounds in Darwin have recently added an EV Deltamax speaker system to hire stock, including 8 DML1152 15" top boxes and 4 DML 2181 bass cabinets and controllers. Top End Sounds: (089) 817-744.

• Production Works in Hobart have recently added Klark Teknik DN3600 programmable equalisers to their hire inventory. Eight sends of DN3600 were recently used for monitors on the 'Presidents of the USA' Tassie tour. Call Production Works; (022) 311-505.

Music Centre Pro Audio Division

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LARGEST RANGE OF DIGITAL HARD
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Cut price Tascam DA 88

Tascam have released a new version of the DA-88 called the DA-38 Digital Audio Recorder. Still 8-tracks, it has been developed in response to the requirements of musicians and smaller project studios with a hankering for the same format.

One important change from the DA-88 is in the A/D and D/A conversion where 18-bit, 64 x oversampling A/D and 20-bit 8 x oversampling D/A converters are now utilised. An electronic digital

patchbay has also been included which allows digital copying of any track to any other track between two or within one DA-38.

Other features: DA-88 compatible; multiple synchronisation up to 16 units; multiple D-sub 25 pin balanced analog I/O; shuttle wheel; 2 point locate memory; auto punch I/O with rehearsal capability; track delay function; built-in electronic patch bay.

• \$7,150 (inc. tax) TEAC, call (03) 9644 2442.

WRITE IN 408 ON READER SERVICE CARD FOR INFO

Otari Cassette Copier

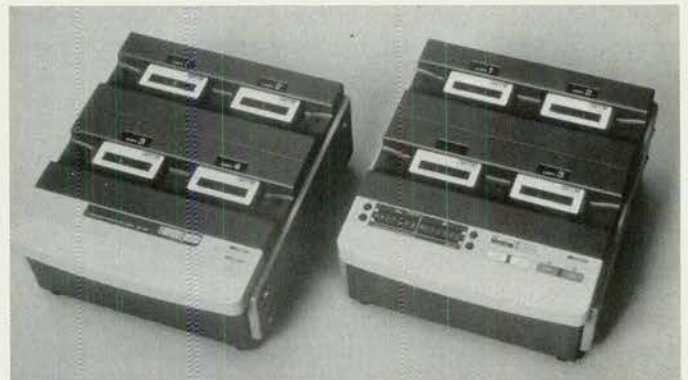
The DP-8 C3 Master Copier comprises the master cassette transport and three slave stations, providing duplication of up to three cassettes, copying both sides simultaneously at 16-times normal play speed. Slave positions are equipped with an erase head to automatically record over any existing program material and has short copy tape error detection.

The basic system can be further

expanded using the DP-8 Z4 Slave Copier. Housing four slave cassette transports, up to three DP-8 Z4 units can be added to a single DP-8 C8 Master copier to simultaneously duplicate fifteen cassettes.

- DP-8 Cassette Copier \$6335
- DP-8 Z4 Slave Copier \$5622
- Amber Technology, call 02 9975 1211.

WRITE IN 409 ON READER SERVICE CARD FOR INFO



PEAVEY®

Almost Perfect...

The **CS®800X** is one of the best selling professional power amps in the world because of its excellent sound quality and unsurpassed reliability. Due to 20 years of continuous improvement, the CS®800X approaches perfection.

But, you wanted more power...

You asked for more power, so we developed the **"G" series**. For years, amp designers have pursued Class "G" topology because of the increased efficiency you get from using multiple rails. Previously, these designs suffered from signal glitches, a form of crossover distortion, when the signal switches from rail to rail. Peavey's engineers figured out how to execute a "glitchless" Class "G" amplifier with less than 0.04% distortion at 20kHz. This was remarkable enough that we were awarded U.S. Pat #5,387,876.

But, you wanted even less weight...

You asked for less weight and a smaller package. So, we developed the **DPC™ series**—one thousand watts in a single rack space weighing only 12 lbs! True digital amplification offers outstanding efficiency and sonic performance. The only audio amplifier using "Digital Phase Modulation," an advanced form of PWM. U.S. Pat #4,992,751.

- 2x400 W @ 4 ohms, 2x600 W @ 2 ohms
- Hum & Noise -100dB below rated power
- Less than 0.030% thd +N 20 Hz to 20 kHz
- 10 Hz to 50 kHz power bandwidth
- Damping factor greater than 200 @ 4 ohms

- 40 V/usec slew rate
- Plug in crossover island
- 3 EIA rack spaces, 47 lbs.
- DDT™ speaker system protection



- 2x600 W @ 4 ohms, 2x900 W @ 2 ohms
- Less than 0.040% thd +N 20 Hz to 20 kHz
- Hum & Noise -100dB below rated power
- Power bandwidth 10 Hz to 40 kHz
- Damping factor greater than 300 @ 8 ohms

- 40 V/usec slew rate
- Dual, two speed fans
- 2 EIA rack spaces, 35 lbs.
- DDT™ speaker system protection



NEW

- DDT™ speaker system protection
- 12 lbs.
- 2x500 W @ 4 ohms
- Hum & Noise greater than 90 dB below rated power
- 1 EIA rack space



POWER AMPS



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Ph: (02) 9698 4444 Fax: (02) 9698 4545

Australis Music NZ:
5 Amokura Street Henderson Auckland
Ph: (09) 837 3230 Fax: (09) 837 3232



Write in Reader Service Number: 177

Clearsighted Conversion

Focusrite make it. They call it the Blue 245 and it is a stereo 20-bit analogue to digital converter. The Blue 245 has been designed to perform in professional mastering, transfer and recording work and utilises the advantages of 20-bit conversion technology with good noise (108dB THD+N) and jitter (<1.6ns) performance.

The 245 is based around a 20-bit 64-times over sampling delta-sigma chipset that has, when working with 16-bit media such as DAT, a proprietary dithering system that enables the 20-bit sig-



nal to pass onto the 16-bit domain transparently. Other features include: analogue circuit topology; ADC clocking; balanced XLRs and a 20-bit AES/EBU digital output; optional output master to AES or

word clock between 28kHz and 54kHz.

Of course, the ear is the final test so Focusrite have conducted a number of 'blind' listening tests to refine the 245. Sample it yourself.

\$8,995 (inc tax)
• A.R. Audio Engineering, call (02) 94810 5300.

WRITE IN 403 ON READER SERVICE CARD FOR INFO

Denon MD to MD dubber

To cater to the increasing professional markets' use of the MD format in broadcast, Denon have constructed the DN-045R Professional MD Replicator.

The DN-045 performs digital to digital dubs, bypassing the ATRAC compression circuit and preserving the high quality sound of the original. The trick here is the dubbing occurs at a maximum speed of 3.5 times faster than real time (74 min.=21 min.).

As well, MiniDiscs can be defragmented in the same way as computer floppy discs and hard drives. This is because repeated

editing on a MD causes data for each track to be dispersed at different locations. When the master is dubbed on the DN-045R, the dispersed data is automatically joined and recorded onto a slave disc as a single string of data starting from the inside of the disc. Windows version of the control software is provided as a standard accessory.

The DN-045R incorporates the same type of professional-use drive mechanism as the Denon cart recorder and player units.

\$ 5055 (inc tax).
• AWA, call 02 98948 7666.



ConcertCom

From Creative Audio in Sydney, a new range of ConcertCom talkback communication devices.

Designed to function as control hubs in permanent and portable systems, the ComandCentre units provide either two (model C120) or four (C140) independent communication channels (rings), employing the 3-wire standard.

The CommandCentre functions as the master intercom station and may be operated with a communications headset or with the built-in microphone and loudspeaker (squawk mode). Other features include: an audible call facility; link

switches (to join rings); automatic program mute (APM) and cross-mute (X-mute) functions; two dedicated paging outputs for announcements; external program input; a monitor direct input; and a monitor output.

ConcertCom components include Beltpac remote stations, Squawkpac loudspeaking remote stations, and Talentpac receive-only remote stations. Complex systems may be configured with the addition of the C150 SwitchMatrix.

C120 \$2295, C140 \$2995.
• Creative Audio, 02 746 1199.



WRITE IN 404 ON READER SERVICE CARD FOR INFO

WRITE IN 405 ON READER SERVICE CARD FOR INFO

EAW

EASTERN ACOUSTIC WORKS

The Laws of Physics - The Art of Listening

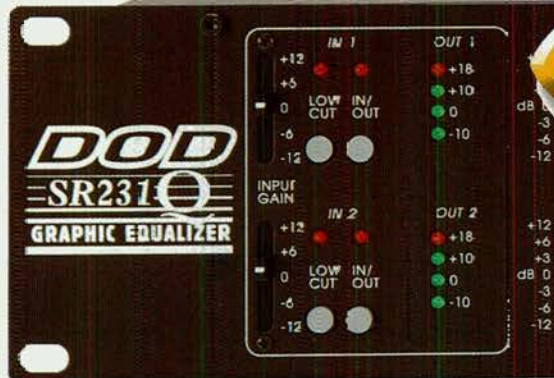
Sydney: Suite 406, 220 Pacific Highway, Crows Nest NSW 2065 Phone: (02) 9954 5100 Fax: (02) 9954 4927
 Melbourne: 6-8 Elizabeth St, Richmond Vic. 3121 Phone: (03) 9415 1585 Fax: (03) 9415 1595

Write in Reader Service No.123

**GET MORE.
PAY LESS.**

DOD EQ's NOW WITH CONSTANT Q

**GET MORE.
PAY LESS.**



The new DOD SR series EQ's will surprise you with features you thought could only be found in EQ's costing \$100's more. Constant Q filter technology ensures stable bandwidth and response at any slider setting. Impeccable THD and noise specs make your job easier by keeping your sound clean and the switchable low cut filter offers instant protection against sudden low frequency overloads. DOD delivers these and other professional features that today's sound engineers demand. Check out the new SR EQ's at your DOD dealer today and let your ears and your budget be pleasantly surprised.

- Constant Q filtering
- Low Cut Filter
- THD: 0.003% @ 1kHz
- Signal to Noise: >90dB
- Internal Power Supply
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IMP Amps Super-Safe

MIAMI: Infinite Modular Power (IMP) are a US based designer and installer of professional sound reinforcement systems. They have made an impression in the Australian distributed public address sector such as announcement/P.A. systems for shopping centres, colleges, courts, and at the home of Lindsay Fox (trucking king).

Recently IMP's Speaker Power Amplifier SPU5A underwent rigorous testing by Scientific Services Laboratory of Australia. The IMP Amplifier tested to the relevant clauses and now complies, officially, with all the requirements for Sound System amplifier performance criteria, essential for installations in the Life Safety Field. IMP are very happy as it offers new marketing potential for their product.

• **H&C Audio,**
call (03) 9989 4320.

AKG debut 'category killer' wireless

UK: AKG have released a category killer priced VHF wireless system. This sector of the market is very hot, with all microphone vendors proffering systems. Now a Harman company, joining JBL, Soundcraft and other leading brands, AKG have had a dose of Harman induced product pragmatism.

The new wireless system sells at \$695 for a bodypack set and a diversity receiver, or \$795 with a handheld microphone transmitter.

It has the standard market requirement, ie: it is a 'diversity system', meaning two separate slightly apart receiver channels for dual selection of the transmitters best transmission.

Some recent new VHF wireless systems have been very sneaky, with two antennas but no diversity.

You get what you pay for, in as

much as a system at this price doesn't have user variable frequency selection, you choose which frequency you want when you buy it.

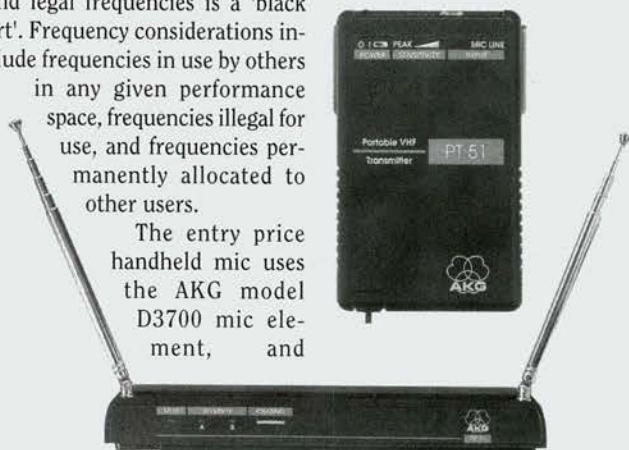
The usual VHF frequency selection range is between 174MHz and 240MHz, but selection of useable and legal frequencies is a 'black art'. Frequency considerations include frequencies in use by others in any given performance space, frequencies illegal for use, and frequencies permanently allocated to other users.

The entry price handheld mic uses the AKG model D3700 mic element, and

claims 8 hours use with a 9v battery. The pocket transmitter (below) will accept any mic, and provides a supply voltage of 5v.

• **Call AWA, (02) 9898-7666.**

WRITE IN 410 ON READER SERVICE CARD FOR INFO



MIX ME A DOUBLE

DMS 22 Dual Mic Preamp



Announcing a startling scientific breakthrough from the Rane labs. We've invented a new mic preamp that has more than twice the performance of the highly respected FMI 14. [gasp...!]

"How is this possible?!" you ask. "The FMI 14 has an impressive -130dBu Equivalent Input Noise, THD+Noise of only 0.009%, 48V phantom power and that patented Accelerated Slope™ EQ that's killer!"

Like all truly brilliant inventions, ours is elegantly simple: we put two in one box!

(ooooohhh....)

But wait...there are some serious advantages to the DMS 22 approach:

- You get an additional, separate STEREO MIX OUTPUT with Pan control for custom stereo imaging instead of hard left/right.
- Selectable EQ turnover points; 50/100Hz for Low and 7k/12kHz for Hi.
- Each output has a separate Rumble Filter with switch-selectable roll-off points of 15Hz, 50Hz or 100Hz.
- You get all the performance of two FMI 14s, with additional features, for LESS COST —we passed the savings of a single chassis on to you.

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Barco 701s

The new Barco 701S video and data projectors are equipped with CRT's enabling light outputs of up to 1200 lumens (230 ANSI Lumens) at 10% peak white - which is a dramatic increase of over 50% on the light output formerly available from standard 7" cathode ray

tubes.

This enables the projection of very bright and contrasted images that today have no comparison in today's market place, says Barco.

The new CRT's have a bigger phosphor area (hence the higher light output) and an improved

cooling of CRT face plate, resulting in an improved life time and a significantly higher reliability than previously used tubes.

The Barcovision 701S has been equipped with an improved Video Decoder with an adaptive three line comb filter for a better colour reproduction. It features, amongst other special techniques, an adaptive three line comb filter with motion detection, resulting in a superb video picture with razor sharp colour transitions.

The 701S series of data and video projectors can be either factory fitted or retro fitted in the field with the Barco Line Doubler for elimination of line pattern and flicker.

Vision 701S HQ \$17,123.00

Data 701S HQ \$21,991.00

• Call Trace Pacific, Tel. (03) 9646-5833.

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The unit microprocessor controlled and takes samples of ambient noise and compares this with program signal and adjusts levels as needed.

The ANC22 is designed for locations which experience changes in the level of noise - such as restaurants or factories, or the Connections office when Caroline is telling the latest joke of the day. Some of which do NOT bear repeating in a family magazine!

• ANC22 \$2,275 retail inc tax.

• **Production Audio Services, call 03 9415 1585.**

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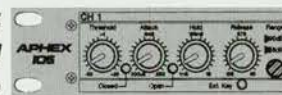
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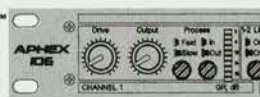
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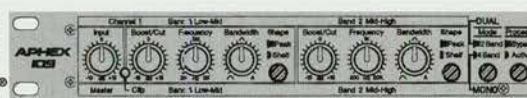
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INTERCITY SOLD

New owner gears up for Asian push

Intercity Staging is now owned by UK based company, The Gearhouse Group, having been sold out of Fairfax owned AAV Australia.

The Gearhouse Group, which already operates businesses across the UK, Europe, USA, South Africa and Dubai, plan to use Intercity Staging's established Australian operations as a base from which to launch into the lucrative South East Asian market.

Increasingly, Australian expertise is featured in business theatre



and product presentations in the Asian market. Our story elsewhere on this page is just another indicator of this.

The firm will now be known as Intercity Gearhouse, and will specialise in the supply of audio visual technology and staging equipment, as well as staff for conferences, seminars, exhibitions, and product launches.



At the time of the sale Intercity had a staff of 43 people, with offices in Melbourne, Sydney, Brisbane, Gold Coast and Canberra. Franchise outlets operate in Perth, Adelaide and Hobart.

According to AAV's Ted Gregory, AAV will now concentrate on production, post production and replication, with new opportunities coming via online and internet technologies.

Saving The Rainforest

Malaysia puts on a spectacle, Aussies do the AV

by Madeleine Murray

A rainbow archs over the forest floor, the sun sets amid screeching birds. The scent of damp leaves and animals fills the air, and shafts of light pierce the dense canopy. This is the Malaysian rainforest.

This rainforest world was created at the Dewan Merdeka Putra World Trade Centre in Kuala Lumpur. The hall is three storeys high, 55m wide, and 70m long. The entire space, including the ceiling was filled with painted cloths, foliage, reflective ribbons, a rainbow, sunsets, animal noises, and forest smells.

Six of the biggest national companies put on shows during the week about conserving the rainforest in their industry. Each night, there was a lavish dinner, speeches about saving the rainforest, and a slightly different

show. The final night was the launch of the Proton car, made in Malaysia, and partly owned by the Government. During the week, Prime Minister Dr Mahatir Mohamad attended, the King of Malaysia came, foreign royalty was there.

And so was Phil Stafford of Entertainment Lighting and Sound, in Burleigh Heads, Queensland.

"We were creating a rainforest with scenarios from dawn till dusk, with thunderstorms, lighting, and rainbows," Phil said. "During dinner, there were fully scripted themes with a narration, and the lighting would change in a few minutes from a sunrise to a day, or from sunset to night." Each course of the meal was marked by a change of setting. Scents were pumped into the air to enhance

the time changes.

Setting it up

Phil had to decide whether to hire the equipment over there, or to fly everything out from here. He went to KL, surveyed the venue, and assessed what was available from local suppliers. Malaysia has the same voltage as Australia, which was an advantage. The customs carnet, government holding deposits, and air freight cost were so high that he decided to hire gear in KL.

"We didn't have any major headaches," Phil said. "There were a lot of little problems to deal with, language barriers, the formalities of work. But the plots were pretty descriptive, everything was fairly black and white on how it goes together, even though we were



Dewan Merdeka Putra World Trade Centre in Kuala Lumpur, with rainforest environment

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making slight changes as it went up to get the right look. But it went up ok, and everything worked well."

Two lighting techs, and one audio went from Australia, and they used eight local crew in KL. The event needed 25 different sends of audio. The stage, the bird songs, and animal noises all through the room meant that each wedge had to have its own separate feed. Each area of the room had its own sounds, like a real forest. ELS put 24 speakers around the walls, and in the roof. The audio was like surround sound. When the thunder burst, it rolled in along the room.

The shows

A group of dancers from Sarawak performed traditional dances most nights. Malaysian Airlines launched their new ad on a big screen. They had their own show, and their own dancing troupe. One night, the 60 piece Malaysian Symphony Orchestra played, another night was a five piece Italian band.

Backdrops covered all the walls, a shredded light sensitive plastic hung from the roof to look like crystals. Some of these were up to 6m long. One of the effects ELS managed was a thunderstorm, with lightning, rain, and a rainbow. "When the storm came through, it rolled through because of the audio. Then we had other lights in the distance flashing. As it got closer, the whole room lit up. You could see them jumping out of their chairs. When it rained, mist machines were going in the roof, and the guests got slightly

misted."

The guests loved it, but the reaction was quite understated. The audience was mainly Muslim, who don't drink, with a scattering of local and overseas VIPs such as Generals, and royalty. So no one was screaming, "Good on ya, mate!" But they loved it anyhow.

"We were making a fantasy world, of a crystal rainforest, where all the senses were aroused," Phil said. "Scents were pumped into the air to enhance each changeover, morning, evening, storm, and so on. It was like being in a fantasy world where the whole room would change. And it moved. The sun came up, and went down. With the Cyberlights, you can scroll and cross fade from an amber to a pink, and down to a deep blue. So the whole room just sunk from one level to another. But it didn't crunch, it just slowly crossfaded over a period of time to a sunset, where it disappeared behind the trees on the other side."

The Crew

Lighting

Phil Stafford
Andrew Underwood

Audio

David Willings

Producer

Lloyd Bond

Production company

Bojo Productions
The Three Wise Men (Malaysia)

Lighting and sound production company

Entertainment Lighting and Sound, Burleigh Heads, Queensland

Love on the job

...at the Channel 7 Welcome Home Olympics dinner

by Madeleine Murray

The good will in the atmosphere is almost palpable.

The associate producer loves the designer, the stage manager, and the production director. The designer loves the set builder, the team spirit, and the lighting designer. The lighting designer thinks his Vari*lite operator and designer is the best in the country. Everyone loves the producer.

It's the day before the Channel 7 welcome home dinner for the Olympic athletes. Over 300 athletes, and 800 sponsors, and VIPs, including the Prime Minister, and the Governor General will arrive at Hall 5, at Darling Harbour Exhibition Centre on Wednesday night. Red carpets and banners will lead them into a foyer where they will have drinks. Then it's into the main room, heralded by 50 fanfare trumpets, for dinner, awards, and entertainment. Tickets are \$1000 a head. 160 round tables are set with linen tablecloths, several choices of cutlery and wine glasses. Each table seats ten.

The huge hall is draped in blacks, and hung with satin banners. Above the tables hang over 90m of truss, and hundreds of lights. The stage at the end of the room is 10x20m. The set is white arcs of material against black rings mounted on flats. A big pro cube is behind tracking flats onstage, and two more in the room.

There will be speakers, video rolls, awards, and a live cross to Seven news. Five assistant stage managers, one deputy, and four staging people will be looking after the cues, and the talent. Talent, as in Michael Cormick from *Beauty and the Beast*, Slim Dusty, Roy and HG, James Reyne, Rob Guest, Col Joye, the Delltones, John Paul Young, Marc Hunter, Julie Anthony, Kate Cerebrano, Rebecca Chambers, a twenty piece orchestra, and more. Whew.

All this has to be blocked, rehearsed for sound and lights, and ready for tomorrow night. And the associate producer is chatting to me about the Northern Territory.

(continues over page)

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Love on the job

No wonder they like her.

Design and Lighting

The designer, Russell Cohen, has just finished NIDA. This is his first big job. He doesn't have a card, a car, or a mobile phone. But he has lots of talent, and goodwill. "Obviously it's a very plush night," Cohen told me. "So we had to validate the money that people are going to spend. So Jeff and I, and Channel 7, and Eric Robinson from Jands have tried to make something quite spectacular, unique, large, and very clean. Something really stylish, no daggy bits anywhere, just really simple lines with everything."

Cohen then launched into a passionate speech about fair treatment of athletes by the media, which was quite endearing, but not too relevant to an article on production. In the brief conversation we had, Cohen managed to praise everyone, including the rig-

ger. "There's a guy called Michael, whose nickname is Shackles," he said. "He's the guy who does it all. He's unbelievable. He's like a monkey, he just climbs around with stuff everywhere. We just give it to him, and he puts it up."

The set has been designed with a strong sense of lighting. The sails are 8m high, and reflect the light. The 500 black rings give texture and depth, and the white borders covering the truss above the stage were specially made to be lit.

Jeff Pavey, LD, figures he's got a lot of gear. The whole room has been draped off at 9m. There are 82 motor points, 400 par cans, 40 colour changers, 36 VL2s, 26 VL5s, 90m of truss. "Because it's a TV thing, we try to keep it clean, make it look big and well lit," Pavey said. "We try not to pump in hundreds of cues. We try to put in 50 quality cues, rather than put in 200 that will all look exactly the same."

The whole show was scaled up, and planned a month ahead. "We've been quite lucky, to have

no grief at all. Everything's fitted down to half a metre. We've been quite happy, very happy."

The stage and set was built by Ray Elphick, and White Bay Studios. The scaffold frame, by Butlers, was clad and painted. There are ten flats, which are 6-8m high, and some are 5.5m wide. The schedule meant that the set was put in in the middle of the night, from midnight to dawn on Sunday and Monday.

Running the show

The stage manager, Trudy Dalgleish, is calling the lighting, sound, video rolls, and more. "I just think it's really funny that we've got a lighting designer as the production manager, and an LD as the stage manager," she said. "We're in the middle of rehearsals right now. It's going really well. I expect it all to fall apart when the 120 children arrive! At the moment we're going really well, to time, which is very unusual."

The associate producer, Jane

Rosback, is happy. She can't find enough superlatives to describe the situation. "There hasn't been one problem, everything's just been great. It's the best team I've ever ever ever worked with. Like Trudy, and Gary the production manager. Eric Robinson's really across everything. He is so helpful. Russell's put in so much time and effort, and is really thorough. Jeff, and Greg are such fabulous professionals that I've worked with a lot. We're lucky. It's a really good team that communicates."

At the moment, the OB truck is setting up, putting the cameras into the room, and finishing off the scaffold towers for cameras, and follow spots. The orchestra is doing a full run through of all music, twice. By midafternoon, they will start to rehearse the acts. By the night, they'll be blocking all of the big 200 people finales.

The big day

I drop in Wednesday afternoon, (continued over page)



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and watch the run-through. A few minor hitches are fixed up without fuss. No one is frantic.

The day after, I ask Rob Scott, a Silver medallist in Rowing, how the party was. "It was incredible," Scott said. "Everyone expected it to be a big show, but it just surpassed our wildest dreams. The night was just amazing".

"They had Dave Faulkner, Doc Neeson, Slim Dusty, and all these entertainers!"

"All the people were fired up about it. The sponsors were getting into it, and all the athletes were letting their hair down. I had a ball. I'm paying the price for it now. It'll be pretty hard going to this week, after last night. Everyone's saying, 'Where do we go from here?' It was one of the biggest things I've ever been to."

Some of the crew

Executive Producer:

Adrian Woods

Associate Producer: Jane Rosback

Stage Manager: Trudy Dalglish

LD: Jeff Pavey

Production Director:

Eric Robinson

Production Manager:

Gary Brokenshire

Technical director: Steve Morton

Audio Director: Michael Hocking

Lighting techs: Mark Harris,

Daniel Mihai, Scott Rogers.

Sound Designer: Greg Rosman

Sound Techs: Jeff Hardie, Jason Fripp.

Vari*lite operator: Dave Harding.

Designer: Russell Cohen.

Set construction:

White Bay Studios.

Contracting

• **KOSMIC ELECTRONIC INDUSTRIES** have been crunching the big sales, with 16 JBL Array 4892 enclosures going into the 2000 seat Burswood Showroom in Perth. 8 custom JBL subs went in too, with stiff tendering competition from EV, EAW and Apogee. The system was immediately put to work on the Rocky Horror Show.

• **TCP** have won a contract at Crown Casino, for Showroom lighting, sound, talkback system, video, and control

• Also, **ITE** will do the counterweight system for the Showroom and Lyric theatre.

• **Rutledge Engineering** are doing AV in the ballroom.

• **Vision Design** are the Theatre consultants, and architectural lighting consultants for the whole complex.



Chain Motor Controller

Creative Audio reports strong sales of the recently introduced CM8 Chain Motor Controller, an 8-channel motor control system. It is designed for controlling motorised chain hoists used for the rigging of lighting and loudspeaker arrays in live concert and theatre applications.

Designed and manufactured in Australia, CM8 Chain Motor Controllers are reported to be in active use at the Brisbane Convention and Exhibition Centre and Sydney Exhibition Centre. CM8 controllers are stocked by major staging contractors including Bytecraft and Capricorn Stages in Victoria, Chameleon Touring Systems and The PA People in NSW

The Creative Audio CM8 will control up to 8 chain motors simultaneously and is fitted with phase detection circuitry to indicate phase rotation on the motor supply. Front panel controls are provided for each channel, with Weiland connectors for motors and the 32A 3-phase power input located on the rear panel.

The CM8 features three modes of operation: Master mode permits direct control of each motor from the front panel; Slave mode permits control from another CM8 designated as a master unit; and Remote mode, to allow full remote control of motors by an external computer in auto sequences.

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CYBERLOGIC

Brisbane is now Turbotown!

Brisbane Sound Hire has purchased 24 Turbosound Floodlight cabinets. When added to the major Flashlight/Floodlight rig purchased by Australian Concert Productions, the Turbo brand is boosted.

The 24 box system is capable of covering most venues seating 8000 or less. ACP have a system suitable for any arena in the country. If combined with the Brisbane Sound Hire system, there is now virtually enough Floodlight/Flashlight in the country to handle almost any outdoor show.

In addition, Brisbane Sound Hire have purchased a new 40 channel AMEK / LANGLEY 501 console with virtual dynamics.

Also added is various BSS equipment, including Varicurve 10 x send foldback EQ, Yamaha ProMix mixers, and 8 compact Turbo TCS612 cabinets.

Brisbane Sound Hire have also moved to a new address: 36 Agnes Street, Fortitude Valley, phone (07) 3252-4935.



Hire Buzz....

• Sound hire & production company **Anaconda Productions** based in the north of Sydney have recently added 8 Deltamax 1152 speaker cabinets to rental inventory. Recent production work includes PA for 10,000 cranky uni students at the National Day of Action in Sydney. They've done conference, TV, footie and gigs with DIG too. Call (02) 9415-6270.

• **Staging Rentals** did staging and production coordination for SOCOG's rehearsals for the handover of the olympic flag, decorations for the stage for the Olympians welcome home parade, and more. (02) 9519-6300.

• **System Sound** have Aida starting in Singapore this month, then it tours to Perth and Sydney. It has a Meyer PA with 12 MSL-4s, 8 MSL 3s, 6 DS-2s and 2 PSW-4s.

System are also providing sound design for Piano Men in the newly reopened Forum Theatre. The Forum has been described as the hottest new caberet room around. Piano Men is part musical, part concert. A self powered MTS-4 system with a Yamaha PM3500 console is in the sound system.

Sound Information from YAMAHA

by Chris Steller

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The cassette multitrack recorder has proved to be a godsend for the musician who needs a handy way of jotting down ideas in an inexpensive and easy to use format, but there have always been a couple of shortcomings with the cassette medium sound quality and durability.

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- **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
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- **NSCA 1997:** April 16 - 20. New Charlotte Conv. Centre, USA.
- **ENTECH '97:** Melbourne Exhibition Centre, April 23 - 25, 1997. Annual show, at Sydney Exhibition Centre on even years.
- **SHOWLIGHT '97,** Flemish Opera House, Ghent, April 28 - 30. Details from PLASA, +44 1 323 642-639.
- **Venue Management Association Conference.** Melbourne Exhibition Centre, April 23 - 25, 1997. Held in association with ENTECH. Call (02) 876-3530 for details.
- **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
- **AIMS '97.** The Australian International Music Show. Early October.
- **Vision & Audio 97,** Nov. 4-6, Earls Court, London.

The PALA (Pro Audio, Light, Asia) exhibition, held in Singapore this year, will return to Singapore despite earlier announcing the event was to be held in Bangkok in 1997. The organisers were somewhat taken aback by exhibitor resistance to the move, and polled the exhibitors to find - surprise - they would prefer to stay in Singapore. Connections also had a letter from the PALA people before this year's event, warning that any criticism of the event may result in legal action.

DOLLAR HISTORY

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

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

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

NZ\$ at publication: \$1.13 ●
 *At 21/8/96. All rates indicative only. Check with your bank.



World Weather trend, SEPTEMBER

*NOT a forecast!

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

CASH!

Business Column
 By Julius Grafton

We've talked about this before, but the value of a frequent flyer point is now real and tangible. Because we've just arranged a bunch of air travel to cover some of these exotic and exciting trade shows listed on the left.

Consider this:

A Business Class airfare to the USA on United will cost you \$5200, give or take \$100. On Qantas it'll cost you something wicked, like \$5800.

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Therefore, against this fare a point is worth around 3.5c. 150,000 x 3.5c = \$5250. More if you use it on Qantas.

But if you use your frequent flyer points for a Melbourne - Sydney return trip, they are only worth 2c. 17,000 points required x 2c = \$340 - roughly the average cost of a discounted ticket.

If you use your points for a rental car or hotel room, you rip yourself off. Consider: one night in a Rydges Hotel costs 23,000 points. Use points for this and they are worth just .6c each. Just over half a cent!

Using your points for an economy class return ticket the USA doesn't get maximum value either, you need 100,000 points, which values them at just under 2c each.

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Optus Oval at Carlton will soon gain an additional grandstand, meanwhile a high quality sound system and scoreboard has been installed to cater for all seats in the 35,000 capacity outdoor venue.

Management at Carlton sought proposals. Bose® undertook to produce an acoustic study of the oval so that different configurations of sound equipment could be considered. Management were promised an active presentation and demonstration using Bose's new Auditorer® system.

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The Problem

Management wanted a new system with better intelligibility, to cater for the expanded audience. But houses nearby couldn't be exposed to any additional noise.

Bose sound system designer, Julie Hunter, surveyed the site, and obtained all the plans for existing stands and the proposed new stand. Dimensions and surface materials were entered into the Bose Modeler® software, to produce an acoustic 'wire frame' model in 3D of the entire oval.

The sound system was then designed.

Using Bose Auditorer demonstrator technology, it was then possible to actually hear what the proposed system would sound like at various seats in the oval.

Julie Hunter discovered the proposed sound system would reflect (echo) off the glass club windows opposite the main loudspeaker cluster. In some seats the proposed sound system would not be intelligible. This also affected the location of the proposed scoreboard and presented a major challenge to find a solution.

The Installer

The PA People installed the system. It comprises 5 x Panaray® Long Throw speaker enclosures and 12 x Bose 502BE subwoofers, mounted at the scoreboard so people' would localise to it. 10 x Bose 402 speakers are located on individual time delays to cover areas with no direct line of sight to the main system.

The system is controlled by a Crown IQ system, providing input through an SMX-6 mixer. The IQ also controls the Crown amplifiers, and monitors their performance.

Interestingly the system was configured so accurately that no equalisation was required. The input to the system comes from audio sources at the ground announcer's booth, located on the opposite side of the oval.

The PA People have a national network. The local Melbourne branch provides after-sales service to Optus Oval.

Contact: Chris Dodds at The PA People, Sydney

The Solution

Julie attempted every possible reconfiguration, but to no avail. She was forced to make the presentation to the club, and show them, using Auditorer, that there was a problem with the sound system location - and the scoreboard too.

Auditioner allows a listener to hear - through the playback system - how any source, voice, music or even a race call, will sound at any position in the venue.

Julie demonstrated to the venue management the attributes of the proposed sound system. She demonstrated the problem caused by the location of the system, and advised the scoreboard and system be moved. "It doesn't matter whose brand sound system you choose, the problem will not go away" she told them.

The Result

Management accepted that the scoreboard be relocated, and with it the proposed sound system. The revised Auditorer demonstration proved that the reflections from the glass windows were now minimised. A proposed billboard around the top of a stand was now a potential problem. A simple solution was to tilt it upwards just 5°.

The proposed sound system was demonstrated to management using Auditorer. The quote was accepted.

Bose dealer The PA People designed the mechanical and electronic configuration of the system, and arranged installation.

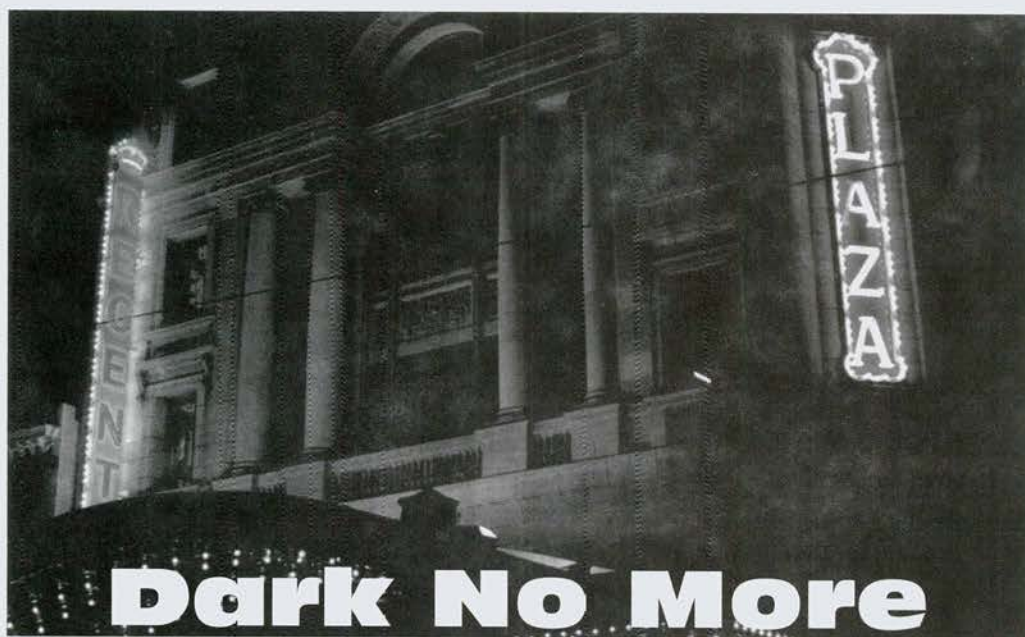
Once commissioned, management were extremely impressed. Ground Manager Martin Shannon said: "It's sensational. If it wasn't spot on, we would have got our money back!"

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Theatre & Cinema



Melbourne's Regent Theatre has re-opened for business. The sign lights the way in Collins street

By Mandy Jones

About 200 devoted fans braved the cold and rain on Saturday 17 August to witness the long awaited re-opening of Melbourne's Regent Theatre. 2000 guests were invited by the theatre's developers, David and Elaine Marriner to help them celebrate the culmination of 6 years of planning and major renovations to the dilapidated theatre at a cost of \$37 million dollars.

The gala opening was beautifully orchestrated, from the roving searchlights against the night sky, to the red carpet and champagne. The guests, stars from the golden age of Melbourne theatre and television, as well as ardent supporters of the Regent, were greeted by doormen dressed in classically styled uniforms. Other guests included the 'A list' of the local industry, as well as the Lord Mayor, Governor and Premier. An orchestra provided background music from all the big shows; *Jesus Christ Superstar*, *Les Miserables* and of course *Sunset Boulevard* which will be the first production to be performed in the new Regent.

The media were out in force in-

terviewing the celebrities as they arrived and snapping photos of the stars against the dramatic backdrop of the theatre. The biggest media buzz came when the Marriners arrived and made their way up the grand staircase at the entrance to the foyer, a moment they have worked towards for the last 6 years.

Co-ordinated by Ken Mackenzie-Forbes, director of the Victorian State Opera's musicals and concerts division, and directed by Richard Wherrett, details of the opening concert were kept under wraps until the day of the opening when it was leaked that the international stars performing in the concert were Dan Tallis Jr from



the Broadway production of *Show Boat* and Caroline O'Connor soon to be seen in the return season of *Nest Side Story*. Local talents on show included Kate Ceberano, Hugh Jackman, Rhonda Burchmore, and Debra Byrne who was looking forward to breaking in the stage prior to the commencement of *Sunset Boulevard*.

Directly opposite the Regent, the Athenaeum Theatre appeared almost neglected in comparison to the decadence of the jewel in the Marriner crown; however, despite being closed for the night, the Athenaeum's roof provided a perfect vantage position for followspot operators.

Following the gala concert, guests were treated to a supper in the downstairs venue the Plaza Ballroom, which was also returned to its former state by the Marriner restoration team.

For all the pomp and ceremony of the opening celebrations, nothing could beat the simplicity and significance of the Regent and Plaza signs once again lit against the Melbourne sky, a welcome return to the city-scape after 26 dark years.

Theatre News

By Madeleine Murray

- Araluen has taken on Alex Wallach as part of the APACA Arts Vocational Training scheme, which is a 12 month pilot programme. This involves job training at Araluen, and theory at Queensland University of Technology.
- The new Swinburne TAFE teaching theatre has just won a Certificate of Merit in the Victorian Architecture design awards. Dennis Irving was the theatre consultant.

• More Dennis Irving work. Hutchisons, the builders on the Empire Theatre in Toowoomba, are well in to the early stages of construction, and are due to finish about June '97. A carefully restored art deco auditorium will seat 1500 people, making the Empire the largest regional theatre in Queensland. The theatre will have a new stage house, rehearsal studio, dressing room, meeting rooms, foyers, and administration area.

• Bob Peet, who was the manager at the Illawarra Centre in Wollongong for nine years, is now the manager of the Empire Theatre. The Empire will be Peet's sixth regional venue.

• James Buick, who was at Preston, has taken over as manager at the Illawarra Centre.

• The new Canberra Playhouse is now out to tender. The tenders close mid-September.

• The expanded Faith Centre in the Barossa Valley is well into construction. Premier Lighting got the sound and communications contract, Osmond Electronics from Adelaide are doing the lighting, and Stagecraft from WA are doing the counterweighting.

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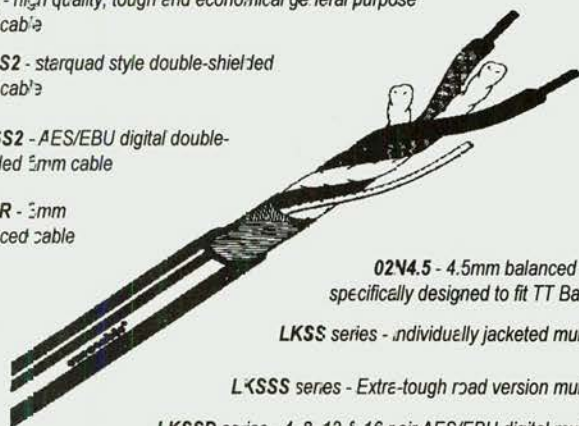
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Theatre & Cinema

The Griffin Theatre

Small verging on tiny

By Madeleine Murray

In this era of inflatable kangaroos, and mega spectacles with more cast, effects, and lighting cues than you can swathe in smoke, it is refreshing to find something small, intimate, and not completely meaningless.

The Griffin Theatre, at the Stables, is a funny triangular brick building in a Kings Cross lane. The ladies toilet outer door was wedged open, so I had the rather self-conscious experience of standing in a toilet queue, visible to the people drinking wine in the lobby before the show. The two washbasins were held onto the wall with metal straps. This didn't affect the play, in fact it enhanced it.

The Griffin is cozy. The stage manager, who also operates the lights and sound arrives three hours before the show opens, in order to make the cocktails, handwrite two letters, and check the setups. Just before the show begins, she mops and buffs the slightly glossy stage floor.

The control room is a tiny triangular space reached by walking across a scaffold plank, then climb-

ing up an angled wooden ladder. Five rows of benches form a V shape, looking down onto the stage. Lights dangle from a tangle of pipes and wires a metre above the audience's head.

This is fun, this is real. Talented people would kill to work here. And they do. Tonight, *Speaking in Tongues*, is lit by Nigel Levings, with sound by Sarah de Jong. Marshall Napier is one of the four actors in a evocative ensemble piece about relationships.

The production design, by Liane Wilcher, is visually fascinating, without being overwhelming. Stretched red lycra covers the back walls of the stage. A pair of reflective venetian blinds hang at right angles to each other at one end of the stage, and a floor spot and a few other lights shine through another little venetian blind rig at the other side of the stage. And that's it, the entire set.

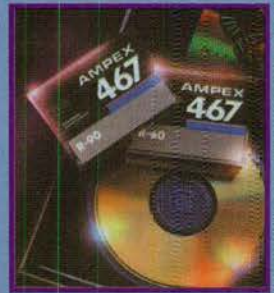
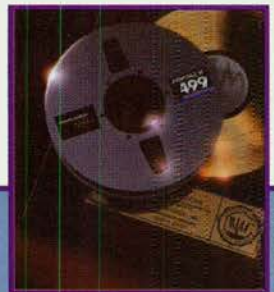
The blinds cast shadows on each other, on the floor, and on the actors. Blue neons reflect on the blinds in striated shapes, and the little floor spot casts dark strong



Stage manager Desa Cvetkovic

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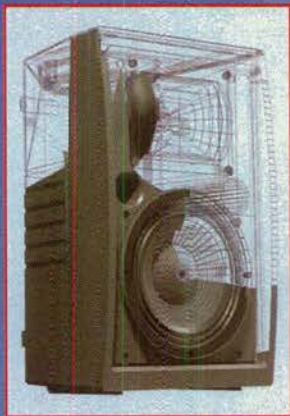
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shadows of the actors on the red wall. The glossy floor picks up the lights. Even a black patent leather shoe, poignantly placed on a table, reflects the red, and blue light. The elements are simple, but beautiful. Neon, Tom Waits, film noir. Less is more.

The stage manager

Desa Cvetkovic is a dedicated, offbeat girl whose family is from Serbia. She started out working with Street Arts in Brisbane, studied production at NIDA for two years, and then worked in small theatres. Cvetkovic does all the props, lighting, sound, cleaning, and wardrobe for the show. "If something goes wrong, I grovel," she confessed. During one of the previews, Cvetkovic forgot to put the blue phone on the stage. This must have been quite a shock for the actress, who needs the phone to make desperate calls, the crux of the second act. "You only forget something like that once, it's imprinted in your brain. I just died."

A competent stage manager is vital for the Griffin. "They're lucky with Desa," Nigel Levings said, "they've got a good one there. But it's sometimes very hard for small companies, because you're demanding an awful lot, pretty sophisticated skills, on a small budget. It's a pivotal role. It can be hard working with a stage manager who is young and relatively inexperienced, and can't quite handle the pressures of operating lighting, sound, props, mechanist, cleaner, and wardrobe, all on one night."

The lighting designer

Nigel Levings, was nominated for a Tony award on Broadway this year, for *The King and I*. He enjoys going from Broadway, to a 120 seat theatre. "For me, working in those small spaces is the time I get the chance to push forward the boundaries of what I'm doing with lighting design," Levings said. "The tasks of visibility are not so demanding as in the larger spaces. You can try things,

abstract the lighting images much more."

Levings likes the intimacy and accessibility of the stage, and rig. "If a light's out of position, you don't need a three hour call to get a lighting crew in, a Cougar on stage, and mecs standing by. You can just stand on the back of a seat and fix it."

"The Griffin is an awkward little space, in some respects. It's a difficult shape, the actors are close to the lights, it's a low grid, and the angles are sometimes very flat. The actors work close to the audience, so you're often faced with the dilemma of whether to maintain the sanctity of the stage space, or just let the light drift off into the audience. I've always been a fan of trying to expand the performing space, so that it encompasses the audience, so it doesn't worry me too much."

Another challenge of the play, was to separate the actors out, for some stylised scenes. "At some points, you need to create four totally different spaces, which is hard

on such a tiny space. It's hard to think of ways that you can light an actor, and miss all the other actors with that light. So there were a couple of things that I resorted to. In the second act, I used a very flat angled slit of light that actually just clears the top of the head of the actors working downstage, and manages to light the face of actors upstage. It's a very touch and go type thing. It's relying on all of those tricks of trying to squeeze the light past other actors, so that you can find ways of lighting those four spaces at the same time."

They hired in an extra dimmer rack, to take the Griffin total up to 48. Belvoir Street Theatre loaned their old Strand memory board. "The Griffin really needs to have some sort of memory control system. The stage manager operates the sound and lights, and if you're doing a show which is at all complicated, it becomes a nightmare, for the stage manager, and for the lighting designer." With memory, it was much easier

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for Levings to make adjustments during tech runs, and previews.

The composer

Sarah de Jong does music for theatre, radio, and film, including the film *Flirting*. de Jong composed, performed, recorded the music for *Speaking in Tongues*, and delivered it on a CD, all for a budget of \$500. She worked from her studio at home. Her husband, Philip Howe, did the mix. The only instrument is a tenor saxophone,

which works beautifully with the film noir/neon ambience. A friend came over to de Jong's studio, and played the saxophone, for "hardly any money." The sound track is a blend of synthesised sounds, and the sultry sax. 

The Crew

Director- Ros Horin
Designer- Liane Wilcher
Lighting- Nigel Levings
Composer- Sarah de Jong
Stage Manager- Desa Cvetkovic

Theatre News

By Madeleine Murray

• **Moncreiff Theatre in Bundaberg**, have been renovating, and also put in new disabled toilets.

• As part of a commitment to "world class entertainment," **Sydney Harbour Casino** will sponsor the Shanghai Ballet touring Australia, performing in Sydney, Melbourne, and Adelaide. 141 dancers, musicians, and singers, will tour, along with seven tonnes of equipment. Excerpts from five Western classics will be performed.

• Rumours, that is unconfirmed speculation that the **900 seat cabaret theatre** at the Sydney Casino, will be operated by the management of the Lido nightclub, in Paris.

• A **youth theatre company** will be formed in Singleton, for children aged eight to sixteen.

• 35000 people had a tribal time at the '96 **Tribal Gathering**, in the grounds of the Luton Hoo Estate, 50km north of London. The DJ line up included Carl Cox, Billy Nasty, and Laurent Garnier. The Chemical Brothers, Black Grape, and Leftfield were some of the live acts. The gathering had been rejected by police and magistrates in the Oxford area.

• The opening of the new \$7m **Cameron Mackintosh musical, Martin Guerre**, in London was fraught with problems. During a preview, there was a blackout and power loss, attributed to a power feed to the computerised stage machinery. The play opened three weeks late. On Monday night, the entire theatre was plunged into dark-

ness one hour into the show. This time the explanation was that London Electricity had a voltage problem, and the show was cancelled. Disgruntled patrons were given free drinks in the bar.


• Technical rehearsals of the **Australian Opera's *The Flying Dutchman*** were quite stressful. The huge set for Barry Kosky's new opera is supposed to disintegrate. The designer, Michael Anderson told the Sydney Morning Herald about the problems of the tech run. "Watching stuff that I thought had been sorted out in the workshop get wrenched, get stuck, get broken, get bent. Virtually everything that could go wrong did. I spent most of the run through either with my head in my hands, or peering through my fingers." It will be interesting to see how the real thing works.

• The basement of the **Music Production Factory, in Newcastle**, is about to open as an alcohol-free, weekend, entertainment venue. Touring and local bands will play to audience of all ages.

• The lighting designer of the *Ring* cycle for the **State Opera of SA** is Joel Hourbeight, who was LD on the '96 Geneva Opera production of Strauss' *Arabella*.

• The **Roger Barratt Lighting Scholarship** is underway, with Jason Waide now on secondment to various leading companies. In October he goes to London to complete the program. Connections is accepting donations towards his costs.

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Recording.

What is the state of play with recording - right now - today? And where may it head in the next year and the one after that? Plagued with weird visions, editor Julius Grafton decided the best way to find clarity is to talk to smart people 'on the coalface'. And run some debate here. He found one in the futuristic, abstract, modern, wired and wide open spaces at AVID HQ. David Corazza has been a DigiDesign product expert through most of the digital revolution period. Despite a professional bias, his thoughts on Recording Technology make some sense....



HARD DISK TO KILL TAPE?

The ADAT was the watershed in 1992. It democratized the notion of digital audio recording, and it was almost irrelevant that it still used a linear contact medium, i.e. tape. The point is that you could have digital recording and that was the holy grail at the time.

The first platform for Pro-tools was the Mac 2CI. The first Pro-tools package was a single card which provided you with four tracks of recording and play back, an interface box which gave you full balanced ins and full balanced outs and the software. In late '91.

There has been two periods of Mac

architecture, in terms of card slots. The Nu bus architecture started from the Macintosh 2, and went on to the last generation of Power Macs like the 8100s. Apple then went to a PCI interface and PCI actually has a lot of benefits in that its bandwidth is a lot wider, it can shuffle a lot more data quickly than the Nu bus, it's something like two to three times the speed of Nu bus in practical use.

It was about a year and a half ago now when the whole PCI transition (on new Mac's) started to happen. It was a very politically testing time.

Apple changed their protocol for PCI very late in the day which forced us, and virtually every other card manufacturer, to re-engineer what we were doing with the cards and how we were addressing the PCI slots. That coupled with the fact that Apple very prematurely phased out Nu bus machines, gave us huge marketing headaches.

If Apple died tomorrow the Mac Operating System (OS) would live on. I think in the long term Apple will stop being a hardware company. The whole agreement between IBM and Motorola and Apple will see evolution

into a common hardware reference platform.

You'll buy a generic box needing a disk operating system. The whole notion of "Will I buy a Mac or will I buy a Pentium Pro" in two years will be an irrelevant question because people will be buying basically a common hardware reference platform box from any number of dozens of vendors and sitting down and saying "OK, do I want Windows NT or Mac OS or Win 95?"

TURNKEY SYSTEMS

The big argument for turnkey systems like the Fairlight MFX or any other kind of turnkey system is they'll work pretty much first time every time. The big downfall is though that they are relatively limited in what they can do, once you specify, "OK, I want Options".

What we decided to do is try and find the best possible compromise between a turnkey system and a system that will run on everything all the time. What we have done is we have said "OK, we're going to limit it to this operating system, to this platform." At least we can pretty

(continued on page 40)

PRO TALK

Compression

We polled studios this month about the perennial issue of the use of compression in the recording studio. The realm of the black arts, or is it? Sample questions asked included: what do you use and how do you use it; secret formulas; how do you approximate possible broadcast processing /compression etc?

Barrie Clissold from **Wombat Rd Studio** says he uses compression 'only when absolutely necessary such as on vocals and on wildly played bass and guitar', but adds, "A touch of valve compression is also nice on some vocals and harsh instrument sounds. We will often run keyboards and sequencers through a valve stereo pre-amp which also tends to compress and fatten up the sound." Colin Wright from **Troy Horse** also uses compression over kick and snare drums, 'when mixing in order to increase their punch. Compress them fairly hard with a slow attack and fast release.' Guy Dickerson from **Megaphon** uses compression to contain vocals within the limits of 'whatever recording medium I'm using, and to help sit— particularly vocals—in the mix. For classical music I never go near the compressor. I think it is essential in pop music to help a sound sit on top of the mix'. Paul Kosky from **Kiss Music** identifies the use of compression primarily for signal control and for creating 'the right sound for the part I'm working on... I often use a Teletronics LA2A on vocals during mixing as it has a close sound and is relatively warm'.

As to different types of compressors and their applications, again there are numerous options. For instance, Marshal Cullan from **Damian Gerard Sound Studios** says 'the

(continued over)

Technology Brief:

According to David Corazza:

- The MAC and the PC will become one platform.
- Today people use CD-R for backup, mastering and transport. Like tape!
- SOME mixing consoles are an endangered species

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Changes At Eclipse Music Studios

SYDNEY: Eclipse Music Studios is going through an ownership reshuffle and sale of significant equipment but sources stress that business will continue as normal whilst these negotiations continue. This is due to Ron Bracher, one of 5 shareholders, deciding to relinquish his equity share in the studio.


According to one source, Bracher has wanted 'out' for over a year, but the trick is how. It is believed that Bracher's delay was due to the high prices set on the big ticket items, including an SSL console. An equipment broker has been engaged to act on his behalf, yet Bracher may only recover 2/3rds of the asking prices.

The SSL console is advertised for around \$135,000. The problem is not only in the selling but also the moving: a hole was knocked in the studio wall to get it in.

Two recording machines are also on the market: a Studer 24 and a Mitsubishi 32. The latter is advertised for \$28k yet according to

industry commentators, the real worth of this machine is less. Built 5-6 years ago, they are no longer made, so parts are the issue. (This was a \$250k machine in its day). The equipment was advertised in the Sydney Trading Post on August 15th.

A consortium bought Eclipse from former studio identity Paul Rich several years ago. A source described the consortium as 'public servants'. It was said that although they dabble with mixing they have 'no idea about the fundamentals of running a studio'. Apparently difficult and key and decisions were left to staff and the consortium attempted to run the business using 'public service methods' according to one source.

Once the main items from studio 1 are sold, it is likely that the main studio at Eclipse will close, leaving the subsidiary studios, audio education and administration operations continuing on level 2. **-Dan Cole** 

PRO TALK

(continued from page 37)

better quality the more transparent, that is, you can't hear it working, but a cheap compressor could be good as an effect'. He favours the Urei 1178 and the LA12 and for tubes, TL Audio and Drawmer. Barrie Clissold uses a number of different units from Aphex Compellor, Symetrix to Alesis, "The new Alesis is my current favourite for guitars as it incorporates quite effective gates." Paul Kosky says that each compressor has its own variables but usually fall into two basic categories: fast and slow, "My favourite fast compressor is the DBX 160X... it's release is very fast. This is extremely useful for things like power distorted guitars." Here, according to Paul Kosky, "the guitar track should sound velocity-even and powerful", without it sounding like a compressor has been used. "My all time favourite is the Urei 1178. It is a warm compressor... its attack is relatively fast or super slow and its release is the same. The 1176 is a good compressor but its attack is only 1/4 of the 1178."

Guy Dickerson adds "The most important thing about a compressor's performance is its ability to deliver full harmonics and I like the LA2A model and the ADL copy.

The mastering situation is a little different with Martin Pullan from Edensound Productions saying that for mastering compression needs to be subtle so it can't be heard "pumping". He further adds, "The main compressor I use is the BSS-DPR 402. I would normally using ratios of 2.5:1 or 3:1 at the most. We have hooked up a switch to the tag strip at the back of the unit enabling us to utilise some of the options available. For tracks

that require more serious compression or those that need to sound loud on the CD, we often use the digital compression that comes with the "SAW Plus" program. You can compress the hell out of a track using digital compression before it has too much of an adverse effect."

The general consensus when using compression is to be careful with mixing and it is advisable to sidechain back into your console Marshall Cullan. Colin Wright adds to this saying, "you can EQ the compressed version/channel to highlight a particular frequency by carefully mixing the original and compressed signal together". With the advent of new mastering media, the role of compression seems to have changed. Guy Dickerson, "I think that the days of vinyl required a lot of control over the dynamics where as with the CD, not as much."

So how to prepare recorded material for possible processing by broadcast facilities? Rod Watts from Advanced Studios Noosa suggests leave it to the radio station and use as little as possible for CD. Barrie Clissold says that for material destined for either radio or TV, "we will usually limit slightly with a Compellor and then run it through a Hi Fi VCR to bring it up to RF so we can check it in Mono on an average television set".

To close this mini survey, it comes down to experimentation. Paul Kosky, "there is no right or wrong way to create sounds for contemporary music; fool with it, if it sounds good use it. Compression—I love it", and Guy Dickerson, "When it comes down to it I have a love-hate relationship with compression."

Thank you for all those who responded



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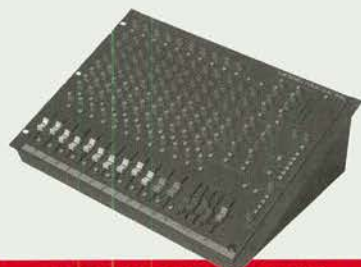
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Hard Disk..... (continued)

much control the parameters of this platform with this operating system.

So, who are OUR end users? It's embarrassingly broad. It's funny because when we came to market in '91, we naturally assumed that the vast majority of our users would be recording studios. We were wrong. We have maybe 50% of our users in recording studios, we have a hell of a lot of people involved in post, 35-40% of our sales go to post, another small segment goes to government and other commercial agencies. We have people involved in advertising and of course we have like the well-heeded home user who uses Protools as well.

They're all coming in at different levels. The criteria needed for radio and broadcast is quite different to someone whose using Logic Audio or a Steinberg sequencer at home doing composition.

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You keep recording in the digital domain throughout the entire chain. The good thing about it too is, with respect to other systems, we are very fortunate in that we've got our TDM architecture, so if someone is mastering to a CD, we don't actually force you to use a certain type of noise shaper for the CD. You can choose Apogee's UV22, you can choose Waves noise shaper, our noise shaper, whatever you require because all CD pre-mastering algorithms will sound different.

The Yamaha CD-Rs are very robust. They seem to be enjoying popularity. There's the new generation two times (2X normal speed) reader/writer Sony device which is inexpensive and very good for short runs as well. There are two

Yamaha's. There's the two times and the four times. The four times is great. Significantly more expensive than the two times, but the vast majority of sales that I can ascertain are the Yamaha two times reader.

But there is a big difference between having the tools and having the expertise, to actually go and burn CDs. There's issues within just the red book standard about how CDs should be structured and you have to know before you can actually approach a project.

THE END OF THE BIG STUDIO

With the luxury of hindsight, you know now that that sector has disappeared to a large degree. It's embarrassing. I mean the last five years we have seen a litany of what were world class studios in this country just go, or downsize to a degree, and it is purely because of the means of production now that are in the hands of project studios and indeed home users. To a great degree they are just as technically competent as the systems that were being used only five years in major recording studios. It's a very simple issue. It's an issue of not only cost but functionality. So people are being very pragmatic about this. They are saying, "Well OK, instead of spending X thousands of dollars sitting in a studio and not having any real control, ultimately over the nature of the product, I'll spend a bit more, buy the actual recording system and do it myself."

DO WE STILL NEED THE MIXING CONSOLE?

If someone was to say mixing console five years ago I would have thought of something in the order of a Neve Series 5 or a SSL4000 or something like that. Something big that has literally hundreds of control surfaces, has maybe a compressor and gate on each channel and would cost a bomb. Now, if you're talking mixing consoles for digital audio workstations, I really think of a tactile fader box.

THE FUTURE OF THE ENGINEER

The beautiful thing about where we are at now is that it will be a great litmus test for people with true talent and true skills. The people with the ability to engineer, to master, to produce etc. will still be around -

in fact they'll probably be around and in greater demand because we are in a stage now where there's the illusion of power. The illusion of ability. These are just tools and historically all tools have been as good as their operators, it's that simple.

There are many options given to you in digital audio, especially non-linear digital audio workstations and if I can diverge slightly, I like to use the example of midi sequencers. Midi sequencers now have evolved to a stage where they're so amazingly complex and amazingly diverse in terms of what you can do once you get midi information in there. A lot of people sit in front of something like a Steinberg or a Emagic or whatever it may be sequencer and just sit there dumbfounded thinking, quite literally, "where the hell do I start?"

If you look at a traditional studio environment, say ten years ago, where you had an open reel recorder and a simple console with a fader, pan pot and basic EQ, then the actual methodology of recording was fairly straight forward. Open up a channel, arm the tape recorder, tell the artist to start and the tapes would roll.

However, now because we have so many editing options you've really got to discipline yourself into understanding where you want to go. But that's not necessarily a bad thing, it just means that you have to approach it with a slightly more disciplined mindset. I mean, given the choice of having an open reel recorder or a digital audio workstation of any brand, I would overwhelmingly choose the digital audio workstation because the editing options alone allow you the freedom to do edits and try aesthetic choices that you otherwise wouldn't have had the time or probably the ability to do with traditional analogue technology.

THE STANDARD ONE YEAR FROM NOW

In a year's time, as a relatively educated guess, if you are looking at a card based solution, most card based solutions will have something in the order of say 8 tracks recording play back from the one card without any problem, the cards will be around \$1500 or less, they may or may not be bundled with a basic recorder package.

I see more and more the industry

moving to co-development with digital midi sequencer people - whether they be PC based or Mac based is irrelevant. So people like Emagic, Cakewalk, Opcode, they'll all be working with suppliers like Card D, Digidesign, you name it - providing the front end that gives the entry level user not only the audio recording portion but a midi recording portion. Because midi is pretty much pervasive in the compositional world these days. And I see that happening for well under \$2000 for the hardware.

THE MDM : A PRODUCT OF ITS TIME?

It (the Modular Digital Multitrack) is a product of its time. It gave a lot of people the ability to make the transition between traditional open reel analogue technology and actually have multi track digital technology and it was in a very user-friendly format.

Some people have suggested that it's an answer without a question!

RESISTANCE DECLINES

It's interesting to see the reaction of the different fields within the industry to hard disk recording, especially how it's evolved now. A lot of the people in the entry level portion of the market, the people who are buying the turnkey hard disk recorders that you spoke of like the Roland, 880s and things of that ilk are fairly open minded and they'll walk into a store and they'll open up a magazine and say "Hey, this is interesting, this might be able to provide me with the solution I need, and they'll happily go in and ask questions and try things and you know in the end, 9 times out of 10 make a purchase. And they'll use the thing."

In the hi-end, like the broadcast, the post and the recording industries, these kind of technologies are still viewed with a fair degree of healthy suspicion - in that people really want to play devil's advocate as to what they can provide and where the downfalls are. It's almost as if they're circling the concept of it and looking for the cracks. That was very commonplace five years ago. It's starting to wear away at a rapid rate of knots now, I've seen the shift in the first part of the '90 as to attitude, now it's quite remarkable.



HOWARD JONES WORKBENCH

PLEASURE AND PAIN

I still get a kick out of tracking down and repairing electronic faults. There's nothing like the pleasure of sweating over a repair and bringing it to a satisfactory conclusion. However, the pleasure can sometimes also involve a fair amount of pain, particularly when the fault turns out to be something which you considered early in the piece but decided wasn't relevant. At times like that, you just can't believe that you didn't go with your instincts. Such a repair came across the workbench last month.

The unit concerned was an old Lexicon reverb - one of the early models which contains a number of horizontally mounted boards plugged into a vertical motherboard. To drive the reverb programmes, you use the so-called LARC which has a 2 line display together with some faders and switches. When you turn the unit on, the display on the LARC shows that the reverb has entered a

power-up diagnostic routine. If all is well, the diagnostics finish and the unit defaults to the last used reverb programme. If a problem is encountered, the LARC displays a code which points you in the general direction of the fault. These sort of codes have to be taken with a grain of salt but are valuable in giving you a starting point.

This unit was not getting through its power-up routine - the error code was pointing to a fault on the Dynamic Memory Board. This board lives in an option slot at the top of the card cage and holds the princely total of 4 very small memory chips - big time in its day. As well as a whole lot of logic chips and EPROMS, the DMEM board also holds the batteries which back up the user registers which store any customised settings. One obvious fault was that these Nicads had gone leaky - the chemical cocktail which emanates from these batteries is highly corrosive and just

loves to eat its way through adjacent metalwork. This scurf is always bad news and has to be thoroughly removed. This usually involves repeated scraping as none of the standard circuit board cleaners dissolves it properly. If the chemicals have found their way beneath the protective lacquer on the circuit board then it's best to scrape away until you reveal bright copper - this way you know that all traces of the contamination have been removed. Anyway, having done this, I thought I'd leave the new batteries out until I'd traced the fault. When I powered up again, everything seemed to be okay. The reverb worked and sounded okay when I ran signal through it. After a while, though, it suddenly entered diagnostic mode by itself and then bombed out with an error code.

It repeated this behaviour on several more occasions, making it quite apparent that the fault, real

as it was, was also highly intermittent. There was no one place in the circuit which was more likely than another as a starting point for tracking down the fault. In cases like this, you generally start rounding up the usual suspects - check the voltage rails, check clock frequencies, make sure that no reset signals are jammed on, check all the data and address bus lines going to the RAM and ROM chips. If none of this reveals anything, then the next step is dictated by individual experience - for myself, I decided that I would cruise around the board looking for 'illegal' TTL levels. Because TTL circuits are based on binary logic, the chips should give only a logical 1 or 0 at their outputs - anything else is judged as illegal and will cause a problem.

To cut a long story short, I did find two areas of the circuit where I was not happy with the signal

(please turn the page)

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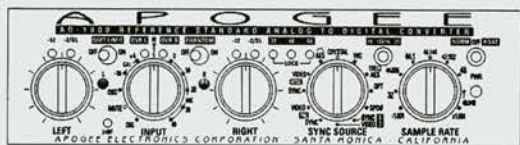
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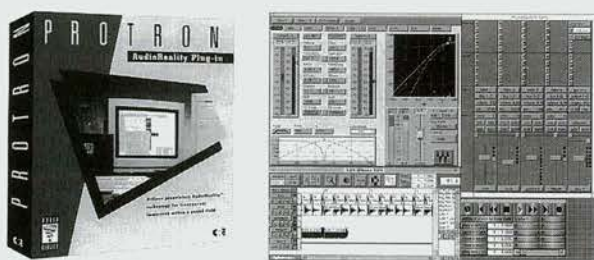
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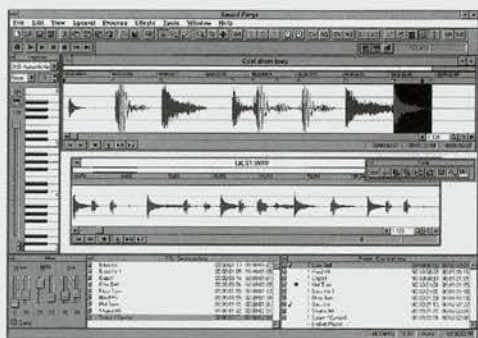
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Property details: Tim Derham Bennison Mackinnon & Associates P/L
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Studio equipment: Tom Kehoe Gotham Audio
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Workbench
(continued)

levels. One gate, in particular, was occasionally drifting slowly from 1 to 0 and back again - definitely not kosher. However, I had a known good unit on the bench beside the sick unit, so I could do A/B comparisons. This good unit showed exactly the same behaviour at this particular gate. Hmm... the output of the gate was connected to a transistor and some other passive circuitry - maybe there was some interaction from these circuits which was causing this? Influenced by this thought, I went off and solved the other problem area which I had found.

At the end of it all, the unit still didn't work reliably and I was drawn back to the original chip with its funny drifting levels. The problem was finally uncovered when I decided to remove from the board the old IC socket into which this chip was plugged. Hey presto! the corrosion from the leaky batteries had gotten underneath the socket and shorted across several of the pins, although none of this was visible from the top or side of the socket. This was the cause of the slow drift in levels at this gate which generated...the power fail signal. Duh.

Corrections and connections:

Towards the end of last months column I said **not** to use video cable for hooking up S/PDIF signals. This is not accurate, so I'd better recap the story on digital cables. The pro interface (AES or IEC958 Type1) was modelled on traditional transmission line requirements which revolve around good noise immunity and delivering usable signals over long cable lengths. Hence, AES interfaces are 110 ohm and balanced. A new style of cable was developed for this application and is the cable of choice when making up AES interconnects. As previously mentioned, S/PDIF (or IEC958 Type 2) arose out of consumer products where the design requirements are not so stringent (or expensive). Because a digital audio signal is much like a composite video signal in terms of bandwidth, the S/PDIF interface was simply modelled on existing principles which were known to work well. Thus, S/PDIF interconnects are 75 ohm unbalanced. This means you can use video cable - often known as coax - for these signals. If you need to make up some S/PDIF cables there are two ways to go. The first is to use RG59 which is a thick cable containing a solid copper centre conductor surrounded by a heavy insulating layer and a braided earth screen. The second is to use RG58 which has a braided centre conductor surrounded by an insulating layer and a braided screen. Both types are coaxial. RG59 is awkward to terminate into an RCA plug and is also not particularly flexible. So, you can buy or make up cables as though they were for video using RG59 and add on some BNC-RCA adaptors. Alternatively, you could make your cables using RG58 and terminate directly into the RCAs. Being smaller in diameter and with a multi-strand centre conductor, RG58 is a lot easier to fit into the plug.

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Famous 5	Dave/Band	Dave Tozer	Demo
Over The Edge	Dave Tozer	Dave Tozer	Demo
Damian	Dave Tozer	Dave Tozer	Demo
Damian Gerard Studios	Contact Marshall (02) 660-8776 2 x 32'2" 24 Track		
Front End Loader	Magoo/Band	Magoo/Pilling/Jordan	Demos
Ashtray Boy	Randall Leigh	Marshall/Russell	Album Trks
Big Electric Cat	Band	Russ Pilling	USA Tour Backing
Ana Christensen	Ana	Russ Pilling	Comp. Track
Urban Guerillas	Vien	Russ Pilling	Mix.Album
Rebecca Renee	Rebecca	Carter	EP
Darling Harbour Studios	Ike Brunt (02) 211 1474, 24 Track	A80 Studer, D88 Sony	
Afram	Larry Vankriedt	Julian Slade	Demos
P. Malone	P. Malone	Julian Slade	Demos
Eclipse Music (02) 254 7734			
Mitchell Shadowl	Collin Watson	Ted Howard	Mixing
Blue Productions	Phil Munro	Phil/Mike Ward	Album
Ammonia	Paul Mc Kercher	Paul Mc Kercher	Mixing
Jon Stevens	Rob Hirst	Brent Clark	Mixing
Darius Gakas	Jim Bonnefond	Jim Bonnefond	Mixing
Finniscad	John Aver	John Aver	Mixing
Festival Studios	Catherine Knapman (02) 660 4022 2 x Analogue Multi-Tracks or Digital Multi-Track		
Silverchair	Nick Launay	Nick Launay	Trkg.LP/Tape Transfers
Twilite Prodn.	Twilite/P.Harti	David Hemming	Orch.Rec./Trks.
Ammonia	Paul Mc Kercher	Paul Mc Kercher	Recording
Studio Kita, Indonesia	Divicki Dharmawan	David Hemming	Orch. Record.
Hullabaloo Geoff (C2) 9906 2933, 24 Trk, 16 Trk. Protobols			
Ian Turpie	Jamie Rigg	Gler/Daniel	ABC Album
Nathan Tasker	Nathan	Daniel	Album
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	City West Corp.Music
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	Foxtel Pilot Music
Ritchie Productions	Bob Ritchie	Heaton	Various TVC/Corp.mixes
Robert Knapp	Robert	Heaton	Various TVC/Corp.Mixes
JMF Sound Studio	Fran Esther (02) 9790 4097		
No Mad Theatr.Prod.	Ralph Esther	Ralph	Theatrical Score
Craig Byrne & New Fronteers Band		Ralph	Demo
Ken Grimston	Paul Gray	Ralph	CD
Mark Bonnici	Mark	Ralph	CD
Lucinda Street Recrdings	Rick Mostyn (042) 291 169. Dig.	Multitrack Computer Based Studio	
Peter Harkin	Rick Mostyn	Rick Mostyn	Sequencer Tracks
Resonant Voices	Rick Mostyn	Rick Mostyn	Demo
Us Too	Rick Mostyn	Rick Mostyn	Demo
John Marducci	Rick Mostyn	Rick Mostyn	Demo
Bitamin Z	Rick Mostyn	Rick Mostyn	Live Set Track
Nabilone	Rick Mostyn	Rick Mostyn	Live Set Track
Megaphon Studios	Guy Dickerson (02) 550 6576 24 Track & 48 Trk Analog.		
Lee Kernaghan	Garth Porter	Ted Howard	Anthem
Billy Thorpe		Guy Dickerson	EP/CD
Kingsley Looker	Michael Harvey	Guy Dickerson	Album
Stealth	Jim Bonnefond	Jim Bonnefond	Tracking Album
Mirage Mixdown	E. Nixon (02) 211 3915, Neve VR Studer 820 Dolby SR		
Human Nature	David Hemming	David Hemming	Mix Single
Clouds	Tim Whitten	Tim Whitten	Mix Album
Mother Hubbard	Justin Stanley	Keith Cooper	Mix Single
Bones	Jeremy Allum	Jeremy Allum	EP Mix
Robert Sarzov	Robert	Robert	Movie Score
Sidewinder	Jeremy Allum	Jeremy Allum	Remix single
Paradise Studios	Jason Lea (02) 9357 1599, 24 Track Analogue		
The Wheel	Band	Ted Howard	Single
Died Pretty	Band/Connolly	Wayne Connolly	Single
Slim Dusty	Rod Coe/Col.Watson	Ted Howard	Album Tracking
Tina Martyn	Larry McHoberac	Michael Vidale	Single
Frank Bennett	Scully/Wall	Tony Wall	Album Tracking
Bruton/Zomba Music	Art Phillips	Adrian Boland	Album Tracking
Powerhouse Studios	Doug Henderson (02) 318 1220 32 Input Neve Console 24 Trk.Studer A800		
Brother Brick	Band	Doug Henderson	Album CD
Psychrist	Band	John Darwish	Album CD
Dark Order	Band	Gavin Outfield	Album CD
Yum	Band	Nik Sanning	EP CD
John Rowles	Berger/Henderson	D.Henderson	
Kurt Austin	Band/Ted Howard	Ted Howard	EP CD
R. & R. Recording	Robert Zimola (02) 672 4494 16 Track 1'		
C.J. Turner	Mike Kerin	Rob Zimola	Album - C/JM
Kerri McInerney	Mike Kerin	Rob Zimola	Album - C/JM
Australia Post	R. Zimola		In Store Message
SAE Technology College	Michael Pollard (03) 9534 4403, 24 Trk, Sony MXP 28 ch. Midi & Dig. Edit & Rec.		
The Clouds	Tim Whitten	Tim Whitten	Album
Sidewinder	Jeremy Allum	Jeremy Allum	Single
Mother Hubbard	Justin Stanley	Keith Cooper	Single
Little Hornet	Tim Misner	Tom Misner	Single
Various	Went Pickering	Jason deWilde	Album
Northern Line	Craig Portells	Craig Portells	Album
Sony Music Studios	Ross A'Hearne (02) 332 0320 24 Track/Pro-tools		
Joel Schefz	Joel Schefz	Simon Tonx	Presentation video
Human Nature	Paul Begaud	Simon Tonx	Japan Release
Monique Brumby	Monique	Simon Polinski	B Sides
One Eyed Milkman	Simon Tonx	Simon Tonx	CD EP Release
Barry Crocker	Dave McCrae	Tod Deeley	Album Track Mast
Lance Constantini	Lance	Simon Tonx	Single Track
Soundwarp	Meredith Brooks (02) 9905 7144 Mastering		
Tony Martin	Tony Martin	Meredith Brooks	Album-CD Master



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Nikko	Nikko	Meredith Brooks	Album-CD Master
Icehouse	Icehouse	Meredith Brooks	Comp. CD Master
Headshop	Headshop	Meredith Brooks	Demo Album
Various "No Guts No Glory"	Stuart Khan	Meredith Brooks	Comp.CD Master
Liams & Lunatics	Band	Meredith Brooks	CD Master
Trackdown Digital	Marcus Leadley (02) 9550 6890, 24 Trk.	Dig./Protocols	16 trk.
Antony Partos		Tim Ryan	Telemovie "Territorians"
Tabaluga	YGFS	Tim Ryan	TV Series Post/Prodn.
Robby Dorn		Katrina Schillar	Album
Tanya Bowra		James Cadsky	Album
John Hanksworth	John	Kathy Naunton	Library Music
Darryl Everhart		Simon Leadley	Demos
Tracking Station	Chris Brooks (02) 281 8899, 2' 24 Trk.	Dolby SR, 3 Rooms	
Shiver	Shiver	Chris Brooks	Single
Shiver	Shiver/G.Fleming	Gary Fleming	EP
Anthony Field	Anthony Field	Chris Brooks	Album
Wiggles	Wiggles	Roy Mollace	Album
Troy Horse	Michael Levis (02) 319 1799 24 Track 2'		
Dig	Band	C.Wright/Russell	Movie Theme
Lawnsmeil	Band/John V.	John Vittori	Album
Magic Lunchbox	Band	Ramesh Saltham	Album
Leone Page	Ben Whatmore	Colin Wright	Demos
Bondi Wave	Band	Suzanne Ireland	Demos
Velvet Sound	Dave McCann 0414 227 325 24 Track/32 Ch/ 2' Valve Analog		
SPDFGH	'The Gift'	T/Wall/M.Scully	Remixes
Spazm	Band	Tony Wall	Tracking
Rumana Stone	Band	Adrian Grigorieff	Demos
Frank Bennett	"The Gift"	T.Wall/M.Scully	Tracking
Skunkhour	Band	Tony Wall	Demos
Rosemary Rae	Band	Tony Wall	Tracking
Woolly Mammoth	Andrew Perrott (02) 9557 2721, 32 Ch. Cons./16 Trk. Dig.		
Time	David Price	Nik Sanning	Demos
Charlie McMahon	C. McMahon	Nik Sanning	Demos
Wall Street	Band	Gavin Drew	Demos
Cindy Ryan	Cindy Ryan	Gavin Drew	Demos
Freezer Burn	Nik Sanning	Nik/Adrian Stubbs	Demos/EP
Simon Smith	Simon Smith	Nik Sanning	Demos
Queensland			
Advanced Studios Noosa	Rod Watts 074 424 233, 16 Tr./24 Trk. Dig.		
Faded Halo	Band	Mal Williams	Demo
Jazz Factory	R.Stevens	Mal Williams	CD Album
Boo	Sunshine Coast Compil.	M.Williams/R.Watts	CD Album
Prodigious Audio	Richard or Mark (07) 5571 1400, 16 D/16 HD Analog & Dig. Cons.		
Cliffhanger Park	Transworld Media	Mark Munro	TV Ad.
Jonathon C.Smith	Mark Munro	Mark Munro	Demo
Billy's Beachhouse	Mark Munro	Mark Munro	Promo - Jingle

ARTIST	PRODUCER	ENGINEER	PROJECT
Michael White	Michael/Mark	Mark Munro	Album
Soul Studio	Daniel Winter (07) 5592 2222 24 Trk. Dig. Tape,	Mac Hard Disc Rec.	Radio/TV Prod.
Gravol	Self	D.Winter/M.Stills	EP
Dr. Jeckyll	Self	D.Winter/M.Stills	EP
No Nonsense	Larry Johns	D.Winter/M.Stills	Album
Karry Fisher	Mick Stills	D.Winter/M.Stills	EP
Joel Rivers	Joel Rivers	D.Winter/M.Stills	Album
Suite 16 Audiod Prods.	Murray Lyons (07) 3369 8733, 24 Trk.	Digital	
Mark Allan	G.Smith/D.Richards	D.Champion	Album
Kristie	Garry Smith	David Champion	Album
Lemonjuice	Bidmead/Glover	Bidmead/Richards	Album
Jazz For 4	Steve Levar	David Champion	Demo songs
Vandersound Studios	Eric Vandersande (07) 5546 8100, 24 Trk.	ADAT/XT, HDR, Q2R, CD-R, CD-R, Multimedia	
White Night	Eric	Eric	Mix/Mast.to CD-R
Neuro Triptic	Eric	Eric	Remix/Mast. to CD-R
Lachlan Blundell	Eric	Eric	Album Tracking
You Fest	Eric	Eric	Radio Ad's
Gold Coast Careers Market	Eric	Eric	Live Demos
Warren Winter	Eric	Eric	Album Tracking
South Australia			
Disk Edits	N. Clark (08) 340 1377 Editing & Mastering		
Chunky Custard	Band	N. Clark	Pre-Master Alb.CD
John Giacchi	John Giacchi	N. Clark	Pre-Mast.Album CD
Fusier	W. Menz	N. Clark	Pre-Mast.Album CD
Vicki Bennett		N. Clark	Pre-Mast.Album CD
Various	Big Boot Rec.	N. Clark	Pre-Mast.Album CD
Radics	T.Elliott/Day	N. Clark	Pre-Mast.Album CD
John Reynolds Rec. Studios	Nick Love (08) 410 3044 24 Track Dig./16 Trk Anal.		
Adult Toys(Zep Boys)	Ray Axisa	E.Sikorski/N.Love	CD Album
Kate Ceberano	Ashley Cadel	Ashley Cadel	Movie Sound Trk.
Fuse	Nick Love	E.Sikorski/N.Love	CD Album
Chunky Custard	Band	Band	Comm. & Movie S/Trk
Eric Bogle	Brian McNeil	Tony Elliott	CD Album
Streamliners	N.Love/Band	Eddie Sikorski	Cd Album
Mixmaster Productions	Mick Wordley (018) 822 986 24 Track 2'		
Sin Dog Jelly Roll	Mick/Band	Mick Wordley	Album
Helga	Helga/Mick	Mick Wordley	EP
Fuzzy	Band/Mick	Mick Wordley	EP
Honey Fix	Band/Mick	Mick Wordley	EP



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ARTIST	PRODUCER	ENGINEER	PROJECT
Travis & The Heeler	Les Karski	Mick Wordley	Album
Allan Eaton Studio	Robin Gray (03) 9534 0752, 48 Track	Victoria	
Crown Casino	Chong Lim	Robin Gray	Corporate
AFL Grand Final	G/Mills/Tommy Tycho	Robin Gray	Pre Game Show
Big Beat Studios (03) 9898 5815	John 'Shadow' Toth 16 Trk. Analog, 1', 32 Trk. Auto Session 8 Hard Disk		
Amanda	Toth/Borgeest	Ben Williams	CD
Daniel Kelso	Toth/Borgeest	Ben Williams	Demo
Incline	Toth/Borgeest	Dave Borgeest	CD
A.Y.C.	Fahri	Dave Borgeest	CD
Andrew Lee	John Toth	Dave Borgeest	CD
Real to Society	Toth/Jiminez	Ben Williams	Demo
Back Beach Recording	Mark Rachelle 059 886 948		
Superheist	McCloud/Norton/Rachelle	Norton/Rachelle	EP
Pendulum	Band	Tony Espie	Album
In;Extremis	Norton/Rachelle	Norton/Rachelle	EP
Intrusion	Norton	Norton	EP
C'est Ca Norman James (03) 9419 1506	Automated 24 Track		
Pat McKernan	Pat	Belinda/Genevieve	Album
Meg MacDonald	Andrew Paterson	Genevieve/Belinda	Album
Circus Oz	Band	Genevieve/Norman	Album
Rob Bartlett	Andrew Paterson	Genevieve/Belinda	Album
Kiss Music Recording Studios	Paul Kosky (03) 9827 1500		
The Truth	Craig Portells	Craig Portells	Album
Something for Kate	Band	Matt Duffy	EP
Dave Graney	Dave Graney	Andy Baldwin	Album
Effigy	Paul Kosky	Paul Kosky	Album
Rage Against the Machine	Band	Paul Kosky	Single
N.I.L.	Paul Kosky	Paul Kosky	EP
Newmarket Studios	Paul Rigby (03) 9372 2266		
RAAF Central Band	Graeme Lloyd	Chris Corr	Album
Alex Burns/Nick Charles	Keiran Tolhurst	Chris Corr	Album
Geoff Achison	Geoff	Ben Hurt	Remixes
Gordon McKenzie		Chris Corr	Album
Telstra	Cezary Subizewsky	Corr/Hurt	Advert.
RB-X (Aust) P/L	Bevan Quelhurst (03) 9429 6199 24/48 Track	SSL Cons.	
Fantasia	Band	Adam Quaife	Album/Demos
Jim Haynes	Greg Champion	Adam Quaife	Album
Greg Champion	Greg Champion	Adam Quaife	Trks. for Album
James Dique	James Dique	Ethan Cook	Album
BIB Productions	Mike Brady	Doug Brady	Jingles
S.A.E. Technology College	Michael Pollard (03) 9534 4403	24 Tk.2', 8 Tk 1/2' & Hard Disk. Dig. Editing	
Flywire	M.Pollard/Band	Michael Pollard	Demo
Fire Fly	Michael Pollard	Michael Pollard	CD/EP
Oversize	B.McDonald/Band	Bruce McDonald	Demo
Limestone Tear	Bruce McDonald	Bruce McDonald	Demo
Seed David Warner (03) 9682 8488, 24 Tk Analog/32 Ch.	Harrison Cons.		
Tex Perkins	Tony Cohen	Tony Cohen	Album Mix
Verona	McGoo	McGoo	Album Mix
Rail	Rail	Tim Johnston	B Sides
Barker	Barker	Tim Johnston	B Sides
Stephen Cummings	Stephen Cummings	Simon Polinski	B Sides
Sing Sing	Kaj Dahlstrom (03) 9428 4622	SSL, Neve 24/48 Trk. Dig. & An.	
Tumbleweed	Adam Casper	Adam Casper	Album Mix
Rail	Don Fleming	Bill Emmons	Album Mix
Automatic	Nick Launay	Nick Launay	Album Mix
Floor 13	Kaj Dahlstrom	Kaj Dahlstrom	EP & Mix
Mark Seymour	Barry Palmer	Patrick McCarthy	Album Mix
Paul Kelly	Paul/Simon Polinski	Simon Polinski	Album Track
Studio 52 Paul Higgins (03) 9417 7707	Studio A - 32 Tk. Studio B Adat 16 Tk		
Cash Backman	Cash	Rowan Jarl	Country Album

ARTIST	PRODUCER	ENGINEER	PROJECT
Adam Harvey	Cash Backman	Rowan Jarl	Country Album
Jungle Juice	Band	Peter Frawley	Cover Band Demos
Cinema	Cinema	Trevor Carter	Album Tracking
Indian	Trevor Carter	Trevor Carter	Album
Festa	Tony Norris	T.Carter/S.Segal	EP
True Form Music Services	Neil Gray (03) 9391 0907, 12 Trk. Analog, 8 Trk Dig.		
Verison Chilli	Neil Gray/Band	Neil Gray	EP Mix
Sympara	Neil Gray	Neil Gray	EP
Frantic	Ross/Band	Ross O'Driscoll	EP
Incarnate	Glenn Lewis	Neil Gray	Master EP
Wombat Road Studio (051) 454204	Barry Clissold 24 Trk. Plus full Midi Facilities		
John Bartell	J. Bartell	Barrie Clissold	Demo Tracks
Gaye Lynn	G. Lynn	Barrie Clissold	Album Tracking
Salvation Army	P. Roberts	Barrie Clissold	Live Album Trkg.
Brian Baker	Brian	Brain Baker	Jingle Prodn.
Roberta Rox	Roberta	Barrie Clissold	Demo Tracks
Debra Rodgers	B. Clissold	Barrie Clissold	Prom. Track
		Western Australia	
Bonsai	Tom Thorpe (09) 246 4408		
PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles
Geoff Brownrigg	Tom Thorpe	Tom Thorpe	Album - Kangaroo Creek Gang
Matt Stonehouse	Tom Thorpe	Tom Thorpe	Demo
Planet Sound Studios	Denise Preston (09) 382 2211 48 & 32 Trk.Dig/24 Trk.Analog.		
Evergreen	John Villani	John Villani	Album Tracking Oz-Connection
J.Villani/Band	John Villani	Album Trkg.	
Gino Celeberti	Gino/John V.	John Villani	Single
Jebediah	Chris Dickie	Chris Dickie	Single
Kerry Jewel	Dean Jewel	Anthony Kitson	Sound FX Rec. Peter Pan
Tropo Sound Mict Connolly (091) 922 394	24 Track Dolby		
Jimmi Chi	Shane Howard	Alan Pigram	Corrugation Road
Wayne Barker	Wayne	Mick Connolly	Sound Track - Film
Pigram Bros	Band	Brett Lyons	Debut Album
Witzand Recording Studio	Alan Dawson (09) 3311818	16 Track	
Mardi Picassos	Band/Alan	Alan Dawson	Album
Thundershuttle	Band	Alan Dawson	Album
Stephen Charles	Stephen/Alan	Alan Dawson	Album
Richie Glasgow	Richie Glasgow	Alan Dawson	Project
David Carbon	David/Alan	Alan Dawson	Single
Hamilton H.S.Band	Band	Alan Dawson	Single

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Duncan Fry

Getting Paid

Gimme the money or the guitar gets it!

The Door Deal. Can you believe that bands still fall for this one? For those not familiar with the term, it's when the band doesn't get paid an actual fee for playing, but they get the money people pay to come and see them. This assumes that people *are* going to come and see them, of course. However, it's frequently done in the dying days of a venue, when audiences have dwindled to unprofitable levels, the pub knows it's going to change hands or shut down and just wants to keep the place going until someone new takes over.

Let's face it, if they knew 900 people were going to pay ten bucks a head to come and see The Fudgepackers, then they would be damn sure to want that money themselves, wouldn't they? But they know that it's highly likely the band and crew will outnumber the paying customers, so they offer The Door Deal to the band. The band gets stars in their eyes and orders up big on the production.

And what happens? Well, if you're a PA owner/operator, how many times has someone from the band come up to you after a gig and said: "We didn't get as many people as we hoped. Is it OK if we pay you a bit less?" The implication left unsaid but floating in the air being that if you don't agree to this ridiculous demand, you're the worst bastard left unhung in the world.

What do you do? Well, you could say, "Yeah sure mate, look just give me some bucks for diesel and give me the rest whenever," but if you're that determined to give so much away then you'd be better

off getting a job as a Christmas Santa and let the band keep the truck and PA and shift in with you rent free as well! Get real!

Here's my suggestion. You take the snivelling little shit to one side and you say, firmly but tactfully, "Look Damiiian or Tarquin or Snothead or whatever, you mean that if you'd had a whole lot more people you'd have paid me a more than we agreed on? Of course not, and I wouldn't have expected it, because I agreed to do the show for a set price. You'd expect me to honour the agreement we made, the same as I expect you to honour it."

Of course, many up and coming or down and struggling bands have a somewhat *laissez faire* attitude towards their personal finances, and it may well be that they just don't have any more money to pay you.

So I suggest you say, "OK, you can fix me up later for the difference, but in the meantime I'll just hang on to your pre 'L' series Digitronix XYZ 5000 Midi keyboard until you bring the money round!" This is a very persuasive argument, especially if it's already in the truck!

Call me a bit cynical if you like. Perhaps I am. If cynicism means that I don't believe you should work for nothing while other people make money out of you, then yup, I'm cynical.

If you think I'm being harsh, consider this little story.

I got a call from a band I worked with quite regularly. They had a job in Albury (200 miles/300K away, on the border between Victoria and NSW) and could I do the gig? Well, it was a fair distance for just the one gig, and the old reliable engine in the Toyota F series had been playing up a bit; missing, spluttering and hard to start, but I said yes anyway. I had been regularly putting a bit aside in an engine repair fund and with the money from this gig I'd be able to get some repairs done.

I picked up their stage gear from the house they all shared during the week when I happened to be in the area. Their girlfriends helped me load it into the truck, as the boys were off on a photo shoot or something.

Bright and early on the day of the gig my trusty assistant Jim and I headed off to Albury. I wanted to have a bit of time up my sleeve so we wouldn't have to hurry, and to allow for anything unforeseen.

Here's my suggestion. You take the snivelling little --- to one side and you say, firmly but tactfully, "Look Damiiian or Tarquin or Snothead or whatever, you mean that if you'd had a whole lot more people you'd have paid me a more than we agreed on? Of course not!"

50 miles or so from Melbourne, the engine started to miss quite drastically, and by 100 miles had settled down to a ragged, uneven beat that indicated we were only running on 5 cylinders. As anyone who's driven a truck full of gear knows, losing that one cylinder makes all the difference on hills, but we eventually rattled our way into Albury and arrived at the gig.

What gig? The club manager said it had been cancelled a week ago!

I called the band. John the guitarist answered the phone.

"It's Dunk here," I said

"Oh, Dunk, thank heavens you called. We just found out this morning - the gig's been cancelled." he replied. Lying bastard. What he meant was 'the gig was cancelled last week but we forgot to tell you'

"I know it's been f**king cancelled," I said through gritted teeth. "Jim and I have just driven

200 miles in a sick truck to get here."

"What - you're at the gig? In Albury?"

"Yes, here in Albury. Hot, sticky, tired and very shitty."

There was silence on the other end, but I persisted.

"What are you going to do about it? Remembering, of course, that I've got all your stage gear!"

John sounded nervous. He obviously had visions of his guitar and amp joining the rest of their stuff in a starring role at the Albury tip that night!

"Oh, we'll fix you and Jim up for everything, Dunk, don't worry. Just take it easy with that stage gear, won't you. We'll see you when you're back in Melbourne."

Jim and I got back in the truck, had a leisurely lunch on the band's petrol bill and then headed for home. The misfires from the engine got worse. Soon we were just crawling along, often running on 4 cylinders only, and frequently down to second gear for any slight incline.

It was dark by the time the truck wheezed into Melbourne. A whole day's driving for nothing. We were two really happy guys!

Still, the stage gear threat worked, and the band reluctantly paid us in full for the gig. Oddly enough I didn't work with them again - I think they either broke up or found someone more compliant!

Anyhow, I didn't give a rat's bunghole. With the money I managed to get a really good deal on a secondhand engine that had only done about 100 miles from new. It had come out of a Landcruiser that had got rolled on the beach on King Island at the low tide point. It was covered in sand and seafood, but being a late model engine, it was fully sealed, and ran like clockwork for as long as I had the truck.

As long as you didn't mind the smell of fish!



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Reward for information leading to the return of all or part of a microphone kit stolen from Ministry of Dance, Kings Cross on Friday night 16th August. Aluminium edge flight case contains SM57's, S458's, Sennheiser 421's, Double DI's, AKG C451's, Beyer M88, Beyer M01's and Sennheiser 504. All mics and DI's are engraved ACTION SOUND. Any mics found are to be presumed stolen, as no mics have every been sold. Please

contact Kings Cross police with any information or phone 018 269 849.

Stolen on 4th July 1995 - equipment listed below belonging to Australian Disco Services out or hire, from Prince Alfred Hotel, Gratton Street, Carlton, Victoria. Anyone with any information leading to its recovery is asked to contact Nick or Sean at Australian Disco Services on (03) 9484 1178 or Det. Adam Neillson at the Melbourne C.I.B

Audio : 1 x Denon DN2C00F Dual CD Player, 1 x Numark

DM1175 4Ch. Mixer, 2 x Jands 216 Amplifiers, 1 x Rane AC2C 3 Way Crossover, 2 x Australian Monitor Double 15' & 2' Horn QMX Box, 2 x 18' RCF Uncarpeted Black W-Bin Sub Woofer. **Lighting :** 1 x Abstract Wildstar FX, 1 x Abstract Monster Moon FX, 1 x Twilight Astoraggi FX, 1 x Martin Rainbow Cone FX, 1 x Optikinetics White Lightning Strobe, 1 x Mode Strobe Remote Control, 1 x YES "1 Smoke Machine with Remote, 1 x 4 Way 240V Switching Unit, 1 x Unloaded Grey Carpeted

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BUYERS GUIDE MICROPHONES

SOUNDFIELD ENTERS AUSSIE MARKET WITH STEREO STUDIO MIC



To coincide with 20 years of SoundField microphones, a new stereo studio microphone system has been introduced. At the same time, the range is now distributed by Studio Connections.

The model SPS422 is based on the same design principals as existing models in the SoundField range, and is designed specifically as a 'stereo main microphone' for recording. SoundField offer the un-usual feature of a remote control 'processor', for adjustment of

all microphone parameters in the control room.

This means the pattern can be changed, or 'swept', as can the 'width' of the image - as the microphone delivers a stereo signal. The SPS422 can be used to create highly accurate mono and 'wide image' stereo recordings. The system comprises the multi-capsule microphone, and a 1 rack-unit tall processor.

• **Studio Connections, (03) 9646-0544.**

BEYER ADD TO RANGES

Beyer have a long history in the market in the Asia / Pacific, the German firm make what the editor considers one of the best kick drum microphones around - namely the M88.

In the past year the M-Series has been released, with models from \$189 to \$319. Built to a budget, yes, but still worthy of consideration by professionals..

Beyer has built sales in com-

mercial audio, locally 150 Beyer TG-X20 microphones have gone into the NSW court system, adding to 300 other Beyer models in there. Chances are good that the mic you sweat into before the beak in NSW is a Beyer!

Significant are gooseneck and boundary layer microphones, the range of which have virtually doubled in the past year.

• **Amber, call (02) 9975-1211.**

Editorial Buyers Guide's - deadlines:

OCTOBER: Amplifiers, DJ Samplers, Followspots. Deadline: 1st September. Call for possible extension but hurry.

NOVEMBER: loudspeakers, fog machines. September 30th.

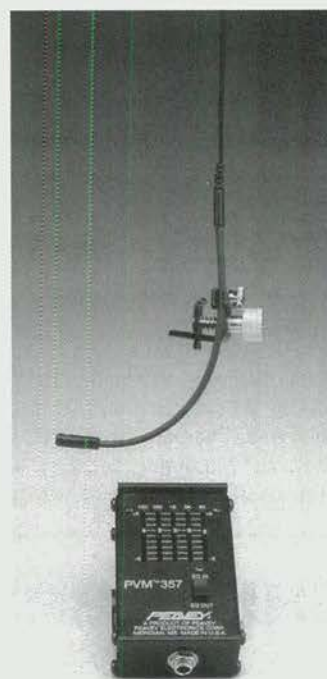
DECEMBER: Recorders. Deadline October 31st.

UNCOMMON INSTRUMENT SOLUTION

Peavey have an interesting solution to the dilemma of self control of instrument microphones. They have a miniature model microphone, as many manufacturers do, which has a drum / instrument mounting clamp. What is different is that the pre-amp has a five band equaliser on board.

This allows a muso to make changes on the fly, and is really good for smaller acts where a sound engineer isn't used. The mic is a cardioid condenser type, and the preamp also has a trigger out for connection to a drum synth or other device.

• **A\$499- From Australis Music Group, call Aust (02) 9698-4444 or NZ (09) 837-3230.**



AUDIX FINDS NEW HOME

Audix are an American brand, which is perhaps underestimated here. They make some tough and well performing dynamic microphones. Funny enough the brand was once distributed by Jands, but in a strange twist of fate, taken off the firm and awarded to another importer. Then just a year or so later, Jands won the rights to distribute Shure Brothers microphones. The man from Audix, it is said, called Jands to ask for a second chance. Whether or not this is true, one can imagine what the response may have been!

The range is simple, with the 'D' series used for pure instrumental purposes and the 'OM' range for pure vocal. There are three models in each range, and they have no transformer in most of them. This is due to the Very Low Mass (VLM) capsule. Audix say it is a better alternative to neodymium magnets, which tend to overload the input stage of most mixing consoles. Against this argu-

ment, many engineers enjoy the extra gain one gets from a neodymium mic.....

Today Audix is handled by Production Audio Services, who also distribute Countryman Associates products. • **Call (03) 9415-1585.**



Buyers Guide; Microphones

RUSSIAN REVIVAL

The recent rise in awareness of Russian audio equipment has been astounding. Just after the cold war ended some former Soviet manufacturers started to appear at international trade shows, manning stands heavy with Soviet regalia, and thick with cigarette smoke. Initially the marketing was slow, but soon the Russians learned the ways of the (rest of the) world and now the country is ramping up pro audio exports.

Three brands of Russian microphones are represented in Australia by ATT Audio Controls of Melbourne. They are: BytetonII, Oktava and Neva-ton.

Prices reflect the currency, with

Russia eager for export sales. There are numerous



BytetonII models at \$179, both dynamic vocal microphones and instrument models. Oktava condenser mics suit project and professional studio applications, ranging from \$495, while Neva-ton offer up-market professional studio models under \$2,000. • **ATT Audio Controls, (03) 9379-1511.**

SHURE BRING IN B 52

'Missing Link' Microphone

After years of field use and feedback from end users, Shure Brothers has updated its Beta Series to offer improved versions of existing models along with two additions to the range: the Beta 52 kick drum/bass guitar mic and the Beta 56 instrument mic.

B52 has a supercardioid pattern rather than the traditional cardioid design. The benefit of this is that you can get radically different tonalities by varying the mic placement - you want more beater click, point it towards the beater; you want more of a jazz "thud", point it away from the beater.

Another unconventional element to this microphone is the frequency response. Unlike loudspeakers which typically aim for a flat response, microphones can either be designed with a flat response for natural, acoustic pickup, or a shaped response to increase sensitivity in particular frequency domains.

The best example of this is the venerable Shure SM58. This microphone has a midrange (read: vocal) hump that gives the mic its legendary tonal characteristics (ask yourself why a 20-plus year



old design is still the one of the world's most used vocal mics?).

Likewise, the Beta 52's response is optimised for kick drum. The response rises a little at 2kHz with a bigger rise at 4kHz, negating the "need to EQ the click in". Also, due to the capsule's loading, the Beta 52 exhibits a substantial proximity effect (ie., the effect of low frequency boosting the closer the mic is to its source), giving you up to +18dB of boost at 50 to 100Hz.

Add to these features neodymium magnets for high output levels, an integral mount that swivels through 180 degrees, an SPL rating of 174dB, and a hardened grille assembly.

• **Jands (02) 9517-3622.**

Vocal Microphones

Prices as supplied by distributors at 1st August 1996. Includes sales tax. Each distributor has listed FOUR representative models only. There are many more!

AKG ACOUSTICS AWA Distribution (02) 9898 7666

D3700 Hypercardioid dynamic, very low handling noise, maximum SPL 147dB for 1% THD, 50 - 20kHz, high output using neodymium boron magnet. Part of the tripower series. \$229.

D3800 Hypercardioid dynamic, very low handling noise, maximum SPL 147dB for 1% THD, 40-21kHz, high output, using neodymium boron. Part of tripower series. \$329

C5900 Hypercardioid condenser, 20-22 kHz, very low handling noise. Maximum SPL 140dB for 1% THD, bass roll off, presence boost used by Mick Hucknall, Simply Red "On Life" Tour 1996. \$449.

D655 Hypercardioid dynamic from performer series. On/Off switch. 70-20kHz balanced. comes with SA44 stand adaptor and vinyl bag. \$79.

ASTATIC Horwood Australia (02) 9585 1011
CTM28 Dynamic hand held vocal mic. with durable Flex-Form hardened steel grille screen. 50Hz to 14kHz frequency response. Features on/off switch. \$165.

CTM54 Omnidirectional hand held vocal mic. Ideal for interviews etc. Dynamic mic. Shock mounted for durability. Recessed on/off switch can be locked in the "on" position. \$229.

CTM 89 Professional dynamic vocal mic with extra mid range bite. 40Hz to 16kHz frequency response. Features exclusive Astatic INR (Impact Noise Rejection) shock mount system. \$320.

AUDIO TECHNICA Yamaha Music Australia (03) 9699 2388

ATM27 HE Hypercardioid; neodymium dynamic; 50-15kHz; low mass voice coil for transients; vocal microphone w/double-isolated element to reduce handling noise. \$199

ATM 29 HE Hypercardioid, neodymium dynamic; 50-15kHz; instrument microphone double dome diaphragm for better HF response. \$229.

ATM 41 HE Cardioid; 50Hz - 17kHz; vocal microphone; high sensitivity & superior internal shock mounting for high output/low handling & case noise. \$379.

ATM 63 HE Hypercardioid dynamic; 50Hz - 18kHz; double dome diaphragm for accurate HF response; quality recording & sound reinforcement applications. \$359.

AUDIX Production Audio Services P/L (03) 9415 1585

CD-11 Entry level cardioid dynamic microphone with switch and cable. Frequency range 50-16kHz, max SPL 128dB. Available in low or high (CD-11H) impedance. \$109.

OM-3xb Pro live vocal hypercardioid dynamic microphone, feature high output. Frequency range 38-21 kHz, max SPL 144dB. Finished in black. \$299.

OM-5 Concert series live vocal hypercardioid dynamic microphone, featuring exceptional vocal clarity. Frequency range: 40-20kHz, max SPL 144dB. Finished in black. \$495.

OM-7 Concert series live vocal hypercardioid dynamic microphone, the choice of top artists. Frequency range: 38-21kHz, max SPL 144dB. 1995 AES "Microphone of the Year". \$589.

BEYER DYNAMIC Amber Technology (02) 9975 1211

M01 Low-cost vocal mic with classic Beyer performance. Dynamic supercardioid, 50-15K Response. Includes on/off switch, MKV8 Flexible clip & carry bag. \$189.

TG-X20 High performance vocal mic with very high output level. Dynamic hypercardioid, 45-16K response, light weight (170g) includes MKV8 clip and carry bag. \$349.

M700TG Dynamic hypercardioid featuring extended 35-16K response, high output and very tight pick-up pattern. Includes MKV8 clip and carry bag. \$575.

M88TG One of the world's most widely used mics for both vocals and instruments. Dynamic hypercardioid, 30-20K response, very high SPL and Gain-before-feedback. Includes MKV8 clip and carry bag.

BYTONE II ATT Audio Controls (03) 9379 1511

VM85 Supercardioid dynamic microphone, ideally suited to live applications where a high quality rugged mic is required. 75 Hz - 18kHz. \$179.

VM95 Supercardioid dynamic microphone with excellent feedback rejection and low handling noise. 60Hz - 17kHz. \$179.

VM97 Cardioid Dynamic microphone with extended frequency response and low handling noise. 60Hz - 19kHz. \$179.

CAD Australian Audio Supplies (043) 291 711
CAD95 Electret condenser, cardioid, smooth bandwidth 40Hz - 20kHz, High -48dB output. \$349.

CAD 89 Dynamic vocal mic. 4 Stage windscreen cardioid, internal shock mounts. \$279.

CAD 28 Dynamic vocal mic. Cardioid, 3 Stage windscreen, internal shock mount for minimal handling noise. \$159.

CROWN Bose Australia Inc. (02) 9204 6111
CM200 Hand held Cardioid Freq. 80Hz to 15kHz. Sens. 2.2mV/Pa. This microphone delivers fine studio quality sound in a rugged package that withstands the toughest field conditions. \$412.

CM310 Handheld Differoid Freq. 60Hz to 17kHz. Imp. 200Ω. Sens. 1.7mV/Pa. This microphone is ideal for high level sound reinforcement and for eliminating strong ambient background noise. Used by top touring professionals worldwide. \$511.

ELECTRO VOICE Mark IV Audio (02) 9648 3455
N/D 157B Cardioid, neodymium magnet. Supplied with EV warm grip and heavy duty sprung steel headshell plus unbreakable clip. Ideal for all vocal forms, excellent gain before feedback. Also available with on/off switch. Lifetime warranty on capsule. \$220

N/D 257B Cardioid, neodymium magnet. Supplied with EV warm grip and heavy duty sprung steel headshell plus unbreakable clip. Ideal for all vocal forms, excellent gain before feedback. Lifetime warranty on capsule. \$265

N/D 357B Super cardioid, neodymium magnet. Supplied with EV warm grip and heavy duty sprung steel headshell plus unbreakable clip. Ideal for all vocal forms, excellent gain before feedback. Lifetime warranty on capsule. \$315.

N/D 457B Hyper cardioid, neodymium magnet. Supplied with EV warm grip and heavy duty sprung steel headshell plus unbreakable clip. Ideal for all vocal forms, excellent gain before feedback. Lifetime warranty on capsule. \$420

IRP PROFESSIONAL SOUND ESA Audio (03) 9562 4605

GM-515 IRP Miniature Electret Condenser Cardioid 15° Gooseneck Microphone - Black or White. 40Hz - 20kHz +/- 5dB Unidirectional 9 - 52V DC Phantom Supply \$392

HM-525 IRP Miniature Electret Condenser Cardioid Hanging Microphone - Black or White. 40Hz - 20kHz +/- 5dB Unidirectional 9 - 52V DC Phantom Power \$371

GM-520 IRP Miniature Electret Condenser Cardioid 20° Gooseneck Microphone - Black or White 40Hz - 20kHz +/- 5dB Unidirectional 9 - 52V DC Phantom Supply \$392

GM-520L IRP Miniature Electret Condenser Cardioid 20° Gooseneck Microphone - Black with Lighted Ring 40Hz - 20kHz +/-dB Unidirectional 9 - 52V DC Phantom Supply \$495

BM-510 IRP Electret Condenser Cardioid Boundary Microphone - Black or White 30Hz - 20kHz +/- 5dB 250Ω Unidirectional 9 - 52V DC Phantom Supply \$409

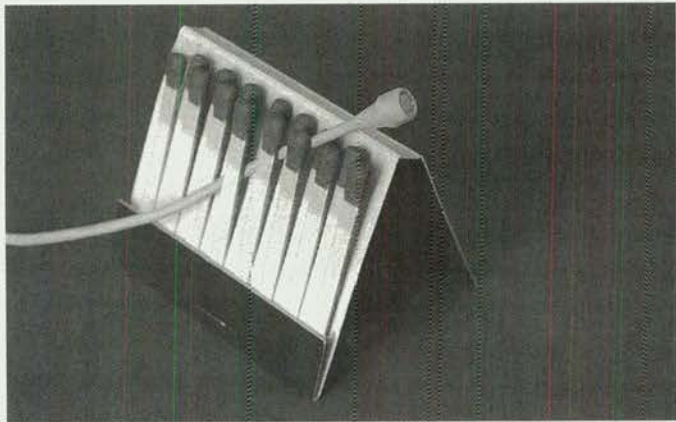
MICROTECH GEFELL Southbank Trading (03) 9699 7809

MD100 Dynamic cardioid. Excellent character, stunning response and built like a German brick Schisen Hausen. \$659

MT71S Specialist soloist pressure gradient transducer microphone. Transformerless output. Dual capacitor designed M7 gold sputtered capsule. Max SPL 144dB. Base roll-off and pad switch. \$1596

UMT70S 3 Pattern vocal microphone (Omni,

Buyers Guide; Microphones



COUNTRYMAN: BIGGER MINIATURE

It's fair to say Countryman have the a top of the top end of the miniature microphone market, now the B3 Lavalier microphone joins the range. It's a very small, round, omnidirectional electret microphone - which they say is very resistant to makeup and moisture. This is a good attribute, as the usual mounting position for a

mic like this is in the hairline, for performers on big musicals.

B3 has Kevlar reinforced cable and an ultra thin diaphragm. Colours include black, white, light skin, cocoa and grey. For all complexities! It comes in hardwired and wireless versions.

• PRODUCTION AUDIO SERVICES, (03) 9415-1585.

CAD SETTLES IN

The people who established Mackie as a household name in Australia have made solid inroads with CAD - selling the range as an adjunct to studios and also as a live and contractor option. To this end the range comes in three lines - Equitek Series for studios, Performance Series and Contractor Series. CAD are one of the oldest microphone firms in the world.

Equitek use a nicad battery for power, but do use phantom power too. It recharges the nicad - giving the mic better power, say CAD. The head amp electronics are the 'crux' of the mic sound, not just the capsule.

The MG115 electret mini condenser gooseneck mic is a big seller here at \$299, 100 of them can be found in the WA parliament. Then there is the HM 50 VC - a harmonica microphone. Sure must be a lot of harp players out there

• CAD: from Australian Audio Supplies, (043) 291-711.



ELECTROVOICE ADD TO ENG, BOUNDARY LINES

EV have been operating near the top of the microphone market in Australia and Asia for many years, the N-DYM range of vocal microphones compete hard with Shure's BETA range.

In the 1990's the RE range of instrument microphones have become very popular, having been amongst the first models to be offered in miniature, yoke mount

Vocal Microphones

Prices as supplied by distributors at 1st August 1996. Includes sales tax. Each distributor has listed FOUR representative models only. There are many more!

(continued from previous page)
Cardioid, Figure 8). Features M7 capsule with two large diameter gold sputtered membranes. Cardioid pattern exhibits extraordinary "Presence". \$2248

UM92.1S 3 Pattern switchable. Vacuum Tube pre-amplifier (Valve). Individually hand selected. Gold sputtered membranes. Hand calibrated to exacting standards. The real producers microphone. \$4590.

NEUMANN Amber Technology (02) 9975 1211
KMS140 Cardioid condenser for stage vocal applications. Acoustically de-coupled transducer, high feedback rejection, w/c natural sound with 20-20K response. Hypercardioid KM51550 also available. \$1970.

PEAVEY Australis Music Group (02) 9698 4444
PVM 38i Clean, well balanced sound; very low handling and stand noise; humbucking coil to reject induced electrical noise; robust construction. Furnished Accessories: External foam windscreen, swivel stand adaptor and a soft carrying pouch.

PVM 835 Diamond Series Diamond-coated diaphragm; neodynamic design; cardioid polar response; neodymium magnetic; superior off-axis rejection. smooth, accurate frequency response; ultra-high sensitivity and the lowest handling noises of any hand-held dynamic on the market. \$399

PVM 880 Diamond Series Diamond-coated diaphragm; neodynamic design; cardioid polar response; neodymium boron magnetic; superior off-axis rejection; smooth, accurate frequency response; ultra high sensitivity, ultra low handling noise, complete with flite case, foam windscreen mic clip and 25' cable. \$399

PM 16S Electret condenser; cardioid response; slender, inconspicuous styling; smooth extended frequency response for natural speech and music reproduction; excellent feedback rejection; full shielding for rejection of hum and RF fields; simple and versatile positioning adjustments; variety of mounting options; collet type mounting flange with mechanical isolation provided; collet mount security clamp; readily powered from any 9-52 volt phantom source. Furnished accessories: foam windscreen. \$329.

SAMSON Electric Factory (03) 9480 5988
QM1c Hypercardioid microphone. Features: High output, low impedance, Neodymium dynamic element. Hypercardioid pickup pattern. Humbucking aluminium voice coil. Multi-axis stock mounted mic element. Carry case & Mic clip included. \$169.

S12 Hypercardioid microphone. Features: low impedance, Neodymium Dynamic element. Hypercardioid pickup pattern. Die cast zinc casing and carry case & mic clip included. \$89.

S11 Cardioid dynamic microphone. Features: Low impedance. Cardioid pickup pattern. Die cast zinc casing. Carry case & mic included.

SENNHEISER Syntec International (02) 9417 4700

BLACKFIRE 530 The EF530 is a super cardioid Mic with unique features. An adjustable inlet

basket allows for variable proximity effect, giving warm and full depth vocal sound. \$629

BLACKFIRE 811 The BF811 is a super cardioid microphone suitable for vocal, speech and instrument recording applications. \$219.

BLACKFIRE 5032P The BF5032P is a high quality super cardioid microphone developed for extreme close miking. It includes a moisture resistant mount piece, protection against popping and excellent feedback rejection.

SHURE Jands Electronics P/L (02) 9516 3622

BETA 87 Finally brings studio condenser performance to the road. Extended HF response brings detail, accuracy and warmth to any vocal. Highly consistent super cardioid pattern for excellent isolation and unsurpassed gain-before-feedback. Phantom Power, 50 to 16,000 Hz.

BETA 58A Top choice among vocalists and touring sound professionals world-wide. Its durability continues to make it one of the most rugged microphones in the live sound business. Super cardioid; 50 to 16,000 Hz. \$499.

SM53 Consistently the first choice of professional performers around the globe, the SM58 is a genuine world standard and a true audio legend. Makes rock, r&b, pop and country vocals sound their best. Cardioid dynamic. 50 to 15,000 Hz.

BG 3.0 Designed to withstand the rigours of prolonged use for serious gigs and showcase performances. High-output neodymium magnet for added impact in live vocal performances. Cardioid Dynamic; Low Z; On-Off Switch; 60 to 14,000 Hz. \$249.

SONY Sony Australia Ltd. (02) 9887 6666

F710 Multi purpose economical dynamic Mic. On/Off switch. Frequency response. 70-15,000Hz. \$170.

E730 Rugged general purpose dynamic mic. Vibration resistant. On/Off switch. Frequency response 50-13,000Hz. \$260.

F740 Vocal and instrumental dynamic mic. Rugged ALN, CO Capsule. Frequency response. 50-18,000Hz. \$317

F760 High quality dynamic mic suitable for vocal recording. Frequency response 50Hz-18,000Hz. \$460.

SPIRIT Jands Electronics P/L (02) 9516 3622

VM01 Live/Recording, first low cost vocal mic guaranteed to meet the high specifications of Spirit consoles. 500 Ohms Impedance; 2 OmV/Pa@1kHz Sensitivity; Maximum SPL 150dB; Hyper-cardioid; 80Hz - 20kHz. \$119.

VM01S As for VM01 but with On/Off Switch. \$129.

IM01 Live/Recording first low cost instrument mic guaranteed to meet the high specifications of Spirit consoles. 500 ohms Impedance; 2 OmV/Pa@ 1kHz Sensitivity, Maximum SPL 150dB; Cardioid; 80Hz - 20kHz. \$119.

TENLUX Elsta (02) 9568 2100

PRO30 Unidirectional, 250 ohm impedance, 74dB sensitivity, Frequency response 50Hz - 14kHz. Die cast zinc alloy body, comes with 5m lead and carry case. You have to hear it to believe the quality! \$119.

format for drums.

NEW: The new 635L is a long handle version of the 635A, which has found favour 'in the field' where radio and TV reporters need spoken location audio. The 'L' has a handle 8" long, vs. the 5" handle on the standard unit. Colour options are black or beige, and the price (retail) is \$325.

For stage work where spoken

audio is needed, or for conference table work, or even some recording applications, the square and flat CT30 boundary mount condenser mic is new. It is suited to permanent installation, with the connections via a terminal strip. The cable can exit the side or back of the unit. Size is 3.7" wide x 5.1" long, and it is 0.63" in height. Cost: \$535 retail.

Buyers Guide; Microphones



Sanken shotgun mic

ASC INTRO PEARL

Pearl, the Swedish firm have been making microphones for a long, long time. ASC have added Pearl to their existing mic brands, which include COLES, SANKEN, PSC, TRAM and LECTROSONICS.

Pearl have models for film, broadcast, live and recording - pretty much the gamut, including contracting - with some gooseneck specialist mic's too.

The classic Pearl capsule was designed in the 60's and has rectangular dual membranes. Some models are particularly good at high sound pressure levels (SPL's: when things get LOUD) such as the TLC 90, with 0.5% total harmonic distortion (THD) at 144dB SPL. By way of comparison, the threshold of pain is 120dB, which is about the volume the Tea Party play at, centre stage!

•Audio Sound Centre,
(02) 9901-4455.

Headset, Miniature & other Microphones

Prices as supplied by distributors at 1st August 1996. Includes sales tax. Each distributor has listed FOUR representative models only. There are many more!

AEROMIC A.M.A. Pty. Ltd. (02) 9313 4995
AM15Mk2 Omni-directional tie clip mic, Electret - micro-size, Australian design, manufactured overseas. Features wide range flat response with mechanical isolation second to none. For high profile platform speakers, churches, musical theatre groups etc. \$299.
AM12 Headworn microphone for pro-voice users, Dance instructors etc. Australian design and assembled. Omni cartridge, micro electret on a one piece adjustable frame, not sweat resistant but works hard anyway. \$399
AM10 The original aerobics instructors' mic. Designed and assembled in Australia. Omni pattern, micro electret cartridge, one piece frame, exclusive cable available only in sweat resistant Hirose or TA4F (Shure) plugs. \$450.
AM20/AQ20 Cardioid electret capsule version with windscreen for outdoor use. Waterproof design, horizontal fitting. Hi noise rejection design. Low profile. Suitable for theme parks, tour guides, aquarobics and other outdoor activities. \$450.

AKG ACOUSTICS AWA Distribution (02) 9898 7666

C417 Omni lapel mic, smooth bass and mid-range, gentle peak at 8kHz (4dB), small and light. Available in black or flesh colours, 9 to 52V Phantom. C417B-Lock version for wireless mic use. \$229.

C418 Hypercardioid MicroMic II for drums and percussion. Clips onto drum rim or stand. Adjustable swivel and elbow for precise positioning, suspension rejects vibration noise. 50 - 20kHz. \$286.

C419 Hypercardioid MicroMic II for trumpet, sax, trombone etc. Adjustable swivel and miniature gooseneck. Phantom version 9 - 52V. C419B-Lock version for wireless mics and B29 battery pack. 20 - 20kHz. \$299.

C420 Cardioid headset MicroMic II used by Peter Gabriel on "Secret World Tour" 1995. Adjustable headband. Miniature gooseneck for positioning accuracy. Phantom version 9-52V. C420B-Lock for wireless. \$329

AUDIO TECHNICA Yamaha Music Australia (03) 9699 2388

AT 853R Miniature cardioid condenser; 30Hz - 20kHz; phantom; perfect for suspension over a choir or orchestra. \$469.

AT 831A Unidirectional miniature condenser (cardioid) close up voice and instrument pick-up applications. \$399.

PRO 8HE Headworn hypercardioid dynamic; 200Hz - 20kHz; low visibility stable headband for versatility. \$179.

ATM 73a Headworn cardioid condenser; 60Hz - 15kHz belt-mounted power module; flexible boom. \$399.

AUDIX Production Audio Services P/L (03) 9415 1585

ML-10 Pre polarised omni-directional lavalier microphone, with power supply. \$199.

ST-2 Stereo pre-polarised cardioid condenser microphone, featuring two cardioid capsules and cable. \$265.

BEYERDYNAMIC Amber Technology (02) 9975 1211

TG-X35 Condenser headset mic with "over-ear" type headband. Low-profile cardioid capsule with flexible gooseneck. 40-17K response. Includes external pre amp for phantom power. \$599.

MCE5.15 Miniature omni condenser for both speech and instrument use. Extended 20-20K response & low cable handling noise. Includes external pre-amp for phantom power. \$639.

MCE10.15 Miniature supercardioid condenser. Wide 40-20K response with excellent off-axis rejection & high gain-before-feedback. Includes external pre-amp for phantom power. \$799.

MCE50.15 Super-miniature omni condenser with 35-18k response for film/TV/theatre use. Also available in skin-tone finish. Includes external pre-amp for phantom power. \$499

CAD Australian Audio Supplies (043) 291 711

MG 115 Electret Mini-gooseneck condenser, 15' gooseneck, unidirectional cardioid. Excellent for podiums, altars etc. \$299.

MG120 Electret mini-gooseneck condenser. 20' gooseneck, unidirectional cardioid. Excellent for podiums, altars, broadcast etc. \$329.

CM-100B Hanging mini-gooseneck, for use with choirs, orchestral concert performances, unidirectional cardioid, high sensitivity. \$329.

ST-100 Surface mounted boundary mic, unidirectional half cardioid in the plane above boundary, phantom powered. \$329.

COUNTRYMAN ASSOC. Production Audio Services P/L (03) 9415 1585

B3 NEW! "Broadway Series" omni microphone for performer market. Features low noise, water resistant and very small, (in round shape). 10-25kHz, High SPL. Available hardwired or wireless. \$320.

EMW World renowned omni electret condenser microphone. Features low noise, moisture resistant, multiple colours. Freq. response 20Hz-20kHz, High SPL. Available hardwired or wireless.

Isomax Headset Isomax 2 mounted on small discreet headset. Thin and strong, it is ideal for use in the most demanding theatre or live performance. Available hardwired or wireless. \$595.

Aerobic Headset EMW mounted on a small, discreet headset. Sweat resistant and extremely tough. Excellent sound quality. Available hardwired or wireless. \$450.

CROWN Bose Australia Inc. (02) 9204 6111

CM311 Headworn Differoid. Freq. Resp. 50Hz to 15kHz. Imp 75Ω. Sens 2.5mV/Pa. CM311 is designed to meet touring sound applications. It includes a belt worn battery pack for hard wired applications or can be connected to wireless transmitter. \$549

CM311E Headworn Differoid. Freq. 50Hz to 15kHz. Imp 75Ω. Sens 2.5mV/Pa. CM311E offers the best of two worlds. Differoid performance is a comfortable headworn package. Connects directly to any wireless transmitter. \$390

CM312 Headworn Hypercardioid Freq. 50Hz to 17kHz. Imp 75Ω. Sens 3.8mV/Pa. Ideal for vocal reinforcement where a little less discrimination against high stage levels is required. Ideal for aerobics and broadcast applications. Includes belt worn battery pack for hardwired use. \$511.

CM312E Headworn Hypercardioid. Same as for CM312 but connects directly to wireless transmitters. \$399.

ELECTRO VOICE Mark IV Audio (02) 9648 3455

CO 2 Available also in radio and pigtail form. Miniature electret lavalier for speech or theatre application. Also available in white. Heavy duty finish ideal for painting or holding make up. Wide range of clips available. \$395

CS 200 Available also in radio form. Small cardioid electret lavalier. Ideal where optimum gain before feedback is required. \$695

HM 1 Headset microphone specifically designed

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

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.

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.



Retail Price
\$349



Conneaut Audio Devices

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 Morris (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



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Buyers Guide; Microphones

for radio use. Supplied complete with TA-4F connector. Light, robust construction, flexible microphone arm, sits securely on head. Ideal for Vocal or aerobic use. \$435

CT 30 Plate microphone. Low profile ideal for table operation. Half cardioid pattern. Features built in equaliser to minimise 'baffle effect' and low frequency noise. \$539.

ELECTROSONICS Audio Sound Centre (02) 9901 4455

M119 Small top facing low impedance omnidirectional microphone suitable for wireless transmitters supplying 2V of microphone powering. \$278.

M140 Small top facing cardioid design with a bright overall sound due to its directional pickup pattern. It is intended for sound reinforcement applications where feedback is a prime concern. Suitable for all wireless transmitters providing 1.5V mic power. \$288.

M150 A Small side facing pickup design with tie clip supplied. This omnidirectional mic is suitable for all wireless transmitters with a standard operating voltage of 2V. \$298./**

MICROTECH GEFELL Southbank Trading (03) 9699 7809

M300 One of the most cost effective ways to achieve excellent sound recording. 135dB SPL. Dark Bronze. Transformerless. Cardioid 40 - 18 kHz. \$1091.

M295 Metal membrane condenser microphone. Full rounded sound due to extended capsule size. Frequency response in the upper range is virtually linear while the lower frequency band features a slight roll off to counteract bass lift (proximity effect). \$1663.

M294 Similar to M295 but with slight boost in EQ (approx 5dB at 8kHz) and extended bass. Great for recording soloists (guitars, overheads & other dynamic instruments) requiring a very clean sound with plenty of that "airy presence". \$1703

M296 Same as M295 but omni pattern. Excellent for highest quality news gathering or in-field recording where realism of sound is required. \$1663

PSC Audio Sound Centre (02) 9901 4455

Headset Microphone Features a three wire positive bias, noise cancelling, electret microphone element with a cardioid pickup pattern. Sporting a comfortable, user adjustable head band and flexible boom microphone arm. The PSC can be direct wired for transmitters or is available with an optional barrel style battery pack with Lithium battery for 5 years use. \$360

Millimic Lavalier miniature microphone : The ultimate production lavalier, with miniature size, very high output, a low inherent noise floor, and exceptional shielding against electromagnetic interference. There is a complete range of mounting accessories including the unique PSC Turtle clip for preventing clothing noise problems. Barrel style Lithium battery power supplies are available with various plugs. \$360.

SANKEN Audio Sound Centre (02) 9901 4455

COS-11 Probably the smallest lavalier available and used on stage for Miss Saigon around the world. Unique rubber mount allows both isolation and top end variance. Replaceable mesh top screen and available for wireless transmitters or hard wired to AA battery pack or 48V phantom barrel style power supply. \$472.

SENNHEISER Syntec International (02) 9417 4700

BLACKFIRE 5048P The BF 5048P is an ultra light headset vocal microphone for keyboard or drum players. It features excellent feedback rejection qualities. \$749

SHURE Jands Electronics P/L (02) 9516 3622

SM84A Professional super cardioid condenser lapel mic; Side exit cable minimises handling noise and is easy to conceal. Includes 4-way tie bar, double mount tie bar, mounting blocks and windshield. Battery or Phantom Power, 80 to 20,000 Hz. \$639.

SM93 Sub-miniature omnidirectional condenser lapel mic. Includes tie bar, mounting block and windshield. Battery or Phantom Power, 50 to 20,000 Hz. \$395

SM98A Miniature cardioid condenser for musical instrument applications; sound pressure levels up to 144 dB. Excellent for drums, horns and other acoustic instruments; Supercardioid Polar Modifier included; Phantom Power, 40 to 20,000 Hz. \$589

WH10 XLR Headworn dynamic; new lightweight, comfortable design with low visibility. XLR Connector. \$250.

SONY Sony Australia Ltd. (02) 9887 666

ECM77 Ultra small high performance Lavalier. Freq. Response 40Hz-20,000Hz. 2 Way Powered - AA Battery/Phantom 48V. Omnidirectional \$590.

ECM-66 Instrumental Lavalier. High SPL 130dB. 2-Way Powered. AA Battery and Phantom 48V. \$630.

ECM-55 General Purpose Lavalier, Omni - Directional Frequency response - 50Hz - 20,000 Hz. 2 Way Powered - AA Battery and Phantom 48V. \$585

ECM-44 Economical general purpose Lavalier. Frequency response 50Hz - 20,000Hz. AA Battery Powered. Omni Directional. \$350.

TRAM Audio Sound Centre (02) 9901 4455

TR-50 miniature lavalier microphone. Miniature lavalier supplied with a selection of mounting clips and accessories. Available in positive or negative bias as a three wire pigtail or with your choice of transmitter connectors or barrel style power supplies or hard wired version. \$487.

TR-50 SONOTRIM hi performance. Resembling a TRAM microphone but only available in half black and half grey plastic casing, the Sonotrim is a high performance TRAM offering up to 134dB SPL. \$487.

Instrument Microphones

Prices as supplied by distributors at 1st August 1996. Includes sales tax. Each distributor has listed FOUR representative models only. There are many more!

AKG ACOUSTICS AWA Distribution (02) 9898 7666

D3500 Cardioid dynamic, max SPL 147dB for 1% THD, Bass cut switch, internal shock mount, integrated stand adaptor, suitable for guitar amps, drums, harmonica & acoustic guitar. \$299.

D112 Legendary kick drum/bass mic maximum SPL unmeasurable 20-17kHz. Also suitable for trombone and tuba. \$399.

C3000 Large diaphragm condenser, 2 pattern, suitable for many instruments including drum overheads, pianos, acoustic guitar brass. Internal shock mount, bass roll off, 10dB pad. \$795

C391B Modular condenser from blue line series. Here with CK91 cardioid capsule, other capsules, CK92 Omni, CK93 hyper-cardioid, CK98 shotgun. Suitable for overhead, cymbals, acoustic guitar. \$810.

ASTATIC Horwood Australia (02) 9585 1011

CTM27 Dynamic unidirectional mic. for use in instrument applications. 60Hz to 14kHz frequency response. Features on left switch and clean, transparent sound reproduction. \$150.

CTM88 Dynamic instrument mic. Ideal for drums and acoustic piano. 40Hz to 16kHz frequency response. Features lockable switch, hardened steel grille and shock mount system. \$289.

JT30H Dynamic crystal mic. for harmonica and blues harp. Omnidirectional, high impedance mic with high -49dB output. 30Hz to 8kHz frequency response volume control optional. \$185.

AUDIO TECHNICA Yamaha Music Australia (03) 9699 2388

ATM 10A Omnidirectional condenser; 20Hz - 18kHz; phantom or battery; suitable for acoustic instruments or a drum overhead application. \$269.

ATM25 Hypercardioid dynamic; 30Hz - 15kHz; designed for high SPL applications such as bass drum, brass, etc. \$389.

ATM 31A Back-electret cardioid; 30Hz - 20kHz; phantom or battery power; vocal mic with top end detail. \$389.

ATM 33A Cardioid condenser; 30Hz - 20kHz; phantom or battery power, for acoustic guitar, cymbals or percussions. \$365.

AUDIX Production Audio Services P/L (03) 9415 1585

D-1 Dynamic hypercardioid for snare, toms, cymbals, high-hats and flutes, requiring crisp, clean reproduction. Frequency range; 38-21kHz. Barrel shaped and small in size. \$329

D-2 Dynamic hypercardioid for bass drum, sax and other high SPL

instruments requiring punch and warmth. Frequency range; 38-21 kHz, max SPL 144dB. Same shape as the D-1. \$329.

D-3 Dynamic hypercardioid for electric guitars, drums and other high SPL instruments, requiring low noise and flat accurate response. Frequency range; 38-21 kHz, max SPL 144dB. Same shape as the D-1. \$369.

BEYERDYNAMIC Amber Technology (02) 9975 1211

TG-X5 Cost-effective "clip-on" dynamic mic for brass and percussion. Hypercardioid with 40-12K response, rugged construction with internal shock mount and integral gooseneck/clamp. \$249.

M69TG Dynamic hypercardioid to suit a wide range of instruments (plus vocals) 50-16K response, very high sensitivity, excellent off-axis rejection. \$499.

TG-X50 Dedicated kick-drum/bass inst. mic. dynamic hypercardioid, 15-18k response, very high SPL capability with superb transient response and gain-before feedback. \$499.

M201 Dynamic hypercardioid widely used for drums, percussion and other instruments. Low-profile design with 40-18k response, hum-bucking coil and rugged construction. \$550.

BYETONE II ATT Audio Controls (03) 9379 1511

IM27 Cardioid dynamic microphone for use with instruments on stage or in the stud. o. 60Hz - 17kHz. \$179.

IM29 Cardioid dynamic microphone specifically designed for use with bass instruments such as bass guitar and bass drum. 50Hz - 17kHz.

CAD Australian Audio Supplies (043) 291 711

CAD 95 Electret condenser, cardioid, smooth bandwidth, 40Hz - 20kHz, high -48dB output, excellent for overheads. \$349.

CAD E100 Single capsule omnidirectional supercardioid internal Ni-cad power design, transformerless. Servoed op amps, great for bass drum. \$895.

CAD 88 Dynamic instrument mic, cardioid, 4 Stage windscreen, internal shock mount, great for high SPLs. \$269.

HM-50VC The quintessential harmonica mic. Crystal anti-static element, with volume control. \$159.

COUNTRYMAN ASSOC. Production Audio Services P/L

(03) 9415 1585
Isomax 2 Precision electret condenser microphone, available in

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Buyers Guide; Microphones

Instrument Microphones (continued)

omni, cardioid and hyper for piano, sax and a variety of other instruments. Frequency response; 10-25kHz, max SPL 150dB. Small lavalier type. \$519.

Isomax DBM Special order Isomax 2 with extra long cable, in order to hang from ceilings to mic orchestra or choir. Small and easily hidden. \$575.
CROWN Bose Australia Inc. (02) 9204 6111
CM700 Pattern Cardioid, Condenser type, Freq. 30Hz to 20kHz, Imp 250Ω Sens 2.5mV/Pa. This condenser microphone for use in professional recording and sound reinforcement applications. Handling up to 151dB SPL before overload. This is an excellent choice for miking instruments. \$599.

ELECTRO VOICE Mark IV Audio (02) 9648 3455
RE 200 Large diaphragm cardioid condenser microphone. Transformerless output with excellent hum and RF rejection. Will handle up to 130dB, small size comes complete with pop filter. \$539

RE 308 Large diaphragm neodymium dynamic. Cardioid pattern. Yoke style mounting for flexible operation. 141dB dynamic range. Ideal for all instrument applications. \$365

RE 408 Large diaphragm neodymium dynamic. Super Cardioid pattern. Yoke style mounting for flexible operation. 144dB dynamic range. Ideal for all instrument applications, industry standard for touring drums and percussion. \$439

RE 20 Variable-D large diaphragm dynamic. Ideal for brass and percussion applications. Industry standard kick drum microphone. Heavy duty construction with excellent shock mounting and little proximity. \$1150

MICROTECH GEFELL Southbank Trading (03) 9699 7809

MK301 Machined metal cover. Frequency Range 5Hz to 100kHz, up to 165dB SPL. 1/4" capsule. \$1530.

MK250 Machined metal cover. Frequency range 3.5Hz to 20kHz, up to 146dB SPL. 1/2" polarised capsule. \$1596

MK102 Frequency range 10Hz to 20kHz. 1" capsule. \$1969.

MK103 Frequency range 2Hz to 20kHz. 1" capsule. \$1969

MINIFLEX Damien Gerards (02) 9660 8776
135 Unidirectional acoustic guitar mic, frequency response 80-16,000 Hz. \$312.

635 Internal power supply; Mic for Dobro or Arch Top Guitar. 80-16,000 Hz Response. \$312.

430 Cello Upright Bass. Clip on mic. \$312.
232 Violin Model external power supply. \$312.

PEARL Audio Sound Centre (02) 9901 4455
TL-6 Series of interchangeable capsule microphones. \$490.

TL-6K Omni condenser microphone. Offering 132dB SPL, a sensitivity of 100 mV/Pa, and a 110 dB dynamic range. \$490.

TL-6C Cardioid condenser microphone. Offering 132dB SPL, a sensitivity of 100mV/Pa, and a 110 dB dynamic range. \$490.

TL-66 Cardioid condenser microphone. Offering 132dB SPL, a sensitivity of 12 mV/Pa, and a 110 dB dynamic range. \$490.

PEAVEY Australis Music Group (02) 9698 4444
PVM 451 Well-balanced, very clean reproduction; uniform hypercardioid polar response; humbucking coil to minimize induced electrical noise; very rugged construction. Swivel stand adaptor, external foam windscreens and soft carrying pouch. \$199

PVM 357 Very small, flexible mounting; uniform cardioid polar pattern; five-band EQ; separate Trigger Output for auxiliary devices; 24-52 volt phantom supply. Drum mounting adaptors, foam windscreens and hard-shell carrying case supplied. \$499.

PVM 480 Permanently polarized condenser element (back-electret type); flat, wide range frequency response, super-cardioid directional pattern; wide dynamic range 9-52 volt phantom supply; rugged construction: Sturdy carrying case, swivel adaptor, external foam windscreens and 25 foot balanced cable supplied. \$299.

PVM 520 Neodynamic design, cardioid polar response, titanium diaphragm, ultra high sensitivity, frequency response 40Hz - 20K, foam windscreens, swivel adaptor, flite case and 25' cable as standard. \$399.

SANKEN Audio Sound Centre (02) 9901 4455
CU-31 Unidirectional condenser microphone. Particularly suited to high pressure sound sources such as trumpets and drums. \$1485

CU-32 Right angle unidirectional condenser microphone. Featuring Sankens original Push/Pull type capsule design giving a dynamic range 6dB wider than conventional mics of the same size. Ideal for compact disc recording. In more than eight years of sales not one of these have been returned to the factory for repair. \$1485.

SENNHEISER Syntec International (02) 9417 4700

BLACKFIRE 504 The BF504 is a rugged cardioid microphone especially suitable for instrument recording applications, this being due to its abil-

ity to handle high sound pressure levels. \$269
BLACKFIRE 521 The Blackfire 521 is a rugged professional quality microphone with a cardioid pickup pattern. It is also capable of coping with a diverse range of applications (i.e. instrument vocals and speech)

SHURE Jands Electronics P/L (02) 9516 3622
BETA 57A Excellent for acoustic and electric instruments, as well as vocals. Excellent supercardioid pattern and superior gain-before-feedback. New restyled grille hardened to withstand prolonged use. Supercardioid dynamic, 50 to 16,000 Hz. \$429.

BETA 56 Specifically engineered for drum and instrument applications; similar to Beta 57A but with compact, pivoting design. Supercardioid dynamic; 50 to 16,000 Hz. \$459.

BETA 52 Optimized for use with kick drums. Frequency response specifically tailored to deliver a new level of low end punch. Adjustable, locking mount makes for fast, easy set-up. Supercardioid dynamic; 20 to 10,000 Hz. \$599.
SM57 The classic SM57 is the "workhorse" microphone of stages and studios world-wide. Its carefully contoured frequency response means clean, well-defined instrumental reproduction. Cardioid dynamic, 40 to 15,000 Hz. \$249.

Studio Microphones

Prices as supplied by distributors at 1st August 1996. Includes sales tax. Each distributor has listed FOUR representative models only. There are many more!

AKG ACOUSTICS AWA Distribution (02) 9898 7666

C3000 Large diaphragm condenser, cardioid and hypercardioid switchable high output, internal shock mount, bass roll off, 10dB pad. Winner of prestigious 1996 Entech Award for Studio Microphone. \$795.

C414BULS Large diaphragm condenser, 4 pattern selectable, ultra linear response, bass cut, 10/20 dB pad. Also available C414BTLII - Transformerless version with C12 capsule. \$2390

C12VR Valve condenser, multi-pattern remotely controllable from dedicated power supply. Comes with flight case, cable, shock mount, power supply and pop filter. \$7,630.

C460B & CK61 Modular condenser with ultra linear response. Priced here with cardioid capsule. Also available CK62 Omni, CK63 Hypercardioid and CD68 shotgun capsules. 10dB Pad, bass roll off. \$1630.

AUDIX TECHNICA Yamaha Music Australia (03) 9699 2388

AT4031 Unidirectional condenser; 30Hz - 20kHz; low self-noise/high output; ideal for all recording, broadcast & stage applications. \$649

AT 4033 Unidirectional condenser; 20Hz - 20kHz phantom power; switchable 10dB pad & low-cut filter; built-in pop filter & shock mount. \$1099.

AT 4050 Multi-pattern condenser; 20Hz - 20kHz; unidirectional cardioid/omni/figure-of-eight; versatile enough for most applications. \$1449.

AT 4071 Shotgun; lobar pattern; 30Hz - 20kHz; phantom power; 395mm long, ideal for video and film production. \$1399.

AUDIX Production Audio Services P/L (03) 9415 1585

SCX Studio condenser microphone for vocal or instrument. Available with cardioid, Hypercardioid, omni-directional or omni with presence capsule. 10dB attenuator also available. \$1174.

BEYERDYNAMIC Amber Technology (02) 9975 1211

MC834 Large diaphragm studio condenser. Cardioid pattern, 20-20K response, 10 or 20dB Pad & 3-position LF roll-off, transformerless output, exceptional S/N ratio and high SPL capability. \$1799.

MC740 Studio condenser - large diaphragm with gold vapourised double membrane, 5 selectable patterns, 20-20k response, 10dB Pad and 3-position LF roll-off. \$2895

M160 Dynamic hypercardioid with unique double-ribbon transducer, superb for strings & piano, 40-18K response. \$935.

MC833 Stereo condenser system, true MS & XY capability without external matrix, unique system to mechanically vary position of 3 capsules, 20-20K freq. response. \$4895.

CAD Australian Audio Supplies (043) 291 711

E300 Large diameter dual diaphragm, servo condenser microphone. Cardioid, omni & figure 8 patterns. 20dB Pad. Internal Ni-Cad Batteries. Transformerless. \$1995.

E200 Multi pattern condenser microphone. Cardioid, omni & figure 8 patterns. Transformerless. Internal Ni-Cad batteries. Servoed op amps. \$1395.

E100 Single capsule condenser microphone. Supercardioid. Internal Ni-Cad power design servoed op amps. Transformerless. \$895.

95 Electret Condenser Microphone. Cardioid pattern. Smooth bandwidth of 40Hz - 20kHz. High-48dB output. \$349.

COLES Audio Sound Centre (02) 9901 4455

4104 Lip ribbon commentators' microphone. Still made to the BBC design, used mostly for high quality commentary speech from noisy surround

AUDIX®

A complete line of professional-level dynamic microphones designed for a full range of applications.



The 300-Series
The Performance Microphone



The D-Series
Pure Instrumental



The OM-Series
Pure Vocal



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Buyers Guide; Microphones

ings by cancelling out a considerable amount of background noise. Polar response is effectively bi-directional allowing close use without mutual cross over talk. \$849

4038 Studio Lip Ribbon microphone. The original BBC design still beats most modern mics in any circumstances. Possibly, the world's greatest microphone. Bi-directional figure of eight polar response delivers a natural smooth sonic quality textured response to sound signals. You owe it to yourself to try one. \$1459.

ELECTRO VOICE Mark IV Audio (02) 9648 3455

RE 27 Large diaphragm Neodymium magnet dynamic. Extended frequency response. Variable-D design to ensure consistent performance, reducing proximity effect. Ideal for instrument or voice-over applications. \$1225

RE 38 Large diaphragm Neodymium magnet dynamic. Extended frequency response. Sixteen position equalisation switch to allow variable tailoring on the microphone. Ideal for instrument or voice-over applications. \$925

RE 1000 Large diaphragm externally biased, high voltage condenser. Transformerless balanced output, low noise, high sensitivity. Flat smooth frequency response with highly accurate transients. Ideal for Vocal or Instruments. \$1495

RE 2000 Large diaphragm externally biased, high voltage condenser. Transformerless balanced output, low noise, high sensitivity. Supplied with external power supply, shock mount and blast filter. Internal heater maintains consistent performance of capsule. Ideal for Vocal or Instruments. \$2995.

GROOVE TUBE A.S.I.D. (03) 9416 1564

MD1 (System) Side address valve condenser mic. Cardioid pattern includes - mic, power supply, cables & shock mount. \$1999.

MD2 (System) Gold spluttered mylar diaphragm valve mic with sensitivity control includes - mic, p/supply, cables & shock mount.

MD3 (System) As per MD2 but inc. MD3 multi-patterned mic. \$3699.

MICROTECH GEFELL Southbank Trading (03) 9699 7809

KEM970 Special Cardioid-Plane multi line microphone which uses beam forming techniques to attain a frequency independent directional characteristic. The KEM is the result of a joint development between Microtech Gefell and the prestigious Institute für Rundfunktechnik München in Germany. \$13,969.

M92S The legendary Gefell Valve microphone. Using the M7 capsule (utilising two large diameter gold spluttered membranes housed in a solid brass surround). The original TUBE. \$4191.

MT71.1S Large membrane M7 capsule. Transformerless output. True over-all dynamic range 120dB. Cardioid pattern. Rising boost peaks at about 4dB in the 7kHz range. Great Mic for great minds.

M900 Revolutionary cardioid capacitor condenser. Well balanced free field/diffuse field frequency response specially developed for recording in areas where there is likelihood of considerable reflected sound. \$1769.

NEUMANN Amber Technology (02) 9975 1211

KM184 Miniature cardioid condenser combining classic Neumann KM84 capsule design with latest transformerless circuitry. 20-20K freq. response. Inc. windshield & clip. \$1056.

TLM193 Large diaphragm studio condenser with cardioid pattern. Extremely low noise, transformerless design with full 20-20K response. Includes static mount. \$2135.

U87AI The classic Neumann studio condenser. Large diaphragm with 3 selectable patterns L.F. roll-off & 10dB Pad. Max 127dB SPL, 20-20K response. \$3680.

M149 New generation vacuum tube microphone combines vintage Neumann capsule sound with latest technology. Switchable 5-patterns/9 directional characteristics, 7-position Hi-Pass filter, includes suspension mount & power supply. \$6374

NEVATON ATT Audio Controls (03) 9379 1511

CMC51 High quality multi-pattern condenser microphone featuring a dual diaphragm pressure gradient capsule. Polar - Patterns; Cardioid, wide cardioid, figure of eight, omni, 20Hz - 20kHz. \$1695

CMC47 Stereo microphone with variable width from mono to wide stereo, 20Hz - 20kHz, cardioid and wide cardioid. \$1995.

OKTAVA ATT Audio Controls (03) 9379 1511

MK011 Fixed pattern, cardioid condenser, 20Hz - 20kHz, 48V - Phantom power, suitable for all applications where an accurate and detailed sound is required. \$495.

MK012 High quality condenser microphone which utilises interchangeable capsules to provide cardioid, hyper-cardioid and omni-directional polar patterns. 20Hz - 20kHz. Case, capsules and mount included. \$995.

MK219 Fixed pattern cardioid condenser microphone featuring a large gold plated diaphragm. Ideally suited to vocals and general acoustic recording, 40Hz - 16kHz. \$795.

PEARL Audio Sound Centre (02) 9901 4455

TL-4 Dual diaphragm design with independent outputs. Two diaphragms only 5mm apart, teamed with non-transformer low noise amplifiers connected to respective capsules provide approximately 20dB high level than conventional condenser microphones. Cardioid, Omnidirectional, Bi-directional, 180 degree XY stereo or mono. \$2180.

MS 2 Stereo condenser microphone. Features transformerless impedance conversion with high output level. Resistant to wind, vibration and high sound pressure with stereo or mono recording without switching. Available with either cardioid or omnidirectional polar patterns in the M channel. \$1995.

MS 8 Stereo condenser microphone. Like the MS 2 available with cardioid or omni polar response for the Mid signal. The MS 8 differs in that the M and S channels are output independently for external

processing - these may be recorded directly and mixed subsequently in an MS matrix to provide variable stereo width. \$1795

MM50 Compact cardioid microphone. Suitable for conference and interpreter installation offering very low feedback. \$129.

SANKEN Audio Sound Centre (02) 9901 4455

CU-41 Unidirectional, double condenser microphone. Specially designed for digital audio recording, the Sanken CU-41 delivers a completely natural, uncoloured sound. It delivers a functional transparency and distortion free performance with a flat (+1dB) frequency response from 20Hz to 20kHz. \$4875.

CMS-2 MS stereo condenser microphone. \$4325

CSS-5 Shotgun stereo microphone. The remarkable performance is based on an array of five new directional condenser elements. The three capsule line array is for frontal pickup and are arranged vertically along the same axis, so Mono/Stereo compatibility is superb. The wide mode allows a wider 140 degree pickup whereas conventional MS microphones have a maximum 127 degrees. \$3650.

CMS-7S MS stereo portable condenser microphone. Featuring a clear stereo image with controllable width, a clean uncoloured sound and maximum immunity to noise interference. Incorporating Sankens Push/Pull capsule design it has a dynamic range of 108dB with maximum SPL of 130dB. \$5195.

SHURE Jands Electronics P/L (02) 9516 3622

VP88 Single-point MS stereo condenser. Unique in its ability to capture the realism of "being there" while withstanding daily use in

rigorous production environment. Built-in stereo matrix decoder, Battery or Phantom Power, 40 to 20,000 Hz. \$1999.

SM61 Ruler-flat response; 10dB Attenuator and 3 Position Low-Cut Filter, excellent for use with most acoustic instruments. Cardioid Condenser; Phantom Power; 20 to 20,000 Hz. \$909.

SM91A Unidirectional surface-mount; ideal for TV settings, news conferences; dramatic productions; altars and stages. Also excellent for kick drums and pianos. Phantom Power; 20 to 20,000Hz. \$639.

BG 4.0 Optimum choice for instrument recording. Low self-noise and flat frequency response keeps instruments and samples sounding accurate and true. Cardioid condenser; On-Off Switch; AA battery or Phantom Power; 40 to 18,000 Hz. \$399

SONY Sony Australia Ltd. (02) 9887 666

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C48 Selectable Uni/Omni Directional - Condenser. Suitable for vocal and instrumental recording. 2 Way Powering, -10dB Pad Switch. \$2240.

C800 Selectable Uni/Omni Directional - Condenser. Wide Dynamic Range - Max SPL, 150dB SPL. Ideal for critical music recording applications. \$5700.

C800G Selectable Uni/Omni Directional - Condenser. Extremely low noise, high sensitivity -32dB/Pa. Suitable for vocal recording applications. \$8500.



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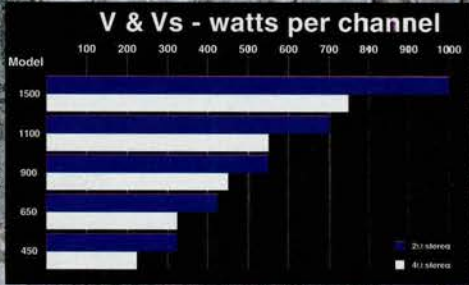
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Write in Reader Service Number: 112



DEF FX

launch their new CD 'Majick' with a multimedia extravaganza

DEF FX are currently touring the country to promote their latest album *Majick* and at Sydney's Metro theatre their record company MCA staged a lavish album launch to a sold out crowd.

With a concoction of music, multimedia, street theatre and the bizarre, the events revolved around the magic theme. Palmists, healers and occult practitioners lined the foyer walls and mythical characters entertained the gathered.

Ian McDermott has been DEF FX's Sound Engineer for two years and more recently also their Production Manager.

"Their previous sound engineer bumped out on a Tuesday night and they were going to Brisbane on the Wednesday," said Ian. "Before that I was doing Caligula, Spy V Spy and The Whitlams. I still work with other bands when the opportunity arises but DEF FX tour a lot."

Warm up shows were done at a few campus grounds including Adelaide and Whyalla before the East coast assault. After that is Victoria, then the crew have two days to drive 2000 kilometres back to Sydney for a night off with their loved ones. A trip to Perth follows and then more East coast shows finishing in Jindabyne. All in all the tour will last about twelve weeks and after an eight week break, they will probably go back on the road.

Recently DEF FX were the support act for The Smashing Pumpkins a tour which Ian particularly enjoyed as there wasn't so much work to do.

At The Metro Ian was using the Martin house rig from Revolver Audio whilst extra lighting - Tiger Stems, Super Strobes, UV tubes and thirty par cans - were added to the house rig. Ian had bought in a Shure L4 Series Beta 58 radio mic for lead singer Fiona Horne as she moves about the stage a lot.

"They're old but very tight and clean," he said. "On this tour, I just pick up interstate production. Currently we have Michael Orlands 'A' System with a Soundtracs Solo 8 desk which isn't my favourite. Because of the level we're at, we don't carry gear around and have to use in house production. It's good in a way because if you can make it happen with poor gear it's so much easier when you get good stuff. One of the worst gigs I've ever done was a place in Brisbane where all the walls were clad in corrugated iron to compliment the theme of the place!"

Ian has also done the good ol' Aussie gig in the sheep shearing production - now these are the stories we want in Connections, send them in!

Monitor guys are usually picked up with the PA's which are hired or the in house guy is used.

"It's a weird band to work with as they're missing a drummer for a start," said Ian. "Instead of drums we have a multi-track backing with clicks which trigger open/shut the gates, then the sampler runs through the gates so the samples get chopped up in time (the gates shut and open in time with the clicks). From there the samples go into a delay which is all in tempo with the songs. Then FOH, I'll put something weird like an auto pan on it as well so you can get lots of weird, techno

sounds just from a normal sample and they are all in time."

DEF FX always strive to take moving lights, strobes or UV's on tour with them as they want more than just an ordinary rock lighting look to their show. Sean Nelson has been the lighting designer for the last four tours but for the record launch Michael Ney from Virtual *continued over*

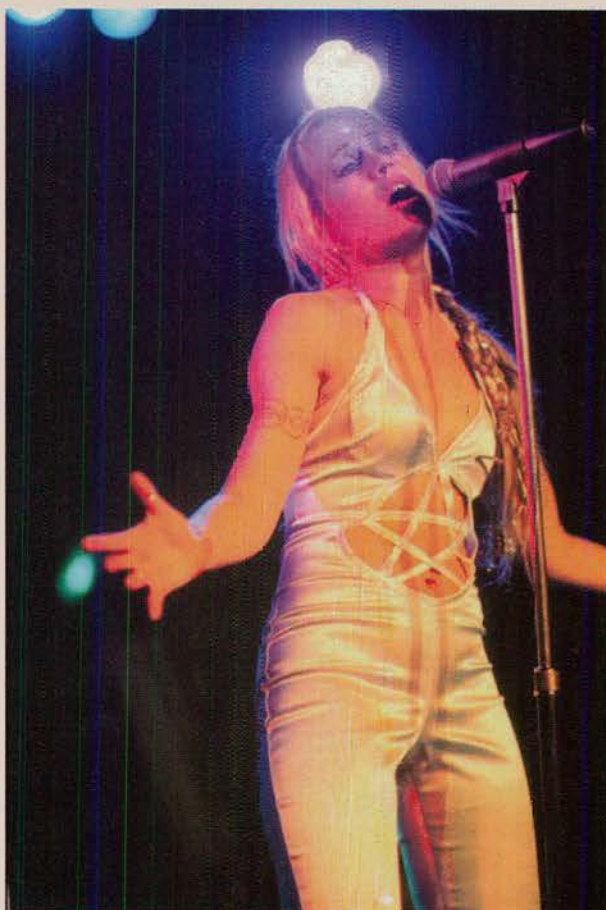


Photo: Ian Sharp

DEF FX

Realm Xchange was bought in to give the show a more theatrical and dynamic look using his video projection work.

Responsible for the creation of the DEF FX's Internet pages, Michael delivered a projected backdrop of morphing sequences, ray-trance animation and pulsing image loops. Most of the images, which were Michaels' idea, were linked to the occult. Michael was also responsible for the lighting and stage design.

Michael has an extensive background in theatre, lighting, photography and audio visual work, and so it was no problem for him to take on such a task. Projection within live concerts is vogue at the moment particularly in Europe but I asked Michael if there was a market for it in Australia.

"It can be fairly costly basically because of the time involved in doing the authoring of the content of what's showing on the screen," he answered. "It can be a very intense process.



A lot of resources are needed including several computers and then there's projection hire. For special events like this, it was worth doing plus the whole set, lighting and multimedia backdrop was used for a film clip. They had a four camera, 16 mm camera crew shooting



Photo: Ian Sharp

the show for the video to compliment their latest single "Majick".

Although it was good for Michael to have control of all the design elements, on hindsight he thinks it would have been better to have sectioned off the lighting production with it's own separate crew. The stage took longer to set up than anticipated which caused problems further on in the day.

"I was creating a full theatre set and lighting not just a simple rock'n'roll set up," said Michael. "I really needed to set up the day before but we couldn't so we only had a 12 hour set up on the day."

During the show Michael was operating the sequences live directly on computer screens linked to the video projector. He was also communicating with the lighting operator Sean Nelson and the two followspot operators.

"The sequences were authored so that I could make snap changes manually to exact timing within the songs," Michael said.

The set had ramps either side leading to a back walkway, 2m high, in front of the 5m x 4m white projection screen. Either side of the screen were two followspot towers, placed at the back so that they would

not interfere with the projection screen.

Extra lighting, supplied by Chameleon and Premier, was hired including four Tiger Scans which were placed behind the band under the walkway.

"The lighting was based song by song, with various effects mixed with the multimedia," said Michael. "As we were using multimedia projection, I had to design the lighting so that the back screen was not washed out. Most of the lighting was either down light or back light with the Tiger Scans creating most of the special effects. Sean programmed the Tiger Scans, helped rig and operated the show."

Additional hire also included PARs, Raylights, Minim 23 profiles, Harmony fresnels, UV lites, Super Strobes, tubular ripple wave effect, Coloroll scrollers and a mirror ball. Prior to the first song, incense was used instead of a smoke machine.

Despite no time for a rehearsal and a short set up time, the show was extremely successful. *Virtual Realm Xchange* can be contacted on (02) 3281 3485.

★ Cat Forcer



HOODOO GURUS UPDATE

Last month we bought you the story on the Hoodoo Gurus tour. Since then the tour has had to be cancelled because the drummer Mark Kingsmill, stood to leave the stage at Launceston and fell off the riser. His arm crashed through the fluorescent tubes damaging nerves to his arms and fingers. Consequently, he's off the road for four months.

Colin Ellis, the Gurus' sound engineer, has been fortunate enough to pick up the forthcoming Midnight Oil tour instead.

RYUICHI SAKAMOTO

Concert Lighting Systems of Melbourne supplied the lighting gear for Ryuichi Sakamoto at Melbourne's Concert Hall in August. Crew who worked on the show were Leigh Greig and Tim Newman.

Equipment supplied: 32 Lekos, Color Faders and XL Rangers; Celco Gold 90 channel 500 scene console; RDS Scene Projector 2000W. In-house dimmers and cans were also used. Lighting designer was Yuasa.

Sound equipment was supplied by McLean Audio Services of Melbourne and included the following FOH control gear: a Yamaha PM 4000

console; 4 x Yamaha Q1027 graphic equalizers; 4 x dbx 160x compressor/limiters; 1 x Yamaha K 2000M cassette desk; 1 x Sony PCM 2300 dat player/recorder; 2 x EAW MX 8001 stereo processor.

FOH effects included: 2 x Yamaha SPX 900 digital effects units; 1 x Yamaha REV-5 digital effects unit; 1 x Yamaha D1500 digital delay unit; 1 x Yamaha CD450 compact disc player; 2 x BSS DPR 404 insert compressors; 2 x Drawmer DS 404 insert noise gates; and 1 Lexicon 480L with Larc processor.

FOH speakers were 16 x EAW 650iR speaker

cabinets with 8 x JBL 1200 series sub-low speaker cabinets. FOH amplifiers were 12 x Crest CA-9 power amplifiers (EAW) and 4 x Crest CA-9 power amplifiers (SUBS).

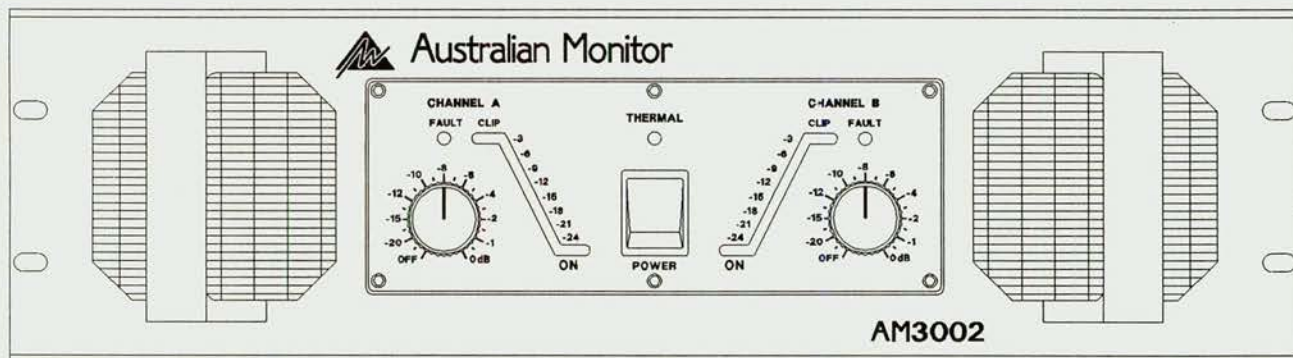
The monitor console was a Midas XL3 and monitor electronics included: 5 x ARX EQ 60 dual 31 band equalizers; 1 x Yamaha SPX90 II digital effects unit; 3 x Yamaha SPX990 digital effects units; and 1 x ARX 6 gate insert noise gate (6 ch). Monitor amps were 12 x channels Yamaha PC2002 and Carver PM900 amplifiers with PMX crossovers. Monitor speakers were 8 x JBL 4728 2 way floor monitors.

Multicore was 2 x 19 channel Belden (75m) with monitor split and 3 x 6 channel Belden (75m) high level returns with 240v mains cable.



Photos: Marty Williams

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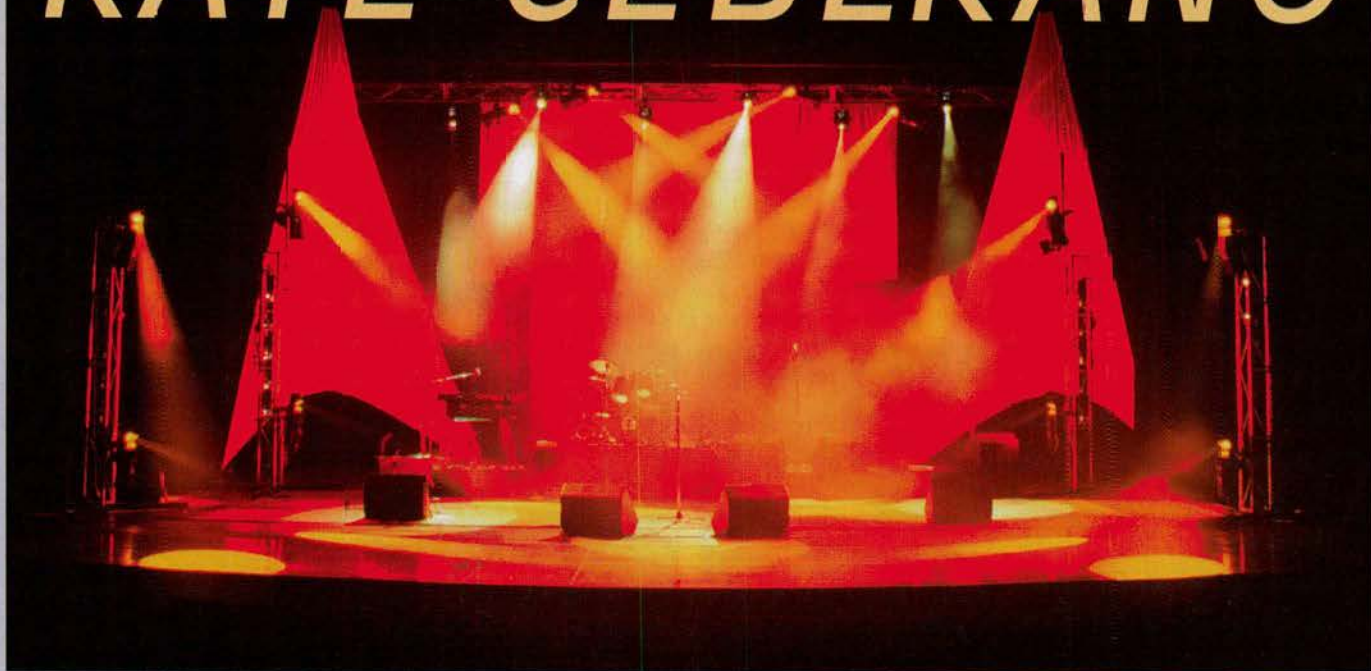
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KATE CEBERANO



Lighting designer Kurt Wagner has worked with Kate Ceberano on a couple of tours.

"Kate is always difficult to design for because she does not run a regular show and this last tour is a combination of old wineries, Woolsheds and theatres," said Kurt. "Consequently the show has to be adapted for the pubs which were more rock whilst the theatres were very smooth."

As the rooms were quite small, the lighting rig was fairly simple with twelve Trackspots, six RoboPro 400's, four strips of ministris for side wash, and four groundrows. Most of the lighting was done with four RoboPro's in the back and with four Trackspots for some rear down lighting. The rest of it was basically on the side from four vertical trusses which suited the projection onto the drops.

"I really liked the RoboPro's and I was originally hoping to have twelve," Kurt said. "Unfortunately there were only six available at the time. It's good for down light and even a wash light. They're not 'touring ready' yet, as they still have things like the jack plug on the back, but it's definitely a very good light and gets rid of some par cans. They've also proved very reliable."

Kurt was going to be using a JandsHog for control but he was going to have to leave the tour early and didn't want to leave his operator, Matt Arthur, with a new console. So instead, he's using a Jands Event 24 for the analogue and the RoboPro's with a Universal controller for the Trackspots.

"The Trackspots are quite good, the only problem I have is the bulbs which have a tendency to break when touring," said Kurt. "The Woolsheds were good, I was quite impressed. They're not completely there as venues yet, but as an Australian cabaret venue they are nice - not like a stuffy Hyatt. People aren't afraid to get up and

dance a little. But then going into a theatre venue is very difficult because the Trackspot speeds would have to be cut back as well as the colour changing speeds. In the theatres the colour changes are so obvious but in the Woolsheds, where there is so much ambient light, it doesn't matter, you can do snap colour changes and snap gobo changes.

"Kate's fabulous to work with although she does like to have spontaneity in the set and doesn't run the same set every night. That can make the lighting tricky so I have a tendency to structure a set, in regards to my light show, and every night after sound check I get the set list and try to adjust to make it work. Lighting wise, the show builds up through the evening so you don't see any movement from the Trackspots

until about the ninth song of the set. So it's very much a challenge to make sure the show has consistency but is still able to work every night as I can't do a preset cue to cue show with Kate."

Kurt is currently in Malaysia working for one of the country's top female artists. The day after he returns, he's back on the road with Kate Ceberano again.

Sound engineer for the tour was Glen Ingles who has worked with many Australian artists and is currently on tour with Tommy Emmanuel. Glen has worked occasionally with Kate since 1989 becoming her sound engineer about three years ago.

"I've only done a couple of real tours with her," said Glen. "This is the second major tour. With all the stuff I've done with her, equipment



Kurt Wagner and Glen Ingles

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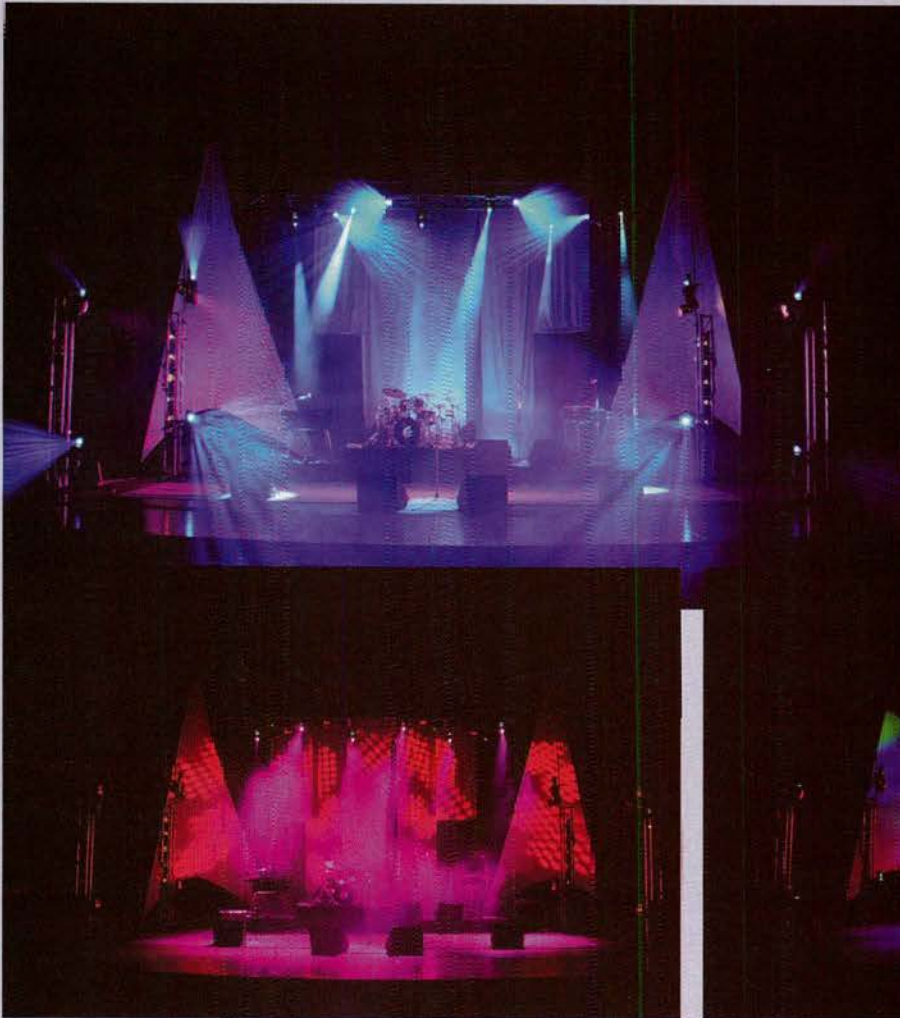
KATE CEBERANO

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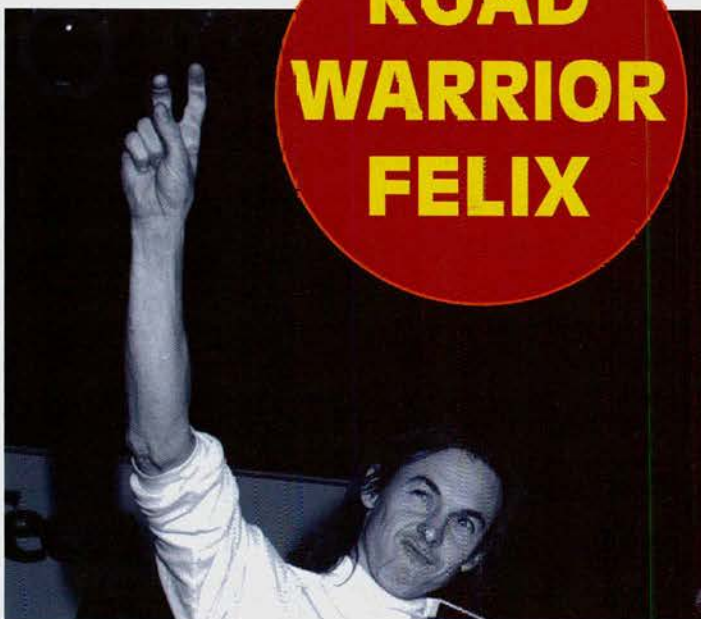
has always been from McLean Audio, Melbourne apart from the odd one off show where it's not worth travelling gear. It's not just personal preference, the price always wins the job for us. I worked for them a while because they had what I thought was the best set up equipment."

FOH control was a Yamaha console, a preference of Glen and the monitor guy, and three different speaker systems were used throughout the tour. For some corporate shows an EAW system was used.

"They're crystal clear and a beautiful sound but quite expensive," said Glen. "When we did the club shows we used an old JBL modular system which is a bit of a rock box but you can still make it sound good and they are easy to get



ROAD WARRIOR FELIX



*Felix was awarded 'Road Warrior of the Year' at the ENTECH Awards 1996.

Starting this month is a series of On Tour articles by *Road Warrior Felix

The stair lug. It puts fear and loathing in even the most experienced roadie. Grown men have been known to break down and weep at the sight of a seemingly endless, narrow staircase. But all that's really needed here is a little preparation and the right mental approach.

Lugging - that is getting the gear into the venue and back out again quickly and safely - is an art that begins with knowledge and experience of a particular gig. First study the worksheet for stairs, lifts, how far the push etc. Unfortunately worksheets often give an untrue picture of what you're up against, or worse, are outdated or simply totally inaccurate. Example, Chevy's at Campbelltown: the worksheet says 20 stairs but fails to mention the 10 outdoor steps, or that the doorway and staircase are so narrow that even the smallest piece of gear needs to be carried end on end (try to unload as much from the cases as possible).....or that the staircase is in three tight turning flights (ouch). A good idea is to ring a mate who has done the gig and ask what it's really like.

Ok, so you know you've got a tough gig ahead. First get your crew to arrive an hour or so earlier. Luggers can be arranged in a number of ways. The best, and most expensive, are loaders from a crewing company. They are efficient, fast, and will love to tell you about loading 20 semis for U2, Barnsey or Metallica, as well as using your gaff on anything that moves. Look at paying about \$120

ON TOUR

KATE CEBERANO

in and out of RSL clubs, upstairs where old blokes don't like carrying stuff. For the last part of the run we used my favourite speaker box, the Clair Brothers R4, because we were doing mainly theatre and dinner shows where you don't want a rock system but you can't quite afford the pristine gear. I consider the R4 the best theatre/dinner show system available. They're easily transported and they're a great sound. You don't need subs, you don't need lots of boxes just a bit of noise around the room. They're pretty old but they're reliable."

Compressors, gates, and a couple of Lexicon reverbs on main vocal and drums are used for effects. Mics are standard Shures, Electrovoices, and Beyer on the drums.

"There's nothing really flash, just everything good quality, basically just good sound through and through," said Glen. "You see a PA with a bunch of dodgy old mics and one good one but that's not good enough. The idea is to have good, standard workhorse stuff."

The monitors are fairly simple using wedges built by McLean. The monitors are driven by Carver amps on the top end and Yamaha on the low end. The FOH use Carver on the top end and Crest amps on the low amp.

"The gear packs up really neat and sets up quickly," Glen said. "You can be eating your sandwiches and drinking your coffee a lot earlier! It's reliable which is good with Kate as there are a lot of people on the stage - a seven piece band as well as Kate. Normally there are eight. You really need to be able to set the equipment up and forget about it to concentrate on mixing the band and listening to the music. I hate sitting behind consoles hearing noises which distract you so much, you start losing the plot about why you're actually there. You start being a systems guy instead of mixing the band."

ROAD WARRIOR FELIX

continued

to \$150 for an in and out.

The next are the dreaded CES loaders. A day or two before the gig, ring the local CES. After giving all your details once, they have you on file so it gets easier. Be straight, and tell them you want two or three strong, keen persons to carry heavy equipment into a venue for say three hours in the afternoon and two hours after the gig. Pay is usually about \$10 to \$15 an hour. Offer them free entry to the gig with a friend, and do the right thing, pay them in cash.

Beware - the CES can send anybody who thinks they're a muso. Watch them closely and you'll know pretty quick if they can lug or not. If you value your gear at all, don't give them the amp racks to carry as a bit of a laugh. Give them guitars, drums, truss, gaff the multicore etc. Occasionally, you'll get a real good out-of-work person who does a great job. Get their number and try to get them work - they are the future of the industry.

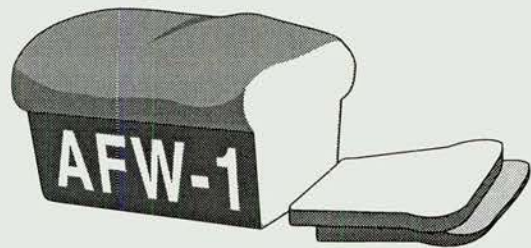
Finally, there's the out-of-work mate or muso friend who you've noticed throw his Marshall stack around pretty well. The advantage of this lot is they often help right through the gig, and double up as stage roadies and runners and often get into the whole 'gig' vibe. I usually pay \$80 to \$100, plus a couple of drinks from the rider.

For long push gigs, it helps to have as much gear as possible on wheels, and load these up with gear which doesn't. As well as my truck ramp and spare 5ft ramp for getting up or down three, four stair obstructions, I have a three inch and six inch wedge ramp for those bloody annoying gutter jumps and wheel-tearing bumps, such as at the General Bourke and Cock & Bull, Sydney.

I dislike stair lugs as much as anyone but look at it as exercise. Try to keep the talking and joking up during a tough lug, and give the heaviest lifts to the most experienced. Remember the days of slavery are over so either the band or venue should pay for extra loaders, but make sure this has been discussed before the gig. Of course, in a perfect world, occupational safety would ban all stair and dangerous load-ins (and boy have I done some of those) to replace them with lifts or inhouse crews (employment!). But, until then, head down, chin up and go, go, go!

Felix has his own company Danger Sound Production Hire 015 497 761.

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Still, rather than have you listen to us rabbiting on about it, we thought we'd print some genuine comments from happy users - people who have actually paid money for their AFW-1.

Neil Mace, Entertainment Installations, NSW

"Well, I was a bit suspicious at first - it sounded too good to be true, but I needed something that would control feedback *after* the install, when I wasn't there. So, I took a chance and put in an AFW-1. It does everything ARX says it does - I'm going to put at least one into every installation that I do...because it really works!"

Alan Brown, Centre State Sound, NSW

"I'd been looking to upgrade some of my Equalisers for a while, and the AFW-1 came along just at the right time. It's a winning combination of great EQ, patented feedback exterminator, and a nice sounding limiter. I'm going to put them in all of my hire rigs."

David Craigs, Rosound Hire, WA

"It's been great! The systems have gone out and come back with very happy customers, thanks to the AFW-1. Feedback problems are a thing of the past now."

Bruce Maddocks, Shedworks, L.A

"Our TV monitoring packages are so much faster to set-up now that we include an AFW-1 with them. Both the engineers and audiences are much happier!"



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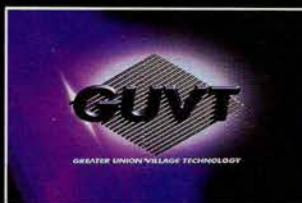
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LIGHTING MONTHLY

September 1996

Edited by Catriona Forcer

Morpheus Shake-up

After reputedly filing for Chapter 11 for protection against bankruptcy, Morpheus Lights Inc., have announced a new senior management team to reorganise and restructure the production lighting company. The new management team consists of Jim Gordon, VP of Marketing, Dan English, VP of Production, and Brian Richardson, VP of Engineering and Advanced Product Development. The management team will work in tandem with the newly appointed CEO and President, Peter Dalton and Vice President, CFO, Kenneth Groth, who will act as the advisory board for the company, while Gordon, English and Richardson operate the company on a daily basis. Peter Dalton also operates a venture funding group called Dalton Partners which invests in ongoing business. He stated "We are very excited about our new relationship with Morpheus and look optimistically to the future for increased success and new strategic opportunities and alliances for Morpheus to enjoy."

continued on page 62

PLASA 96

September sees yet another PLASA, this year held at London's Earls Court from September 8th to the 11th. Over 350 of the lighting and sound industry top names will be appearing including many Australian representatives.

New for 1996 is a Specialist Sound Area dedicated to pro audio and installation companies. Also new is a working stage to demonstrate all the latest ideas live including a DJ competition will be held on the Sunday - hope it goes better than the ENTECH one! A workshop entitled 'Tales from the Production Desk' hosted by Richard Pilbrow and featuring David Hersey and Rob Halliday will also take place on the stage.

ESTA (Entertainment Services Technology Association), the US trade association will be hosting an area for US and Canadian companies. A PLASA/Litestructures Pavilion is available for the small or first time exhibitors.

The Motorola Internet Bar will feature

continued on page 62

STRAND THROUGH THE AGES

The Name That Means Stage Lighting Lives On

An era ends, another commences as UK conglomerate Rank PLC sell Strand. The announcement (see our lead pages) that the venerable firm is to be sold will see a new generation take up the challenge, in a market where the Strand name doesn't quite carry the cachet it once did.

Strand is represented in Australia by Bytecraft, and is every bit a continuing entity. This is not a funeral notice, rather the chance to reflect on a brand which has had an enormous impact on (older) lighting types.

Want some history? Try this.....

Strand Electric began in 1914 in an office/workshop situated in the heart of London's theatre land. It was founded by two theatre electricians called Arthur Earnshaw and Phillip Sheridan who were joined four years later by Moss Mansell, a manufacturer of arc resistances and dimmers.



Strand's Isleworth Headquarters in the UK

1923 saw the first use of Sunray compartment battens using filters instead of colour-dripped lamps. Also in that year, the Theatre Lighting department was started. In 1924 Strand's first 'dead front' switchboard was installed into the Old Vic. Until then, contacts and busbars had been mounted on the front of polished slate panels. Shepherds Bush Pavilion was the first of the 3000-seat venues to have full stage lighting and concealed colour change lighting around the auditorium.

In 1928, with the Stelmar ellipsoidal spot patent applied for, Strand was set to make the first 1kW and 500W ellipsoidal profile stage spots in the world.

In 1929 Moss Mansell patented his Magnetic Clutch, a major step towards remote control of lighting and by 1931 Strand had ventured into public building flood-lighting.

The Shakespeare Memorial Theatre, Stratford-upon-Avon, was built in 1932 and stage

lighting included Stelmar spotlights out front, cyclorama colour mixing and a 56-way Grand Master board. A year later Strand's first demonstration theatre opened.

A stage lighting load of 700kW AC and 150kW DC controlled by Mansell clutch driven dimmers from a 120-way remote control panel was installed in the Royal Opera House in 1934. The following year, a Strand Light Console was the first in the world to use the organ principle of 'select and play'.

Strand's first export of a complete continental opera house installation was in 1940 to Teatro S'Carlos Lisbon.

During the war, Strand was involved with flying and submarine simulators laying the ground for improved optical and projection equipment post-war.

In 1952 Strand's first branch office in Australia was opened.

The most famous number in stage lighting - the Pat 23 - was born in 1953 and was the first die-cast aluminium stage lantern on the market.

In 1958, Strand launched the hook clamp and consequently freed theatre from the old 2 nut and 2 bolt L clamp. Strand also started up in Canada.

The Junior 8 four-slider resistance dimmer



Strand CD console of the sixties



STRAND STORY

continued from page 61

which could be shared over eight circuits was created in 1963. Connections editor Julius Grafton recalls using Junior 8 for controlling lighting at folk concerts a very long time ago, because electronic dimmers in use then caused buzz in PA systems.

1964, the first big all thyristor dimmer with 240 ways was installed at the Royal Opera House.

The Junior Preset and Senior Preset boards arrived in 1965 and in 1968 Instant Dimmer Memory had begun.

In 1968 Strand Electric becomes part of The Rank Organisation. A year later, Strand acquires

Century Lighting of New York. Strand also became the distributor of Quartzcolor studio lighting but Quartzcolor remain an independent manufacturing company.

The Strand control wheel, with optical encoder, is born in 1973 as well as the Modular Memory System.

A completely new generation of lighting control was launched in 1975 with the Lightboard for the National Theatre.

The Duet, the first micro-processor system, is revealed in 1978.

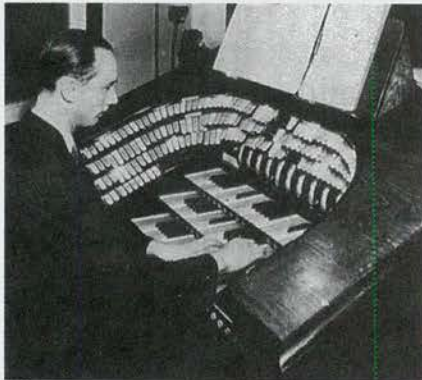
In 1983 the Patt 23 was laid to rest. In 30 years half a million were sold. A sad day!

Strand and Century came together as one company in 1986 and the following year Quartzcolor becomes part of Strand Lighting.

1988 is the year of the Galaxy 111 and Lightboard M. The World Expo in Brisbane

consumes large quantities of Strand product.

1989 was Strand's 75th anniversary and they introduced PALS - Precision Automated Lighting Systems.



A 1935 Strand lighting console

The EC 90 dimmer set new standards in digital dimming and full fault reporting in 1990. PALS won a product innovation award.

In 1991 a number of new products were introduced. Premiere brought flexibility to architectural control systems and the Quartet range of pressure die cast spotlights recaptured some of the style of the Patt 23. The

implement of single-ended discharge lamps brought the new Super Quasar programme into being and Strand's arrangement with Evans brought manufacture of studio suspension systems to the Kirkcaldy factory.

In 1993 digital Theatre became affordable with introduction of the LD 90 dimmer and GSX lighting board, linked by Systems Wide Control (SWC) communication. The next year saw the launch of LBX memory with manual control, CD 80 SV dimmers, Leko available in a European approved version, ANDI DX and ACT 6 plus digital dimmer packs, Lightscope and Super Rig suspension systems, Super Quasar and Super Nova location lighting and low energy studio lighting systems. Strand's visitor and showroom centre at Isleworth, UK, is opened.

Last year, Strand launched the Strand 430, 530 and 550 series of lighting consoles.

• Next month we feature Strand in Australia - our lighting heritage

Morpheus Shake-up

continued from page 61

Plans are underway to primarily focus the company to better serve its existing clients currently consisting of Gloria Estefan, Garth Brooks, Bruce Springsteen, Steely Dan, Barry Manilow among others and better position the company to service upcoming and new business. All existing customers of PanCommand Systems, will now be serviced by the new charter for Morpheus.

The current array of proprietary lighting technology and system packaging is readily available from Morpheus and the company has plans to release new products to the market. This would include the BriteBurst, a 1200 watt special effects light and the XL Fader for larger fixtures. Special upgrades are also underway to existing products.

Further enquires to: Morpheus Lights +1 408 567 0660.

PLASA 96

continued from page 61

the latest in Internet technology, in addition to offering exhibitors the chance to display their own web sites to visitors.

Running alongside will be two other events: Presentation Technology and the British Music Fair.

Presentation Technology caters for the world of business to business presentations and audio visual. The BMF is where the music industry meets to do business showing everything from instruments to printed music.

General enquires to: +44 171 370 8229. Internet: <http://www.pavilion.co.uk/plasa>

LXbizzBITS

CONTRACTS/ NEWS

WYBRON AND LIGHTING TECHNOLOGY FOR BYTECRAFT

Following successful negotiations with Wybron Inc (USA) and Lighting Technology (UK), Bytecraft have announced they are now the Australian distributors of Wybron Color Scrollers and Limelight Xenon followspots and ballasts. A large number of Wybron Scrollers will be used on the upcoming production of Sunset Boulevard in Melbourne. Enquires to: Bytecraft (03) 9587 2555.

LIGHTING LAB EXTRAS

Lighting Lab in Melbourne have added another 6 Trackspots and 2 Emulators to their hire inventory.

CANBERRA THEATRE

Alex Sciberras of the Canberra Theatre has specified Altman Shakespeare Ellipsoids as part of his recent equipment upgrade for the venue.

Enquires to Chameleon (02) 9310 5222.

OVATION NEWS

Following an installation at the BTQ Channel 7 studios in Queensland, the ABC in Melbourne have selected a Compulite Ovation console for installation at the Drama Studio in Elsternwick.

Enquires to Coemar De Sisti Australia (03) 9467 8666.

ADELAIDE CONVENTION CENTRE

John Murdoch of Osmonds in Adelaide reports the sale of 20 of the new Selecon 12-28 condensor spots to this venue.

BYTECRAFT AWARDED THREE CONTRACTS ON MELBOURNE'S CROWN CASINO PROJECT

Bytecraft will supply the following:

1. Overall show control for the Atrium show.
2. Control of the automation effects in the Atrium.
3. The lighting package for the Atrium consisting of 60 x Cyberlights, 60 x Irideon AR500's, 165 x AR5's, 123 x Dataflashes, 315 x Pro Light HID fittings, 2 x Wholehog lighting consoles and 1 x Bytecraft Architectural System including Solution Dimmers, Byteswitches and push button panels.

Enquires to: Bytecraft (03) 9587 2555.

VARI-LITE IRISH DEALER APPOINTED

Arena has been appointed Irish dealer for the Vari-lite Series 300 lighting system.



TALKING SHOP

Peter Robins of SAS 7, Adelaide talks shop about CAD

After reading the report on CAD Lighting design in the July issue of Connections, I thought I would offer my 2 cents worth, as I've been working with CAD for approximately 4 years now, both at SAS 7 in Adelaide, and externally.

What I noticed most about all the LD's descriptions of their systems, was the price. I don't know about the Mac Lux Pro, but the others went from \$2,500 (Micro Lux) to \$15,000 (Power Draw). It occurred to me when I saw those ominous figures, that there may be a number of LD's who find themselves on extremely limited budgets for peripheral equipment such as design software, or perhaps even still in dreamland where such tools are concerned.

When I started using CAD at Channel 7, the only thing available to me at the time, was the Engineering department's copy of Autosketch v.3 for DOS, so naturally, that's what I learnt computer design on. More recently I have played with CAD Lt, Stardraw 3D, and Micro Lux, but for sheer simplicity, speed and reliability, I've been very happy with Autosketch.

Autosketch is actually the 'base model' if you like, of the AUTOCAD software group, and is not a dedicated lighting program. Currently I'm using Autosketch v.2.1 for Windows on my home PC, and v.2.0 for Windows at Channel 7, and at \$250 to \$300 all up, it really is excellent value for money. Team it up with a spread sheet like Excel, for instance, and you've got both a flexible and cost effective software package.

Functionally speaking, I noticed some similarities between the larger and more expensive programs mentioned, and Autosketch. For instance, Steve Wickham spoke of Power Draw's layering capability, and while Autosketch can't do unlimited layers, it has 10 as standard, which you can rename to suit your purpose, plus you can add a number of layers as required. As Steve said this allows you to turn the layers on or off, to print or view only the required sections, (eg. if you're working on channel allocation, you don't necessarily want trussing in your way).

The program has 8 drawing colours which, even if you only print in black and white for faxing etc., is very helpful for visual definition on-screen. There are also 32 short-cut keys which make life very simple, as well as the facility to create your own custom toolbar with your favourite bits on.

I've managed to build up an extensive library of lighting, rigging and set design elements, which are saved as 'parts' files, and inserted in whatever drawing I'm working on. So in a nutshell, I create a base drawing of say, a stage floor layout, and add everything in as I require it. That way I can start literally from the ground up, layering everything on top of the stage an set.

On the down side, you can't measure beam angles but you can nominate dimensions. But if you are after a simple, inexpensive, but flexible piece of CAD software, just to design two dimensional lighting or set plots, I don't think you can go past Autosketch. (And no, I'm not an AUTOCAD distributor, but if anyone wants a copy of my DXF Parts files, I'd be happy to talk turkey on 08 398 2001 (home) or 014 091 535.



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"Never Enough Tech Time In Never Never Land"

Jacqueline Molloy reports from Perth on the debut of *Peter Pan*

The huge dragon breathes fire, the 18 foot crocodile gnashes its jaws in a terrifyingly real way and the main characters fly through the air. This is all part of the new 12 million dollar stage production of *Peter Pan*. Lighting designer for the show, Brett Graham could never have predicted that his career would lead him to the chaotic but magical world of Never Never Land.

Lighting *Peter Pan* is Graham's first experience with commercial theatre. "I think the director, who is English, was attracted to the fact that I had been lighting Shakespeare".

Graham started in lighting as a freelance technician in a variety of venues and whilst working as a follow spot operator at the Footbridge theatre, came across the Bell Shakespeare Company who were just starting up.

They were about to embark on their first tour and were planning to use a tent as their performances venue. Graham got the job as their head electrician based on his touring background and his prior encounters with tent performances. He had previously worked with companies such as Circus Oz.

Bell Shakespeare performed their first show in Sydney with the tent rigged inside a building. Graham has fond memories of the event, "It was stinking hot and there was no raked seating so sightlines were not the best. It was not a good omen".

The tour moved onto Canberra where it was freezing. "The wind was whistling under the flaps and the audience were sitting on the ground literally freezing their butts off". By the time they got to Melbourne the tent had been shafted and the relieved company moved into a proscenium arch theatre.



Since the original lighting designer wasn't on tour, Graham had to re-light the show to suit the venue change and has worked with the company ever since.

He didn't receive a call about *Peter Pan* until three weeks before the show bumped into the Regal Theatre in Perth. He is not exactly sure why lighting was left to the last moment, "I think there may have been another lighting designer involved before me, but I don't know the details."

With limited time there was a rush to get the design done with the added pressure of not having seen a rehearsal. "My initial concept was to cover the general acting areas and then worry about specifics once I had seen a run in the theatre".

During the first week of the Pan bump-in Graham was on tour in Canberra with *Much Ado About Nothing*. He expected to arrive in Perth to find the rig up and patched, ready for him to focus. Instead he arrived to find that they were sixty dimmers down, "They had to hire in additional dimmers to supplement those in the theatre

and when the hire dimmers arrived there was some problem with compatibility. We had to start focussing sixty dimmers short".

During production week, lack of time again added pressure. "There was constant haggling for stage time from the various departments. Scenery needed the stage 20 hours a day as did lasers, lighting and then of course the director wanted the stage for as many hours a day as he could call the actors. The tech run ended up being a blocking run, the dress run became a tech and the previews became dress runs".

Graham ended up doing several all nighters just to get plotting finished. He had no crew allocated for budgetary reasons so operated the board himself. "The next morning when everyone arrived fresh and rested, I was there bleary eyed and pale. It gave me a lot of bargaining power looking that bad. I think everyone thought they better be nice to me because I looked so bloody awful. I finally started to get my own way with the director", he laughs.

Initially, to his dismay, the director had given him a lighting cue synopsis complete with fade times. "The director was very specific about what he wanted lighting wise". This left Graham stifled creatively and it took a while before he and the director established a relationship that enabled them both to satisfy their creativity.

The show is a highly visual one with numerous set trucks constantly on the move. It took seven semi's to get the scenery and props from

continued over



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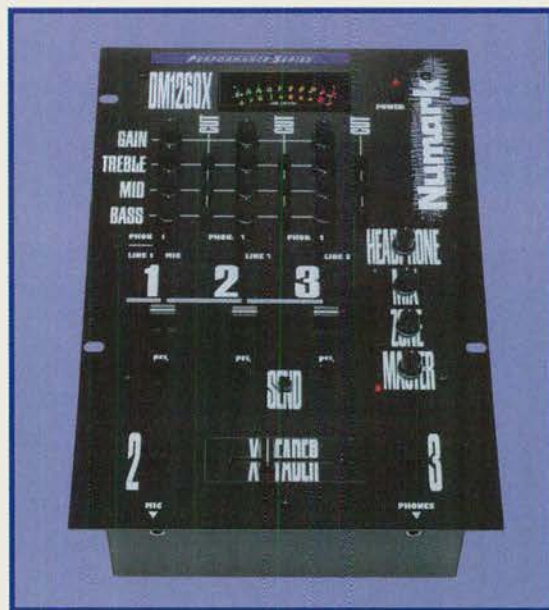
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Peter Pan continued

Queensland where they were built. A 20ft container had to be hired and parked at the back of the Regal to store the scenery that wouldn't fit into the wings.

The amount of flying in the show made the grid tight for space. Numerous cloths and set pieces are flown, as well as two designated flying corridors for the people flying sequences. "The grid is a very busy place and I was restricted with where I could have the lighting bars."

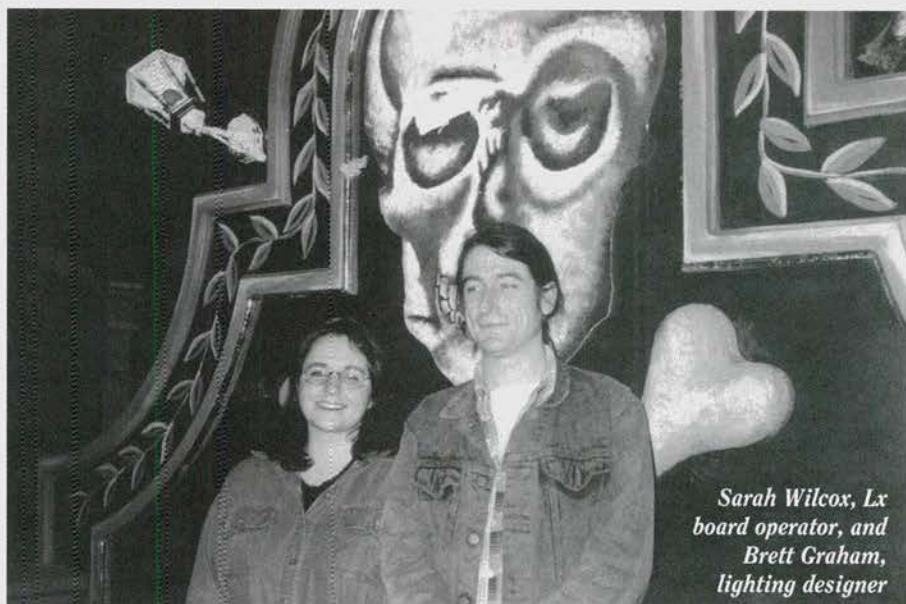
Initially the first fly line nominated for lighting was line 26, "I had to argue to get a lighting bar between the house curtain and line 26, they had to cut a piece of scenery so that I could have a lighting bar around line 10".

The number of large scenic trucks made it difficult to use side light which Graham feels the show needs. "At the moment it is impossible for me to get side light upstage of line 8. There is a lot of top light and less from the front and the back. It was particularly difficult to get front light into some of the upstage scenes due to the false proscenium".

Graham is looking forward to the show moving to the Princess theatre, Melbourne, in September. "At this stage the show is not completely together even though everyone has done a tremendous job, it just came down to a lack of time. By the time we open in Melbourne it should be a lot tighter with most of the problems ironed out".

The script is currently being reworked and key scenic pieces are being redesigned. "Never Never Land in particular is undergoing a major transformation, the two, seven metre high curved trucks are being replaced with cut cloths and borders. This will make it a lot easier to utilise sidelight".

The rig is a fairly standard one for practical reasons; "I picked lamps for the rig that I



Sarah Wilcox, Lx board operator, and Brett Graham, lighting designer

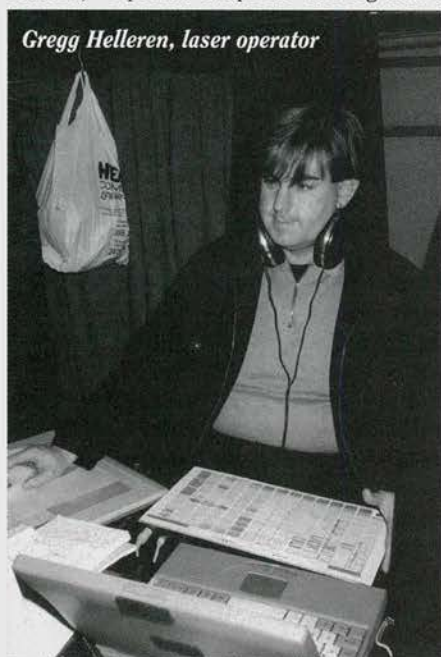
knew we could get up and working without too much trouble; parcans, lekos, a couple of effects projectors. I knew we weren't going to have too much time to muck around. The director wanted a bright, happy looking show so I picked my favourite coloured gels and then went a step less saturated to get more punch".

There are some special touches that add an element of wizardry to the visuals. A fibre optic star cloth completely surrounds the stage at one point giving the illusion of an infinite night sky.

Lasers also add to the magic of the show. There are two effects lasers backstage which project in turn, blue butterflies, fairy dust and a spectacular tunnel sequence near the end of the show.

One laser FOH "plays" the role of Tinkerbell. Each laser has 5 watts of white light and offers 4000 colours which can be broken up into any imaginable combination. An individual sequence takes about three hours to program. All up there is about half a million dollars worth of laser equipment involved in the show.

Brett Graham also found the lighting budget to be generous, one of the benefits of working on a commercial production. "I was keen to do Peter Pan to broaden my scope of design experience and to learn from it. And besides I needed the money to pay for my car insurance", he grinned.



Gregg Hellenen, laser operator

Production Personnel

Producers Elyse & Kerry Jewel Director Leslie Lawton Technical Director David Worthy Set Design James Ridewood Lx Design Brett Graham Sound Design Coda Audio Services - Philip Murphy Laser Design Laurie Birch Laser Operator Gregg Hellenen Lx Desk Operator Sarah J. Wilcox Sound Operators Gavin Tempany & Stephen Peereboom

LXbizzBITS

CONTRACTS/ NEWS

SMOKEY JOE'S CAFE

East Coast Lighting have purchased 6 Cyberlights All Litho version fixtures and a Cyberlight LCD controller which have been incorporated into Smokey Joe's Cafe production.

QUEENSLAND PERFORMING ARTS CENTRE BUY ETC EQUIPMENT

After purchasing 150 ETC Source 4 Profile spots in July, QPAC have ordered another 110 units as well as an ETC Obsession 600 console. Local Jands dealer Greg Hughes is handling both projects.

Enquires to: Jands (02) 9516 3622.

ALE WINS

ALE has supplied video projector hanging brackets for the Sydney Convention and Exhibition Centre and a truss grid of some 14m x 6m for the Australian Army.

Enquires to: Chameleon Touring Systems (02) 9310 5222.

FRONTIER LIGHTING

The new Brisbane based Frontier Lighting have installed Cyberlight CX's, Color Pro's and Caterpillars into Showgirls Nightclub in Auckland, NZ as well as fibre optics, supplied by GUVT, into Players Nightclub, Brisbane. They have also geared up for hire by adding 8 Trackspots, AF-1000's and F-100 to their hire inventory.

Enquires to: Frontier Lighting 0419 888 710.

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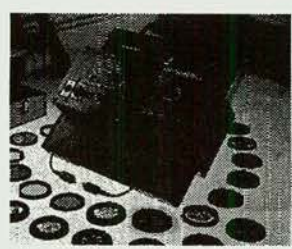
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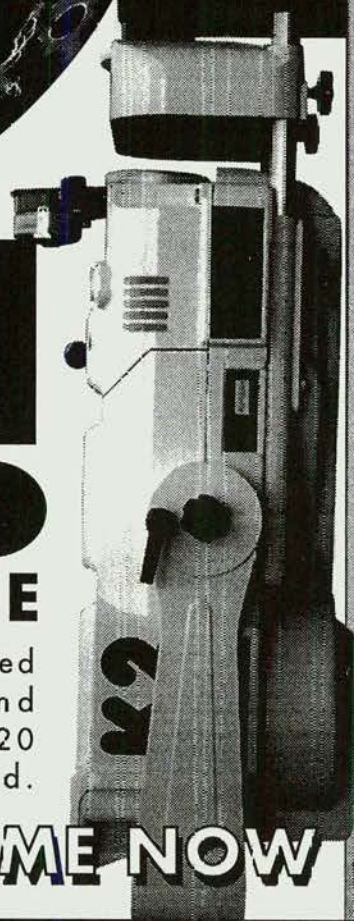


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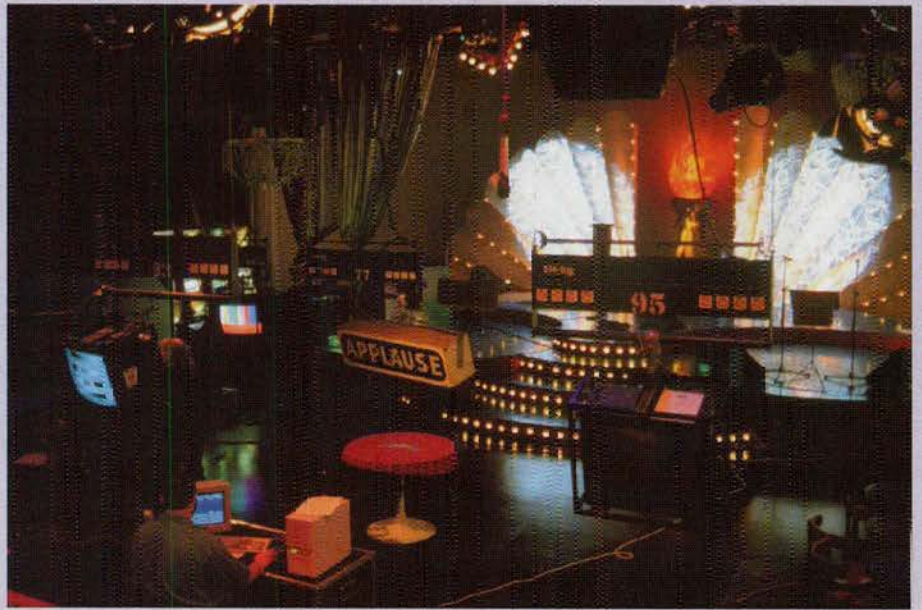
CLUB BUGGERY

HOW TO CREATE THAT DAGGY RSL LOOK

The original Roy & HG show was just the two of them sitting together against black in a basically empty studio. For the next series it was decided to do a much bigger show with the concept of being in a club. It was planned to do a series of shows in various Leagues Clubs but the logistics turned out to be very difficult and expensive.

"The concept was for it to look like a 60's or 70's club with a stage," said Jeffrey Brown, lighting director. "Originally they were going to sit in amongst the audience but we found it wasn't possible as the cameras had nowhere to move. From a lighting point of view we were not going to go all rock'n'roll although initially we had lights on cameras to present it as a 70's type club show. This year we tried out four Martin PAL120C's which certainly adds a big dimension to the show but with any moving lights, you've got to be careful not to go overboard with them. When the guys are there just chatting, you don't want them taking over in the background. I have to trample over the console operator because he loves playing with them. They come into their own in the dance numbers but we never get to see what the dancers are going to do although we know the song they are doing. The first rehearsal (at 6pm on the show night) is the first time we know what they are doing so there's no way I can plan any real concrete kind of effects. What we're doing with the PAL120C's is setting up a series of effects which I think will look good and then when we see the number, we develop them.

"We also rely quite heavily on followspots for the dance number as the dancers jump around all over the place. Sometimes I get



another operator in as it's the only way to follow the action. We have a Strand Alto and a permanently hired 1200W Strand followspot, which is just enough."

As well as Jeffrey Brown, there are two other lighting personnel working on the show - Darrell Brook who operates the console and Nick Hocking who does general work and operates the followspots. The studio is rigged overnight by a crew varying from two to five in number.

The studio is also used for most major ABC productions, except for GP, including *Bananas in Pajamas*, *Ferals* and *Playschool*. The premises at Gore Hill, Sydney have two major studios and a smaller one. The other main studio is taken up by news and current affairs programs. The ABC have also taken over some pay TV studios where eventually the news/current affairs programs will move depending, of course, on the proposed budget cuts.

The studio is better operated with the batters raised and lowered by motors, which makes rigging fairly easy. The main



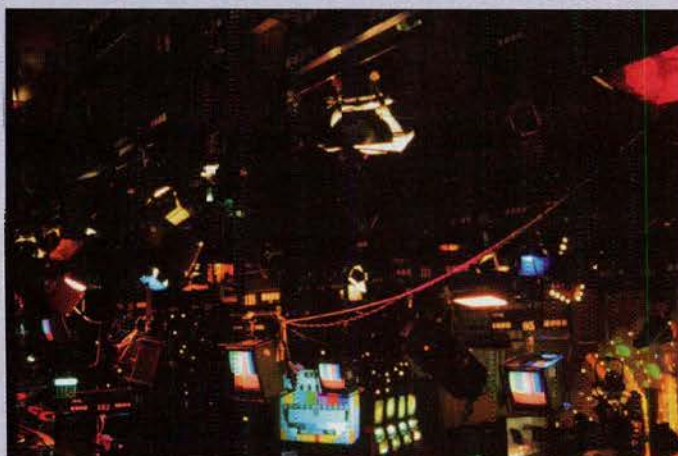
Nick Hocking and Darrell Brook

lights are 5K Strand fresnels and 5K softlights for general purpose. The whole studio has a cyc rail around it so the entire studio can be saturated with cyc light if required.

Control is an Arri desk which can control 500 channels and has 1000 memories. It's not used to control the Martin lights as they come with their own protocol. The dimmer system has 500 x 5K Strand dimmers. Enough? Both main studios are basically the same.

"We're getting in a lot of Arri lights now - little 1K's which I find very good," said Jeffrey. "*Ferals* is a very exciting little show and they're useful for that. I guess we'll always want the studio bigger and higher and we'll always want more lights. It would be nice to own a moving light system but it doesn't make economical sense to do so. This show might not be on next

continued over



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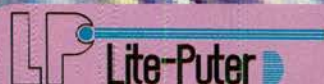
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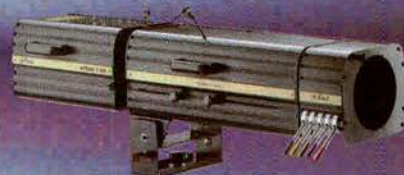
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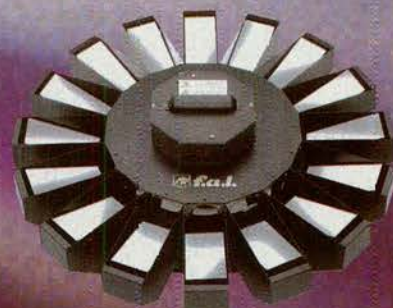
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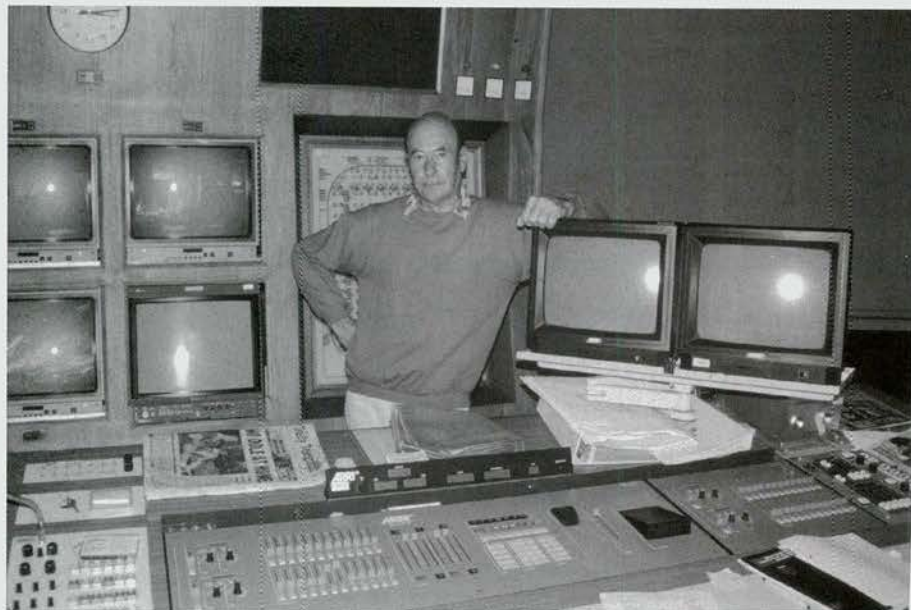
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CLUB BUGGERY

continued from page 68



year and we might not do any more *Live and Sweaty's* which uses moving lights."

Under the stairs are some ray lights and on the shells are some little lights.

"I wanted the designer to get another half dozen transformers so that we could run chases with them but it stretched the budget too far," said Jeffrey. "But we don't use them so much now anyway because we've got the PAL1200's which make the shells come alive."

A lot of people have asked Jeffrey how the flame at the back of the set works.

"At first we just had a flame with some motley reds and yellows stuck all over it so I asked Nick to devise a way of making it move," said Jeffrey. "After scratching his head for a while, I told him to think about all the air currents coming up from underneath. So he got an old aluminium plate, put fluted holes in it and put a multi-coloured gel over it. He then sat it on a pin and the whole thing turns around like a propeller. He's very proud of that!"

Camera wise, there were three peg cameras, one crane, two hand held and one audience portable camera as well as two small 'lipstick' cameras on the drums. On the night I visited, they were trying out a new Jimmy Jib in place of the crane.

The sound console is not big enough to control everything so a radio truck does all the balance for the band and singers which is then fed up to the main console to be blended with things like audience reactions. Roy & HG are on radio mics.

Jeffrey joined the ABC in 1958, straight from school, as a trainee technician. He spent 15 years as a cameraman before specialising in lighting.

"We went over to England in the mid-sixties to show the Poms how to do it but they didn't

appreciate that!" he said.

The technical departments of the ABC have turned out many talented people including Oscar winning DOP Dean Semler (*Dances With Wolves*) and DOP Johnny Searle. It would be a shame to see it affected by budget cuts.

The current series of *Roy & HG* finishes in October after a thirty week run.

★ Cat Forcer

ROGER BARRATT LIGHTING SCHOLARSHIP September Update

The following pledges were paid last month. If you haven't participated yet, PLEASE donate. At press time we had \$3350 plus the donations received in the past month (below), a total of \$4,000.

All the money goes towards training our first recipient, Jason Waide, who started his four month program of secondments this month. In October Jason goes to London for final secondments. He is paid a weekly living stipend from the funds raised.

The UK trip is made possible due to the generosity of Connections, Stage & Screen Travel, PLASA, and White Light (London).

VISION DESIGN STUDIO (David Bird \$100)
CLAY PAKY S.p.A. (Pasquale Quadri \$100)
ARX (Duncan Fry \$100) ARX (Colin Park \$50)
JMC-AUDIO VISUAL DESIGN (Martin Cass \$100). EUROVISION (Yvonne Rigby \$100)
SYSTEM SOUND (John Scandrett \$100).

New donations (and pledges received) will be printed monthly in Connections.

Donations (any amount) to Connections,
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LXbizzBITS

CONTRACTS/ NEWS

CAIRNS CIVIC CENTRE

Greg Hughes of East Coast Lighting reports the supply of Selecons new wide 28-52° condenser profiles along with SF1200 7 inch fresnels and Acclaim 18-34° profiles to this far north venue.

ELS UPGRADES

Entertainment Lighting Supplies of the Gold Coast have added 4 Studio Color Automated Wash Luminaires to their hire inventory.

JANDS PRODUCTION SERVICES ADD TO THEIR HIRE INVENTORY

JPS are adding 24 x ETC Source 4 Par fixtures to their hire inventory. The units will be used for their corporate production work where the 575W fixtures will take the place of 1000W Par 64's. The Source 4's will have their first outing on the current run of Myer-Grace Brothers new season fashion parades.

Enquires to: Jands (02) 9516 3622.

LSC ELECTRONICS

LSC have supplied, via specialist Electronic Services, the Queensland Conservatory of music with the following equipment: 18 Wallpak dimmers with catwalk hanging brackets; 1000 Circuit Dimmer patch facility; Selecon 1200W fresnels and Par cans. LSC have also sold 8 Tourseries Dimmers to Active Lighting for their hire stock and Schusters Concert Lighting have purchased an Avolites Rolacue Pearl.

Enquires to: LSC (03) 9561 5255.

AIDA

CLS are supplying lighting and trussing to Bytecraft for AIDA which goes to Singapore in September and Perth in October. Crew going are Tim Newman, Leigh Greig and Paul Spruge.

Equipment includes: 40 Chain Hoists; 88 x 2.4m Box Truss; 33 x 3m Tri Truss; 28 Molefay Nine Lights; 8 Molefay eight lights; 66 Ray lights; 120 channels of dimming; 2 Oil Crackers; 1 800amp distribution board; 1 F100 Smoke Machine; 46 Icons from Bytecraft.

Enquires to: CLS (03) 9646 8444.

GLADSTONE PERFORMING ARTS CENTRE

Gladstone Performing Arts Centre have just taken delivery of an ETC Express 250 console.

Enquires to: Jands (02) 9516 3622.

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The Genesis concert

September 25, 1996 marks the fifteenth anniversary of the first ever event using Vari*lite luminaires. On that evening in 1981, in a bullring in Barcelona, Spain, the band Genesis opened their *Abacab* tour. Forty Vari*lite prototype luminaires swung into action, changing the history of stage lighting forever.

The tour lighting designer was Alan Owen who served as Genesis' lighting designer since 1974. Vari*lite programming and operation was by Tom Littrell and the system was maintained by Brooks Taylor, who was a member of the original Vari*lite development team and wrote software and provided much of the console design elements for all following Vari*lite consoles. All three were employees of Dallas-based Showco, Inc where the Vari*lite system was initially developed. Jim Bornhorst, longtime Showco audio engineer and console designer, led the team of four engineers in the development of the Vari*lite prototype system. In addition to Bornhorst and Taylor, the team included Tom Walsh, digital hardware designer and John Covington, analog systems designer.



*Optical Prototype. Early workbench tests of dichroic filters and metal halide light source used to develop optical configuration of first Vari*lite prototype.*

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Bornhorst was at the Barcelona show and recalls the circumstances of the first load-in and show in the bullring.

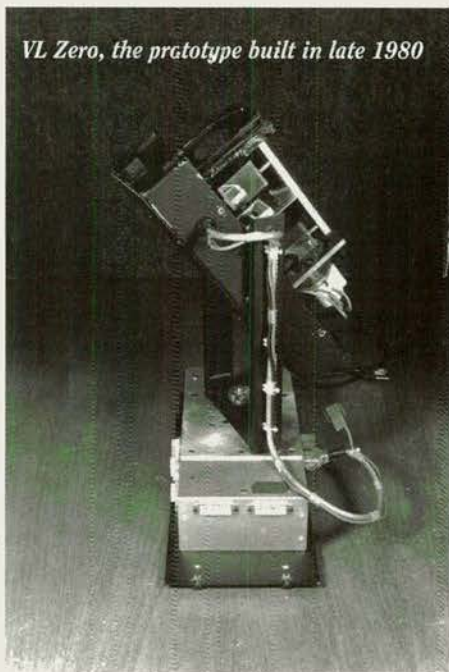
"I remember the fierce smell, somewhat like that of a rodeo arena or livestock show, and seeing bits of bloody hair and flesh in the splinters of the wooden fencing around the pit. Hopefully these were from the bulls at the previous evening's bull fight, rather than the matadors. As the concert started, smoke from the band's fog machines combined with the dust kicked up by the excited Spanish Genesis fans. This created an incredible haze. As the Vari*lite luminaires came on and swept into the crowd, there was an immediate reaction from the crowd. Each time the lights moved, the crowd's reaction increased, along with the glow over the arena created by the stage lights, the dust and the fog. I remember thinking that we had seen our little system work its magic with the music and knowing that things somehow had changed."

Throughout the late 1970's, Showco engineers had worked unsuccessfully to develop a colour changer for PAR 64 fixtures. Finally in 1980, under the guidance of Rusty Brutsche, then President of Showco, Bornhorst and his team drew upon two emerging technologies and began considering a completely new fixture design rather than an 'add-on' colour

changer for existing stage lights. The two new technologies were dichroic coated glass as a colour media and metal halide bulbs as a source. Dichroic filters were permanent and created intense saturated colours not previously seen with gel-type colour media. Metal halide sources provided a tiny point source of light which made compact luminaire design possible and much more output per watt than conventional incandescent sources. In addition, Taylor and Walsh had experience in previous lighting control projects at Showco and had the skills to develop a controller for the new light. In the fall of 1980, the team came up with the idea of a colour changing moving light and an all out effort ensued and by December 1980 a prototype and controller existed.

Brutsche decided that Genesis would be likely candidates to preview the prototype systems, now known at Vari-lite as the "VL Zero". By 1980, the skilful use of high tech effects, including image projection and lasers, and sophisticated music made Genesis a 'must see' for concert goers. Brutsche and Bornhorst flew to London to present it to Genesis. Led by Phil Collins, Mike Rutherford and Tony Banks, the group was rehearsing at their studio in the English countryside. The luminaire was attached to a beam in the hay loft of a 500 year old barn and the console was programmed to

VL Zero, the prototype built in late 1980



execute two simple cues. This demonstration inspired Mike Rutherford to exclaim, "I expected the colour but by jove, I didn't know it was going to move" The afternoon demonstration in the barn, along with the naming of the system by Smith, led to an active personal and business relationship between Genesis and Vari-lite that continues today.




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SF1200 Pro model, medium throw 1000/1200w custom 175mm fresnel. 320x224x280. High out-



CCT Minuette

put 7-56° @ 228939 cd. Safe CE approved c/w T/29 1200w lamp, microswitch safety cutout and DIN std 185x185mm colour frame. \$570.

Arena 2000/2500 pro model, long throw 2000/2500w, 200 or 250mm fresnel with choice of GY16 or G22 lampbase. 400x297x365. Eg. 2.5kw 10" 8-60° @ 418950 cd. Safe CE approved c/w CP/91 (2500w) or CP72 (2000w) lamp, microswitch safety cutout and DIN std 245x245mm colour frame. \$780-1080.

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Passo Wattage: 650W/1K or 2K/2.5K. Beam spread: 5 deg. to 60 deg. Typical. Size(mm): (LWH) 435 x 290 x 240 approx. Working Distance: 5m - 25m. Options include: Barndoors, Colour Frame, Safety Wire Guard, Motorised Colour Wheel. From \$311

TAS

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

Spot Wattage: 300/500W Beam spread: 8 deg. to 50 deg. Approx. Size(mm): (LWH) 225 x 204 x 150 approx. Working Distance: 3m -10m. Options include: Barndoors, Colour Frame, Safety Wire Guard. From \$236

Spot Eco Wattage: 650W/1K/1.2K. Beam spread: 12 deg. to 52 deg. Typical. Size(mm): (LWH) 341 x 254 x 250 approx. Working Distance: 4m -15m. Options include: Barndoors, Colour Frame, Safety Wire Guard, Motorised Colour Wheel. From \$268

Spot AL Wattage: 650W/1K/1.2K. Beam spread: 12 deg. to 52 deg. Typical. Size(mm): (LWH) 341 x 254 x 250 approx. Working Distance: 4m -15m. Options include: Barndoors, Colour Frame, Safety Wire Guard, Motorised Colour Wheel. \$342

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continued on page 82

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Lighting the Stars

A Close Look

by Madeleine Murray

Sharon Stone, Nicole Kidman, Jeremy Irons, Liv Tyler, River Phoenix, Glenn Close. Peter James has told all of them to keep still. And they obey eagerly. Not only is James skillful, but he is charming and gentle as well.

James is the Australian Director of Photography who has been working with big stars, and big directors. He has shot the last seven Bruce Beresford films, starting with *Driving Miss Daisy*, which won four Academy Awards, including Best Picture. James is just back from four months shooting the latest Beresford work, *Paradise Road*, the story of a group of women interned on Sumatra, after the fall of Singapore.

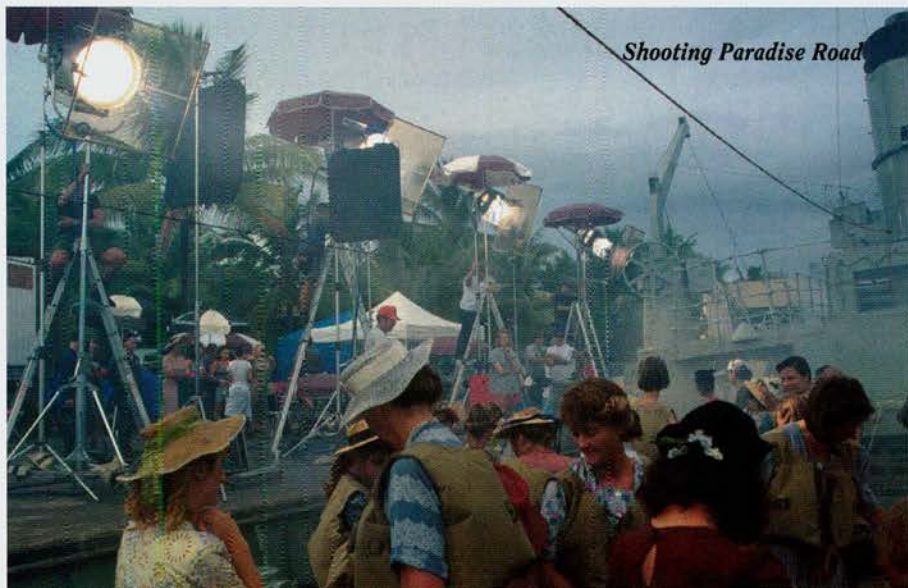
With houses in Hollywood, South West Rocks, and Tamarama, and probably a contact book of A-list friends, James has the trappings of international glamour. But he is modest, and affable, quite happy to sit and talk for several hours with me over lunch at Bondi. Maybe I look a bit like Sharon Stone.

River Phoenix

Peter Bogdanovich is one of those Hollywood directors who is famous for other things. Famous for a film he made 20 years ago, *Paper Moon*, and famous for his breakdown when his girlfriend, Playboy centrefold Dorothy Stratten was murdered.

When James was asked to work on a film with Bogdanovich, he accepted because he admired his early films. James was excited about doing the film, and hoped to bring a moody style to the work. "But Bogdanovich didn't want to hear any of it," James said. "I was trying to bring him into the '90s, but he didn't want to know about it. He only wanted to use two lenses, like his heroes from the '40s."

Not only was Bogdanovich stubborn, he was also often late. It was River Phoenix's last film, and he was taking drugs. "It was a tough time,"



Shooting Paradise Road

James said. "Some days River thought he was a vampire, because he was about to do that vampire film. He would act like a vampire, and I told him, 'You're not a vampire yet.' When he died, it was horrible. I was so shocked. He was the sweetest guy."

One day, James was sitting in the actors' caravan, waiting for Bogdanovich to turn up. "I just finished telling a story, and River leant over and kissed me on the lips. He just liked what I was saying. He was a real flower child, very open."

Nicole Kidman, Sharon Stone, and other beauties

James is a master at lighting beautiful women. He used to work on commercials for hair, cosmetics, Singapore Airlines. "I enjoy making women look glamorous, working with hair and make-up, making sure they have the

right colours behind them and around them and using the right light," James said. "Nicole Kidman is definitely the easiest person I've ever had to light. She's so beautiful, and she has virtually no flaws, which is unusual, because everyone has a flaw.

"Sharon is fabulous, she looks

like a million dollars. She's got great cheekbones, mouth, chin, beautiful eyes, but there are flaws.

"Isabelle Adjani just radiates the light. But she has to be lit a certain way too, as does Sharon. They all have their own way of doing it. Even Liv Ullmann has a particular technique, and will only be shot on a certain profile. Actresses often have a profile they prefer. Sharon never requested anything special. But you could do anything with Nicole, any lighting, any profile, and she can take it. Hard light, soft light, it doesn't matter.

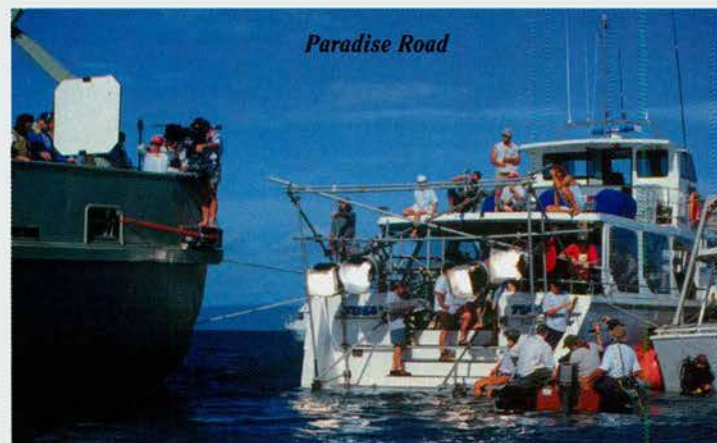
"Some you have to photograph completely in soft light, others with a slight highlight, some have to be backlit and underlit. So it's all different techniques for different faces, and styles."

James shot a film last year, called *Diabolique*, with Sharon Stone, and Isabelle Adjani. "I thought I was photographing the cover of Vanity Fair every shot. Because with Isabelle being a great star in Europe, and Sharon being a great star internationally, they both had to be perfect. And they each needed completely different lighting. Sharon needed the top light, where the jaws, and the cheekbones come out. She needed the light fairly high, and close. Isabelle needed to be completely surrounded in light. It was a nightmare, it was hell, but they looked great."

Adjani would come to rushes. Sometimes, she wasn't happy. But if she liked what she saw, she would crawl over and kiss James' feet.

Hollywood

Star glamour is the Hollywood technique.



Paradise Road



"It's very difficult when you're trying to put mood and nuance into the film, to have all these cosmetic considerations," James said. "You have to separate the actress from the background. It's almost like the person has been stripped in, but you try not to make it look like that. You've got to blend it, because they're moving, walking through the set. The camera is dollying, craning, and you have to maintain this light on them all the time. It's extremely difficult."



A picture is emerging of a very complex job. Not only does James have to know all the range of film stock and lighting possibilities. He also must make the shot look brilliant, fit in with a large crew, keep the star happy, and work fast. The pressure is on the DOP to deliver. Every wasted minute cost thousands on a film set. A good eye, good judgement, and a calm manner are critical.

James often uses the makeup artist to paint out flaws, and shadows, after he has lit the subject. Or to paint the shadows back in. "Some people think you're mad, when you ask them to paint a dark smudge under the nose. But when you look at it on film, it's great portraiture."

"Doing moving camera stuff, matching, continuity, reverse angles is different from still photography. The trick is to be able to do it on the move. When you've got twenty set-ups a day, you've got to make the people look good in every one of them."

"Every second costs thousands of dollars. You're under great pressure. The First Assistant is screaming to get it all going. The actors

are being whizzed off to make up. It's just a nightmare. And if it's not right, you have to live with it forever on the screen."

Driving Miss Daisy

After many ads and films in Australia, James decided to move to Los Angeles and try his luck. He was offered *Driving Miss Daisy* right away. Then the budget was slashed in half. No one wanted to put any money into a film about an old Jewish woman, and an old black man. During a power lunch in Hollywood, the producer got a phone call from a man who had taken a helicopter to get his mobile phone in range. He put in the last \$2m.

The whole film was shot in seven weeks on a small budget, in an old house on location in Atlanta. It was stiflingly hot, and rained constantly. It took four days to shoot one driving scene. One of the hardest things for a DOP is matching the light for different takes, and for each shot in a scene. James' patience and grace would be an asset in those situations.

"It was one of the most wonderful films to make, because Morgan Freeman was just a

continued over

LXbizzBITS

PEOPLE

JARED HAWKE & FRONTIER LIGHTING

Frontier Lighting was formed recently after Jared Hawke, Ben Melrose and Keith Mackinnon resigned from Premier Lighting Brisbane.

Frontier Lighting Brisbane are in the process of setting up their new premises and showroom at 104 Newmarket Rd, Windsor, Brisbane and it will offer sales, installation, corporate hire and driveway hire. Enquires to: Frontier 0419 888 710.

HIGH END ADDITION IN GERMANY

High End Systems announces the addition of Claas Ernst to its European staff at High End Systems GmbH where he has been appointed Sales Engineer and Marketing Representative for the European office in the Munich area of Germany.

Claas comes to High End from Strand Lighting's European marketing department, where he worked extensively within the professional theatre and studio markets.

TONY AWARDS

Jules Fisher and Peggy Eisenhower jointly collected the best lighting award for *Bring in Da Noise, Bring in Da Funk*. They beat our own Nigel Levings (*The Kind and I*) as well as Christopher Akerlind (*Seven Guitars*) and Blake Burba (*Rent*).

NJD SPANISH DISTRIBUTOR

Gil Risoto of Malaga has been appointed Spanish distributor for the complete range of NJD products.



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Lighting the Stars

Continued from page 77

dream to work with, and Jessica Tandy was a saint, never any trouble," James said.

Everyone took a cut in pay to work on it. The film forged a bond between Beresford and James. "He liked the way I shot, and we got along well. And now, we've done seven films together, including *Black Robe*, *Mister Johnson*, and *Last Dance*."

Mister Johnson was shot in Nigeria, during a military coup. The crew had trouble getting to early calls, because of curfews. The soldiers wouldn't let anyone on the road until 5 am. There were no weather reports. Visibility was hampered by the dust from the desert, and the wind from the Sahara. When James couldn't see the other side of the valley, he'd switch to close-up work.

The cast included Pierce Brosnan, whose wife was dying of cancer at the time. "It was a very stressful time, trying to phone out was a nightmare. That was really tough. Pierce is a sweetheart. He still thinks that's his best performance. That's Bruce."

Bruce Beresford

"They love him, he's a great actor's director," James said. "He immediately rejects anything that's phony. And that's what photographs. It's all honesty, it's all straight up truths. In a film, you want them to be straight

on. They can't be wavering, or thinking of their next line. They've got to be doing it, and that's it. If they blink or hesitate, it doesn't work. The camera knows that. With Bruce, I think that comes from an honest sense of himself.

"He's the sort of director that actors cue up to work with. They just love him."

Seven films later, James admires Beresford, for his integrity, brilliance, and vision. They have an intense relationship, based on respect and affection. "Sometimes after a take, I'll rush up to him and say 'Shouldn't we get one with a little bit more emotion, or a little bit less emotion?' You have to be a watch dog, as a DOP. It's not just photographing it, you're directing the photography. I suppose it's a blurred line, into directing the movie. And Bruce knows that I would never overstep that mark, that's it's always his movie. He sometimes jokes, 'When you direct your movie..' And that's fine by me."

In spite of the stress, long hours, and difficult locations, James loves his work. "Nothing is nicer than to stand next to the camera, and watch someone deliver a fantastic performance, like Glenn Close crying. That's what keeps you going through the night shoots and the early mornings and the rain, and huge stress... That's worth all the money they can pay you."

PARADISE ROAD

Paradise Road, set during WWII, was shot in Singapore, Malaysia, Sydney, the docks of Cairns, on the sea, and in the Queensland jungle. For the gaffer, Mick Morris, one of the challenges of the shoot was to give all the locations the '40s look.

Raffles Hotel, Singapore

The hotel exterior was a night shoot. The lighting crew had to disconnect all the mercury vapour and discharge lamps in the scene. All the visible modern lights in Raffles were replaced. The exterior was lit with a12K HMI, and a 6K par bouncing on a 12'x12' Gryffolyn, which was half CTO.

"We filled the front of the hotel with old cars, and palm trees, and it looked great," said Morris. Any modern buildings in the background are taken out by digital post production.

Interior Ballroom

The ballroom of Raffles was recreated in the Marrickville Town Hall. Morris used 200 x 1K Par cans. The lighting crew had to use the top of the poles, pillars, and existing structures, so



the lights had to weigh as little as possible. Each of the 40 dining tables, all set, had a Par can above it, with a brushed silk gel to give a diffuse look without hard shadows. In the centre of the ballroom floor, they used more Pars, and 10Ks to backlight. No one was front lit for the scene, apart from a soft bounce. All the Pars were fed from dimmers, not for dimming, but for control. On the floor they had 4x4 and 12x12 bounce lights, to create an exposure. If there were multiple shadows, they put a big transparent Gryffolyn to diffuse and soften the light.

The docks of Cairns, the sea, and the rainforest

While Morris was shooting in Marrickville, he had another crew preparing the Cairns docks to look like Singapore Harbour. They created bombs falling with backlight splashes and used Xenons to look like searchlights. Then they went to sea, where Morris had a generator on a boat. He rigged 2 x 6K Pars and 2 x 4K Pars on the camera boat.

continued page 84

LXbizzBITS

PRODUCTS

DHA DIGITAL BEAMLIGHT

PLASA 96 will see the launch of the Digital Beamlight from DHA which houses colour scroller, spill rings and switch mode power supply with a built in dimmer within it's unit. It also has universal power input (90v-240v).

A newly designed reflector maximises the 500W tungsten lamp to a level approaching that of a 1000W beamlight, say DHA. Pan and tilt movements are capable of up to 380° rotation. Twelve units are now being used on 'Martin Guerre' at the Prince Edward Theatre in London's West End.

Enquires to DHA Lighting Ltd +44 (0)171 771 2900.

NEW CATALOGUES FROM GEC LIGHTING

GEC Lighting has recently released two new catalogues, in a family of product literature.

The industrial catalogue covers lowbays, highbays and fluorescent products for many applications.

The latest catalogue released details landscape outdoor fixtures for heritage, amenity, architectural and area lighting applications.

GEC Lighting plans to release the next in the series of catalogues covering Floodlighting products and applications in December.

For further information contact: GEC Lighting (02) 9646 9450.



EURORACK 60

ADB, a Flemish company, have created Eurorack 60, a compact all-digital dimming system with the following features: Thyristor dimmers at triac prices; Thyristors for maximum reliability; compact wallrack for saving space; 3 or 5kW per dimmer at 100% duty cycle; high grade filtering for lowest noise; designed for architectural lighting.

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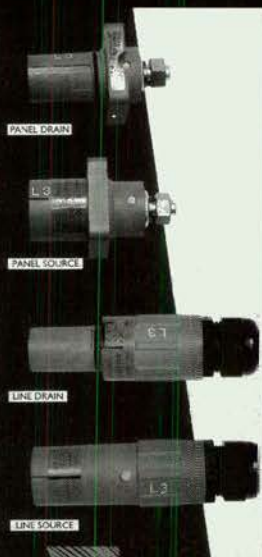
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Smokey Joe's Cafe

by Geoff Squires

Smokey Joe's Cafe is the latest musical offering to come from the stable of the Queensland Performing Arts Trust and is helped along by The Cordon/Frost Organisation. Touring nationally, it's try-out was a short season in the Lyric Theatre, Brisbane. Grab a whole heap of songs written by Lieber and Stoller, a hot band, and a very talented cast and throw them on a very pink set. No script, no story, no expense spared.

Designed by Heidi Landesman, the set consists of three lightbox portals on a flat pink floor. Images of sixties musical icons cover the front and are lit using 32 MR16 zip strips spread through-out. A fourth portal sits behind this but does not light up. The rear alternates between various clothes and gauzes, neon, and a nice stylized fire escape. Space in the flies is at an absolute premium, there's a lot up there.

Behind all of this sit the band on a smallish truck which moves downstage and then returns after one number. Behind the band is a black drop lit by IRIS 4s. The one set piece is an extension of the fire escape and is basically a set of stairs run on a skate in the floor. All scenery was constructed at QPAT's own workshop.

Between portal one and portal two hangs five moving panels. These panels are used to create different settings and scene changes by their placement and movement. Some rather nice scene changing occurs when one of the panels is wiped across the stage picking up and depositing props and cast in it's path. Movement of these panels and the band truck is by an automation system designed by APC (Automation and Process Control, Adelaide), who design systems for industry and theatre.

Stage manager, Mel Robertson, describes the system as one of the most reliable she's seen, and she informs me she's seen a few. Originally based on the Workmate Vision Software the system runs on a PC using windows. The PC is backed up by a laptop (which is a legend within the show for it's colourful history, no one would tell me why though). The new software developed for theatre is called Stagemaster and is being installed into *Sunset Boulevard* and *Crazy For You*.

Off the shelf componentry make up the unit which features the PC driving Toshiba programmable logic controllers, which in turn drive the motor controllers. Each screen has two limit switches and a resolver. The resolver uses pulses to measure where it is which tells the computer where each panel is through pulses. Over the approx eight and a half metre run of the band truck the appropriate resolver sends about 9600 pulses.

As each piece travels the computer recalculates the travel as it moves altering speed if necessary. The travel of the panels is accurate each night to about 2mm. Try doing that with five mechs pulling on ropes night after night. Accuracy of the system and economics were the main reason for choosing the system, over a rig run the wages of one operator as opposed to six mechs generates a saving.

Greg Vicary plays automation tech setting up the system and then leaving it to the operator. His automation experience started on *The Secret Garden* and now he's a bit of a guru. He likes the system because APC give TOTAL



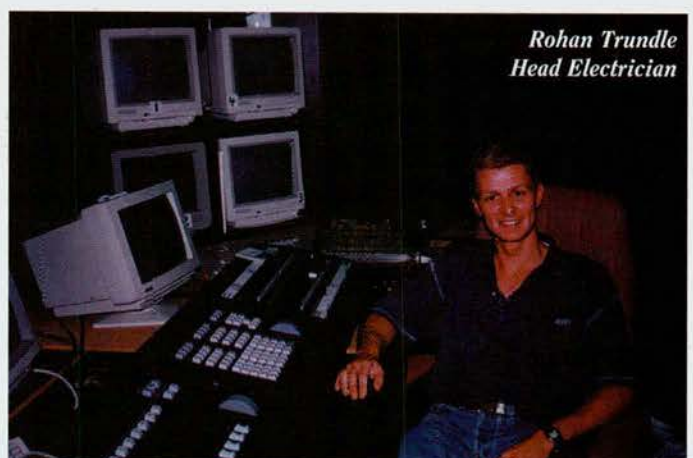
backup and support and listen to what users have to say. Greg said that people using automated systems for the first time just needed to remember that it takes time to commission a system and that each has it's own idiosyncrasies and bugs that take time to fix. In other words, it's not plug and play.

Donn Byrnes has put together a rig consisting of ETC Source 4s, Selecon fresnels, and Strand stuff. There are six Cyberlights run from a dedicated controller which are triggered by a LSC Linklight. An ETC Obsession runs 360 dimmers (comprising of Bytesize and Strand PAM) as well as 32 Colourset scrollers. The plotting session lasted about 40 hours total and contains about 300 cues. Head electrician, Rohan Trundle, said he survived the week on vitamin B and Lucasade.

There are four dome operators, one automation operator, and Rohan on desk. I gather from talk amongst the crew that there should



Morgan Randall
Automation System Operator



Rohan Trundle
Head Electrician



have been a floor electrician, but that position was cut due to budget. Head mech, Tony Popple lends a hand where necessary. Two Rosco Hazemakers are used for mist but they seem to be a bit ineffective, apparently air-conditioning has something to do with this.

Neon plays a big part in the show. With the Smokey Joe's Cafe sign, 23 Bars for Jailhouse Rock, and a large neon wall for Or Broadway, it's easy to see where the \$100,000 went. Manufactured by DAVES NEON, it comprises of about 70 circuits, made up of a mixture of neon and fluoro signs. I am told the number of circuits will be rationalized once the show tours, as stuff set up to chase doesn't chase, etc.

Sound was designed by Ron Barlow who is also working on Crazy For You. FOH is a Midas XL200 running two separate systems, 8 Tannoy Super Dual S300 for vocals, and 4 Meyer MSL 2's and 2 EV MTL2 subs for the band. The split is to allow better intelligibility of the vocals as the Tannoys are a good vocal speaker with the others good for band sounds. A tie in to the augmented house systems is used for the balconies. Yamaha programmable eq's, BSS DPR301 and DBR402 compressor/limiters and Lexicon, Yamaha and Sony effects fill out the effects rack.

Ten Sennheiser 1046 radio systems with Country-man headset mics are used for each member of the cast and two Shure handhelds sit each side of the stage for backup. The headsets were chosen simply to get the gain required because it's a rock'n'roll musical, and they have a good ratio of spill to signal.

Thirty sends from the band truck which moves up and down the stage meant that a large foldback setup was required, allowing for almost an individual send to each muso, as well as three zones on the stage as the band travels, to prevent feedback. This has resulted in the unusual practice of a foldback operator,

not normally used on theatre musicals. Foldback speakers are JBL 4725's as they are their smallest reasonable speaker Ron could find. Space is a precious commodity on stage. FOH is operated by Malcom McLeod and foldback by Blair Marks.

Overall it's not an earth shattering show but it is a fun night out, just sit back and enjoy the talent.



CONTRACTS/ NEWS

WILDFIRE & DANTE CECCHIN

Italian Director/DOP Dante Cecchin and Wildfire recently shot Italy's first digital commercial at Cinecitta, Rome. Using Wildfire's Long Throw UV effects fixtures, Wildfire fluorescent paints and Sony's Digital Betacam BVW 700, the director was able to achieve what he calls a "3D computer graphic animation that included realistic people in the shots without any post-production assistance".

Enquires about Wildfire products to: GUVT (07) 3358 5022.




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Balcar Fluxlite fluorescent studio light fixture, 6 x lamps balanced to tungsten or daylight. 3kW output - draws only 300w. Includes focussing grid spots. \$4520.

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

Monet Wattage: 1K/1.2K G22 or 2K/2.5K G38. Beam spread: 7 deg. to 54 deg. Size(mm): (LWH) 290 x 290 x 307 approx. (2K larger) Working Distance: 3m -25m. Options include: 4 or 8 Leaf Barndoors, Colour Frame, Safety Wire Guard, Scrim, Cones, Manual or Pole Yoke. Reduced price studio fixtures in folded sheet steel. From \$605

Leonardo Range of fresnels ranging through 300W, 500W, 650W, 1K, 2K, 5K, 10K, 20K, & Dual Filament Units in Tungsten fixtures. Discharge units range through 200W, 575W, 1.2K, 2.5K, 4K, 6K, & 12K in both single ended and double ended lamps. All luminaires in stainless steel for strength/weight/durability considerations, and including all standard accessories (4 or 8 leaf barndoors, colour frames, etc.) Available in Manual or Pole Operated. From \$575.

Leonardo Piccolo Range of compact housings and reduced lens size fresnels ranging through 2K, 5K, 10K, and 20K in Tungsten fixtures. Discharge units in both single ended and double ended lamps also available. All luminaires in stainless steel for strength/weight/durability considerations, and including all standard accessories (4 or 8 leaf barndoors, colour frames, etc.) Available in Manual or Pole Operated. From \$1300.

SINGLE FLOODS

WILDFIRE

GUVT (07) 3358 5022

WF-400SF-E Wildfire 400 watt Long-Throw UV-A Spot-Flood fresnel. Focuses from 16.5° to 59° and throws over 33 metres. Supplied with ballast, header cable, C-clamp and safety cable. \$5972.73 inc. lamp.

WF-401F-E Wildfire 400 watt Long-Throw UV-A Flood. 105° field throwing over 53 metres with integral ballast, compact design, digital lamp life meter and supplied with mounting bracket, C-clamp and safety cable. \$3611.66 inc. lamp.

WF-250 Series Wildfire 250 watt Long-Throw UV-A fixtures available in 20° Spot, 50° Wide Spot and 90° Flood versions with throws from 18m to 46m. Integral ballast, compact design, and supplied with mounting bracket, C-clamp and safety cable. \$2296.92 inc. lamp.

TEATRO

Lightmoves Technologies (02) 9560 0000

Riga 1 500W compact flood takes standard filter and doesn't burn them, barndoors available. \$120.

Riga A1 500W compact asymmetric flood for use with standard filters. Barndoors available. \$150.

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Giotto Cyc Lights Compact stainless steel units in asymmetrical or symmetrical c/w wire guards, colour frame. Available in Manual or Pole Operated. Range through 1K & 1.25K. From \$640.

Duccio Groundrow Compact stainless steel units with adjustable feet. c/w wire guards, colour frame. Range through 1K & 1.25K. From \$568.

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Ribalta 1 Work Light Compact sheet steel units c/w colour frame. Range through 300W to 500W. \$144

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Cyc-1000 aluminium modular cyclorama flood that interlocks side by side. Barn door available (four leaf) lamp access via hinged door with built in safety switch.

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Riga A3 300/500W budget cyc flood system for use with standard filters, wired with heatproof cable for each circuit and supplied with hanging brackets. \$340.

Riga A4 300/500W budget cyc flood system for use with standard filters, wired with heatproof cable for each circuit and supplied with hanging brackets. \$440.

Diluvio A 500 4 way modular professional 500w cyc flood system, can be used for top or bottom cyc. \$1300.

Diluvio A 1000 4 way modular professional 1000/1250W cyc flood system, can be used for top or bottom cyc. Now available with Colourbox-



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LXbizzBITS

TOURS

110 STUDIO COLOR™ WASHLIGHTS FOR METALLICA

Lighting designer John Broderick has specified 110 High End Systems Studio Color™ automated wash luminaires for Metallica's world tour, through lighting contractor The Obie Company in California.

High End's Ben Richard will be involved in the pre-production and as the first few dates as the tour's Status Cue lighting console programmer for the Studio Color fixtures. The tour kicks off September 6th at the Stadthalle in Vienna, Austria.

Studio Colors are also in use on the REO Speedwagon/Foreigner/Peter Frampton tour and the White Zombie/Pantera tour.

BUTTHOLE SURFERS

LD Lawrence Upton is in a High End frenzy using 12 Cyberlights, 8 Intellabeams, several F-100 fog generators, 12 Emulator laser simulators and 60 Dataflash strobes for the Butthole Surfers US tour.

22 Cyberlights are also out with ZZ Top on their Continental Safari Tour. LD is Larry Sizemore.

R2D2 ON TOUR WITH TOTEN HOSEN

R2D2 is the name of a new light controller from ASM which can handle up to 32 scanners of any type and 200 Par channels. It is now on tour with Toten Hosen, one of Germany's most popular bands. It is controlling all of the Clay Paky Golden Scan 3s and Golden Scan HPEs.

"Originally we wanted to use the panel to control the Telescans, but these require 16 bit technology and the R2D2 currently only works with 8 bits. However ASM will make further developments to do this soon," said Uli Petzold from LMP Lichttechnik, who have exclusive world distribution.

VARI*LITES ON TOUR

Vari*lites are currently on the following tours: Michael Bolton (LD Peter Morse), Celine Dion (LD Yves Aucoin), Kenny G (LD Valerie Groth), Jimmy Buffet (LD Sid Strong), Def Leppard (LD Butch Allen), AC/DC (LD Patrick Woodroffe), Kiss (LD Brian Hartley), Ozzy Osbourne "Retirement Sucks" Tour (LD Stan Crocker), Darna Summer (LD Stig Edgren), kd Jang (LD Brent Lipp), Neil Diamond (LD Marilyn Lowey), Scorpions (LD Patrick Woodroffe), Dwight Yoakam (LD Jonathan Smeeton), Kenny Rogers (LD Jeff Metter), The Cure (LD Roy Bennett) and Smashing Pumpkins (LD Ethan Weber).



Star Struck

Held in June at the Newcastle Entertainment Centre was The Department of School Education Annual schools' production, *Star Struck*.

This years show included 101 schools and over 2,500 students from kindergarten to Year 12 drawing on the areas of Wingham to Muswellbrook to Wye and Budgewoi.

Star Struck is the showcase for the performing arts programs taught in Government schools.

Although the performers are school students, the production is professionally staged using current sound and lighting technology and supervised by industry professionals.

The technical production co-ordinator was Norman Copeman; Chris Pyne from See Hear Music was responsible for all sound design and audio matters. He had to work with a 500 voice choir and 18 piece ensemble plus soloists and combos. Francesco Calvi was the lighting manager.

The 325 production and backstage staff in-



cluded 77 students working in all aspects of staging a theatrical spectacular. Students were also encouraged to involve themselves in the technical staging of the event.

There has been a seeding grant allocated for their next production, called *the Story of the Hunter*, celebrating Newcastle's Bicentennial and Francesco Calvi has already been engaged to workshop ideas.

It is the 4th production to be staged at the venue and the apparently it was the biggest rig yet installed in the Newcastle Entertainment Centre.

PARADISE ROAD

continued from page 78

"That was quite a challenge, having that many kilowatts on the back of a boat, with generators and cables," Morris said.

The next location was the internment camp. The lighting crew buried about 2km of cable underground, to light the huts, and perimeter areas. Morris used dimmer rack control for the 80 2K circuits. 12Ks and 6K Pars lit the exteriors, and lots of 2.5K Pars lit the ceilings and the roof of the huts. White diffusion was put in the roof to knock the hard sunlight back, for the day shooting.

2K soft lights, and blondes lit the hut interiors at night. The moonlight was 12K and 6K Pars, in two 120' cherry pickers.

For a setup in the rainforest, Morris's crew rigged half a dozen 2.5K Pars on rock-and-roll truss 30' high, lashed to trees. "It worked really really well. When we got there in the morning, there wasn't even enough light for a base exposure, underneath the canopy. And the clouds were a problem. But the crew were able to scramble around on the rig, and focus the Par lamps for every shot. We shot quite a lot of really good stuff in the jungle, with hot sources of backlights. It was a touching scene where

the guard sings to Glenn Close."



Glenn Close in Paradise Road

LXbizzBITS

PRODUCTS

RYGER ELECTRONICS

Ryger Electronics, distributed in Australia by Disco World, have a range of intelligent luminaires and controllers including the new Defender Range comprising of five 250W halogen intelligent lighting effects featuring 10 gobos, 10 colours with strobe effect, Ministep movement, Stand alone, Internal microphone, DMX/MIDI control, Precision optics with adjustable focus, Externally silvered mirror, Thermal cut-out, stylish anodised aluminium construction, lockable mounting. CE marked and stepper motors are used throughout.



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CLUBBLAND & DJ NEWS

Numark Goes Tribal A School For DJs

After objections from the police and magistrates in the Oxford (UK) area, the 1996 Tribal Gathering found a new home in the grounds of the Luton Hoo estate, about 30 miles/50km north of London, over the weekend of June 29/30th. A peaceful, happy crowd in excess of 35,000 was in attendance.

The DJ line up included Carl Cox, Billy Nasty, Paul Oakenfold, Laurent Garnier, Sasha and Danny Rampling. Live acts included Leftfield, The Chemical Brothers and Black Grape.

All eight of the marquees (stages) were equipped with Numark "Performance Series" DM 188x mixer and "Beatkeeper". Although Numark engineers were present, no technical problems were reported during the eighteen hour event.

"All the DJs were delighted with the new mixer and were telling me after the show how brilliant they thought it was," said Paul Shurey, of Universe.

Jack O'Donnell, President of Numark added, "We put a vast amount of work and research into the "Performance Series" to make sure that the end products were exactly what DJs need to get the most out of their skills. We are, naturally, thrilled that the DM 1800X mixer performed so well at the Tribal Gathering."

• Numark c/o Universal Light and Audio, call (07) 5532 9922.

What's The Voltage, Boris?

Numark's Russian distributor have installed a DM1180 mixer and CD7020 dual CD player in the historic site.

Apparently Boris Yeltsin had wanted to modernise the Kremlin ballroom leaving the option open for vertical folk dancing with visiting dignitaries, so a new audio and lighting system was designed,

A new entertainment production company out of Adelaide is offering a unique service, 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.

The units covered include: DJ Industry Studies, DJ Technology, DJ Performance, DJ Techniques, CD Deck Practice and Performance, Studio Sampling, Sequencing and MIDI, DJing & Radio, Promotion.

The proposed course will utilise the skills of Adelaide DJs such as Guru Josh, Angu\$, Sarah, ADS — all with national DJ club, event and recording experience. Other industry professionals will also be involved.

No previous experience is necessary to take part in the course and equipment is supplied. Whilst taking part in the program, students will have access to Big Sister's DJ facilities, free of charge, day or night. Students of the "Checkpoint Charlie" DJ School will graduate with a thorough knowledge of the industry and skills required, but also a Certificate in basic DJ Skills and a Silver DJ membership recognised by Central Station.

• Contact: Abby Gee, Big Sister Productions, 2 Walter St, North Adelaide, SA 5006. Call 08 267 1990 or mobile 04 1614 6969.

specified and is now being installed. Numark's Export Director, Nick McGeachin commented "We were hoping that a favourable result in the recent elections would lead to an increase in our Russian sales, but this one surprised us. Maybe this will be the beginning of Numarkism in Russia..."
Ahem.

Reef Casino

Reef Casino in Cairns recently opened, featuring some lavish design.

NIGHTCLUB '36

Set in New York in the '30s, Nightclub 1936 evokes the glam era of speakeasys, elegant proportions, industrial grandeur, and high flying gangsters.

Live dance shows are performed nightly by the nightclub's own dance troupe and feature characters such as a Bellboy, a Cigarette Girl, The Crooner, plus a Gangster and his 'Moll'.

The decor of Nightclub 1936 takes to the back streets of New York in the '30s with a twist of Gotham City style. Guests can dance the night away amid the scenery of rooftops and alley ways.

Nightclub 1936 has two private lounges, separated from the crowd and the action by glass partitions. Karaoke is also available with a personal operator. Resident DJ is Warren McLean, ex-drummer for *The Divinyls* and *Machinations*.

The Nightclub logo, a working manhole cover, is used through-

COMING...

Features:

October

Education: Our monster guide to courses! Editorial: contact Dan Cole before Sept. 7th.

• Buyers Guide: AMPLIFIERS, SAMPLERS, Followspots. Deadline: September 15th.

November

• CD replication: where, who, how much? • Loudspeakers. Deadline: October 15th.

Advertising: **Caroline Grafton** (02) 9876-3530 or fax (02) 9876-5715.

Connections

out the venue, complete with light, sound and smoke effects.

Creative company: Venables and Ascc

Lighting Designers: Colin Baldwin/ Showcorp

Sound Design: Eruce Brown/



Avtech

Lighting Operator: Peter Whitby

DJs: Warren McLean

Decor/Interior design: Larry Eastwood/ Eastwood Designs

Typical Door Charge: \$10

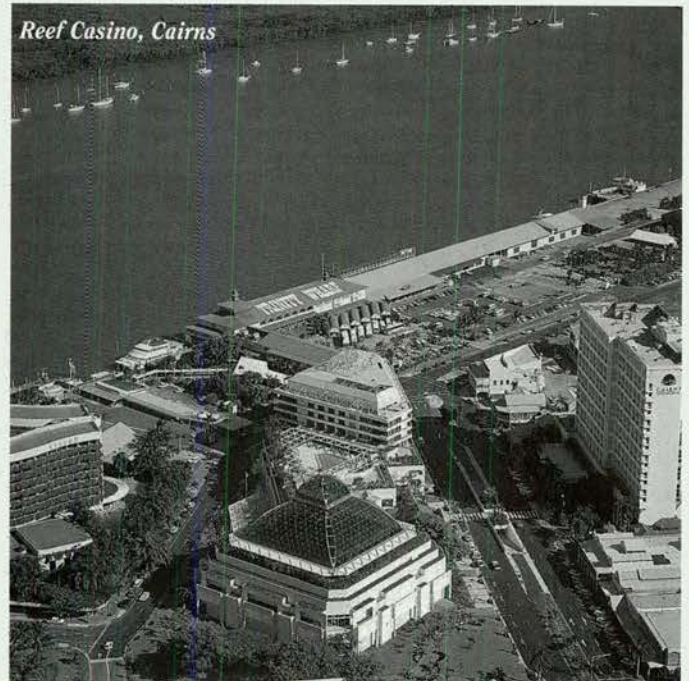
Entertainment: Nightly dance troupe of 3 performers who do 4

fully choreographed numbers. Interactive '30s theme scenarios through the night.

Address: 35-41 Wharf St. Cairns

THE SPEC: (Lighting)

6 Trackspots, 6 Robocolour Pro 400, 28 Rays 100w, 30 Par 56, 12 Fresnels, 6 Profiles Follow spot, Jands GP12 Dimmer rack. Fully computerised lighting program; Multiscan.



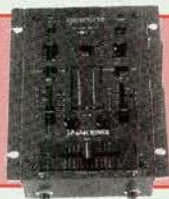
Reef Casino, Cairns

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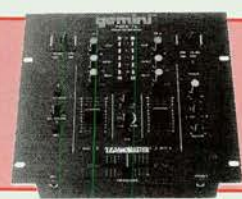
Bed Room



PMX7 \$229



PMX15 \$369



PMX25 \$399

PDM SERIES

Club



PDM1012 \$599



PDM3012 \$859



PDM7024 \$1399

PS SERIES

Professional/Club



PS626 \$469



PS727 \$879



PS924 \$1495



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DISCO WORLD PTY LTD 20 Cave Hill Road or P.O. Box 509 Lilydale VIC. 3140 Ph: (03) 9735 0588

Write in Reader Service Number: 108

REEF: Cairns



Nightclub 36

Video

Nightlife video system
5 AWA 48cm monitors
TVS switcher and amp
Panasonic HD600 hifi stereo VCR

Audio

2 JBL Subs 18"
4 JBL 4652 mid/high
4 QSC USA 1300 amps
JBL interactive crossover
Yamaha QSC2031A graphic EQ
Yamaha compressor
Soundcraft Spirit Folio Rackpack 12 channel desk
Denon DN2000F Mark2 CD player
Citronics SM550 mixer

Effects

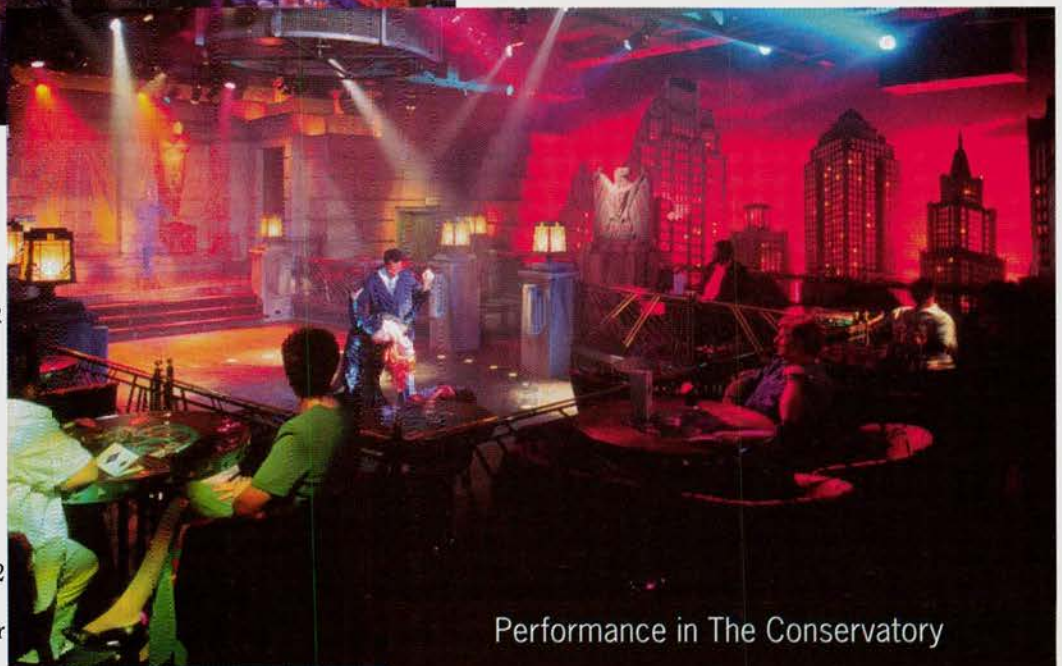
Smoke cracker DF50 under stage, smoke ducting and fan motors to amnhole covers fed by ZR20. Huge industrial factory fan over dance/performance area. Full colour Panasonic roaming camera and control system. Jands Ezycom talkback system with 5 packs

Karaoke

Denon LA3450K laser player
Yamaha PI500 Amp
64" and 48" monitors
2 Shure 58 mics
2 EV SX100 speakers

The Conservatory

The Conservatory is the glass rooftop pinnacle of the Reef Casino.



Performance in The Conservatory

Nightclub 36

By day the Conservatory, overlooking Trinity Inlet, is a botanical experience, filled with rainforest trees and plants. At night the Conservatory becomes a theatre restaurant. The show, *Firefly*, takes the diners through a rainforest journey of drama, song and dance. Sound and lighting effects highlight the aerial acrobatics up in the foliage of the Conservatory rooftop.

Creative Company:

Venzbles and Assoc

Lighting Designers: Don Byrnes

Lighting Operator: David Mayer

Sound Design:

Bruce Brown/ Awtech

Audio Technician: Paul Jackson

Decor/Interior design:

Larry Eastwood

Typical Door Charge: Theatre

show only- \$40. 3 course dinner and show- \$89

Entertainment: *Firefly* theatre show.

Address: 35-41 Wharf St. Cairns, Qld.

THE SPEC/ *Firefly*

Lighting

2 x DX100 486 computers with Showcad software,
1 x LSC active DMX splitter,
8 Cyberlights,
12 Trackspots,
4 Space Cannons.

Audio

24 channel soundcraft desk;
31 band dual Rane graphic;
7 Shure LX receivers;
1 Garwood foldback radio station with 7 receivers;
8 Shure Country Men headset mics with transmitters;
2 Crown 2400 Power amps;
4 x 802 Bose speaker cabinets;
2 x 502B Bose sub cabinets;
Denon 5 disc carousel;
Technics dual cassette;
Sony DAT player;
5 x DBX1 compressor limiters;
1 x Bose interactive processor.





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The Art of Entertainment

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THE PA PAGE

The Grating Outdoors

By Michael Orland.

I'm a big believer in niceness. As in "It's nice to be important but more important to be nice". When I'm working in someone's venue I try my best to be nice to them. Do the please and thankyou thing. Creates a nice vibe. Well, they say there's an exception to every rule. And if being nice is the golden rule, then the outdoor gig provides the golden exception. All you young 'uns take my advice; doing outdoor setups with the sound system you've worked so hard to acquire calls for a tough, no compromise attitude. This is man against the elements, where nice guys finish last. Be a bastard.

All PA owners with more than a few years experience can relate minor horror stories of that one outdoor gig where the weather turned foul and they lost bigtime. When accepting these jobs, first and foremost, always specify adequate stormcover. So many times I've asked the promoter "What happens if it rains?", and he gives me either a grin or a dumbfounded look and says "Well, let's just hope it doesn't." This is promoterspeak for "It's not MY gear! So it's not my problem." So you need to make it his problem. State the necessary cover you require. Repeat your requirements ad nauseum. Then state that if it isn't set up when you arrive with the gear, you'll simply drive away. Be prepared to do it. I have. Even if you have no written contract, a verbal contract, whilst being harder to prove, is just as legally valid. The terms and conditions you state are an integral part of that contract. By failing to comply with your conditions, the promoter has invalidated the contract. There will undoubtedly be plenty of drama when the promoter realises you're serious. "What's to become of me? Where shall I go? What shall I do?" Frankly my dear, well.... there's only one answer.

We've done jobs for so many shonky promoters over the years who have provided none of the promised cover. We've also done jobs for multi-million dollar cor-

porations with limitless budgets. Who have provided none of the promised cover.

Size is no guarantee of integrity.

Ask for details as to who is supplying the stage. Contact them directly and ask whether covered PA wings were even mentioned. Tell them what you need. Confirm arrival and setup time of staging. So many times we've arrived on site to find the stage still being unloaded. Many two-bit staging companies don't care about being a few hours late, even though we can't begin setting up until they're finished. By the time people are screaming at us about schedules, they're home watching the footy.

If possible, do a site inspection with the promoter. Confirm vehicle access. If three phase power is available on site, check the distance to stage and the outlet itself. If your three phase cable is to be hard wired to terminals within a box, make sure the promoter will have a licensed electrician available to do this on the day. No matter how obvious this procedure looks, NEVER try to do it yourself!

If local power is unavailable or impractical, specify a generator. Many system owners get very nervous when asked to run off one for the first time. But as long as it is big enough, it's usually better regulated (safer) than the power in most venues. Specify a fully silenced type, such as those used in film and television work. Most of the ones we use provide a minimum of 50 amps per phase which is more than enough for most of our work. Check the earth stake is sufficiently driven into the ground. And try and avoid the situation we were in two years ago where a huge generator was dumped 40 metres upwind of stage, and the performers spent half the day choking on diesel fumes!

My favourite method for doing outdoor gigs with uncovered stages is with three trucks. One gets parked either side of stage.

Our standard 'A rig' speaker system fits snugly within the rear of each. The third truck is parked out front with the FOH desk and effects/drive racks in the rear facing the stage. The truck on the right hand side of stage has a side access door which allows foldback command centre to be set up within, while leaving easy access to stage. All monitors on stage are carefully wrapped within jumbo size garbage bags which are then folded and gaffed neatly to fit.

Now I realise writing about utilising three of your trucks may not be very appropriate advice on a page meant to be full of helpful hints for beginners, but it may be worth considering hiring an extra truck or sharing larger outdoor jobs with similar sized system owners to achieve self reliance.

We used such a setup on Sydney's Lidcombe Oval in February this year. The promoter was none too happy about the truck out front, but I held firm. At 10a.m. when the band arrived, the sky was blue and clear. They started playing at 11. At midday the sky was black. A little after midday I felt the first drops. The band told me not to worry about it, but I was a bastard. I shut down all power and told the crew to close all truck doors. A few minutes later it was bucketing down. The storm lasted about half an hour, after which the band's gear was a mess, and the audience had scattered. When the rain stopped, we opened all truck doors and there was gear and crew, dry and cheery. I wasn't sure the garbage bags would be adequate protection for the wedges in storm conditions, but the idea worked a treat. There they were, totally dry, feeling glad all over!

** Editors note: When I did PA like Michael does, I also had a written outdoor show contract which stated I would be paid even if the show was washed out. The money was to be paid in cash on arrival. Otherwise, M. Orland is 100%!*

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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Golden Scan HPE

Golden Scan 3



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Lamp	HMI 1200	HMI 1200	HMI 575/1200
Standard lens	Electronic Zoom from 8° to 16°	24 and 15 degree	11°
Optional lenses	—	13 and 9 degree	16°-13°-11°-9°
Electronic focus	*	*	—
Wheel with 7 colours + white	—	*	*
Wheel with 7 special colours + white	*	*	—
Special light blue filter	—	*	—
Rainbow effect, two-colour beams	*	*	*
Colour temperature correction filters	2	2	2
RGB colour mixing systems	*	—	—
Max. No. of colours	Inf nite	113	24
Rotating gobos in dichroic glass	Optional	2	Optional
Rotating M-size metal gobos	4	2	4
Fixed M-size metal gobos	4	4	—
Variable speed indexed two-directional rotation of gobos	*	*	*
10 additional gobos in metal	*	*	*
Fixed prisms	—	1 (5 facets)	1 (4 facets)
Rotating prisms	2 (4 facets, 3D)	4 (4 facets, 3D, wake, image doubling)	—
Frost filters	2	2	1
Iris	increased speed	increased speed	*
Dimmer 0-100% - Stop - High speed strobe	*	*	*
Rotation of mirror adapter on projector body	360°	360°	360°
DMX 512, RS 232 (PMX), analogue 0-10V controls	*	*	*
Number of control channels	12/16 selectable	12	6/8 selectable

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