

Connections

SOUND • LIGHTING • STUDIO • AV • MUSIC TECHNOLOGY • THEATRE • TOURING • SHOWBUSINESS

Tours don't come much larger than this one- and almost never sell as many seats. It's all home grown, and we go inside ...



Pic: Serge Thomann

THE FARNHAM MACHINE

THEATRE:

South Pacific,
Light & Audio

LIVE:

Crowded House
Peter Gabriel

STUDIOS:

National Tracking
Guide & News

REVIEWS:

Yamaha Digital Mixer,
Roland DR 5 Rhythm

VIDEO:

New Section!

FULL SURVEY: Equalisers, Limiters, Crossovers. What they do, who makes them, and how much they cost!



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(Cover photograph at Flinders Park by Serge Thomann)

LIVE

Crowded House

Reviewed at Newcastle Workers Club. **Page 23**

Peter Gabriel

The tour that left them gaping in Europe, how did it fare here?

Catriona Forcer reports **Page 28**

South Pacific, the Musical that always brings on a smile. We review the sound, staging and lighting, starting on **Page 22**



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Connections
April 1994

Editors note

Paul McCartney said in Rolling Stone recently that to break even, his 250 strong tour party had to be slashed in the middle of the *New World Tour*, and to down-scale he needed to sack Richard Ogden, his manager. "Sometimes I think we're getting to the end of the road with these big dinosaur tours".

A large touring production doesn't get much larger than John Farnham's *Talk Of The Town* tour, which also out-sold anything else recently, with ten consecutive Melbourne shows alone.

With an 88' wide stage, over 100 Vari*Lites and 74 S4 MkII speaker cabinets, the production values were world class in every way.

Aside from two days pre-production before the first concert in Brisbane, the whole tour was pre-produced ON PAPER. The crew figured out everything in advance.

The point here is that I think we can show international touring acts a better, cheaper way to tour the world. An Australian crew can pre-produce a tour on paper, which would otherwise automatically go into three months of pre-production if it were based from London or LA. A tour can be bedded in and road ready for the Northern Hemisphere if started here, using Australian expertise, for considerably less than if produced by people in London or LA who simply DON'T know how to do it LIKE WE DO!



Hendo, the legendary foldback engineer, reveals some of his unique tricks in our Farnham coverage.

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SHOWBIZ

NEWS & UPDATE



Sono Vista is one cool machine. It makes all things happen, and it's in our new Video section, Page 63.

Industry to meet in Oct

ENTECH Trade Show to offer Workshops 'on the hour'

When ENTECH '94 was first announced last year, some potential product exhibitors expressed reservations and chose to wait & see. Fortunately a majority were convinced early, and signed up then.

The inaugural three day trade show is now firmly on the international calendar, and 85% of floor space is sold, according to the organisers, Connections Publishing. Boasting a "who's who" of products covering the sound, lighting, studio and contracting markets, the show has also attracted video, musical, show business service providers, stage engineering and theatrical product exhibitors.

With the success of the event guaranteed, a programme of value added events is now in preparation, central of which are a series of pacy Workshops, to be run on the hour during show hours, which are 10am - 6pm daily.

Entry to the 50,000 square feet of exhibits will be free to trade, who need not pre-register. The

Workshops will each carry a \$10 charge, and cover topics of interest to the target trade. "With respect to some of our learned friends, we are NOT allowing manufacturers to deliver long winded 'White Papers', rather the approach is to run snappy, useful Workshops that deliver useful information", said a spokeswoman.

While the programme will not be available until May (and will be published in June Connections) the topics are expected to cover many issues, including these:

- Digital 8 track future directions,
- Lone Wolf Media Link,
- Remote control of P.A. systems,
- Lighting control developments,
- Moving Light programming,
- In-Ear monitor systems,
- Mastering recordings effectively,
- Wireless frequencies & laws,
- Venue acoustics & design,
- Converging Technology & MI.

The organisers welcome submissions for the Workshop programme. Call (02) 876-3530.

Industry Sneaks get caught

AWARD FRAUD

The post-box had 32 envelopes all typed in the same way, containing voting forms all nominating the same music industry accounting firm. (Who are not, we hasten to add, Pa-tlett Chave & Rowland, the Entech Awards auditor!)

What about a voting form nominating a small Sydney Recording Studio and it's resident owner/engineer, sent from a friends manufacturing firm but accidentally in a printed envelope from the studio!

In the case of the accountancy firm, the votes were directed to the Australian Music Industry Awards, conducted by the Australasian Music Industry Directory. "What struck us as ludicrous was the magnitude of the scam, which was so glaringly obvious, it's beyond belief", said Phil Tripp.

The Recording Studio fraud was an early result of auditing the ENTECH AWARDS, which are open to votes for technical excellence in Studio, Live Sound, Lighting and Theatre. Nominations will be announced later this year.

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Phones:

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Editor: Julius Grafton.

Features writer: Catriona Forcer

Studio Editor: Caroline Grafton

Audio Technical: Greg Simmons

Showbiz News: The Weazel

Contributing writers:

Duncan Fry, Howard Jones,

Paul Bryant, 'The Idiot',

Glenn Leembruggen, Bruce

Waite & Dave Macken, Phil

Tripp, Michael Orland, Paul

Matthews, Ray Bond (Singapore)

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Submissions: We WELCOME well written articles and stories for consideration. Send hard copy, pref. WITH PC or Mac word processing disk file. Photograph prints, B&W or colour WITH negatives, & transparencies (preferred) also welcomed. Send stamped self addressed envelope if return of material is required.

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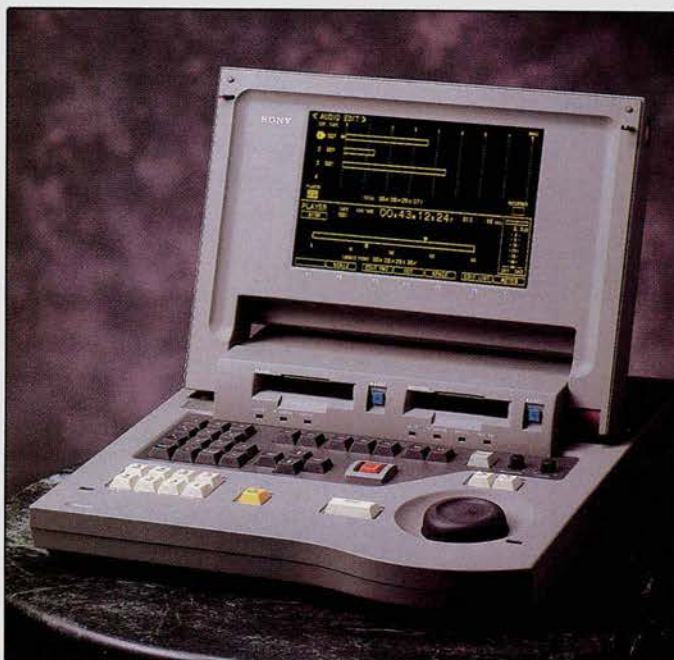
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DAT STATION

Sony's new DATStation is a masterpiece in styling terms, quite the neatest looking product we've seen for a while - and functional too. It's not cheap, so it'll appeal to power users, who need to edit and duplicate DAT tapes. It will edit and dub at double speed, detect

errors and you can jog along, because it mimics analog 'Rock & Roll' cueing. This isn't common on DAT machines of any persuasion. Naturally the machine accepts timecodes, and does more! Call Garry Rhodin or Rodney Sammut at Sony- (02) 887-6666.



New, Coming Soon...

The AES Convention in Amsterdam is just over, we preview some new Audio equipment and trends for '94

- A new speaker system from **Turbosound**: the TCS Series feature a reflex loaded 12" bass driver, and offer vertical line array possibilities ... we will prise more info.
- **Postex** have a new Digital editor/ Recorder/ Workstation product that looks very interesting, called Foundation. We see the front panel only, so we guess it is an 8 track digital device, but it could be a whole lot more...
- Digital processors continue unabated, **RAMSA** say the WZ-DE40 multiprocessor is a parametric EQ, compressor limiter, graphic EQ, spectrum analyser & more.
- **CROWN** have a new headset mic, the CM-312 has a hypercardioid condenser mic element.
- **AMEK** now offer Showtime live automation from PC for the RECALL live sound console, hopefully due for local release this year.
- **AKG** may have a new innovation of note in wireless systems, the WMS900 system allows up to 12 channels from ONE UHF channel, it's legal in the USA but here?
- **Circuits Maximus Company** have the C:MAX Oracle Wireless Monitor UHF system for user controllable in your ear monitoring volume. This kind of system will be common some time real soon.
- **RSP Technologies** and **HUSH Systems** have a new multi-dimensional system called 'Circle Sound', allowing positioning of sound anywhere in a 360° orbit.
- **Soundtracs** have a new console, the Topaz, 24 or 32ch inline, with 8 subs, 6 aux sends and 4 stereo effect returns.
- **Sony** will any minute now release a pair of primo half width effects processors, for guitarists and audio. Inexpensive, we hear!

Technical Forum to discuss Noise Pollution & Concert issues

VENUE MANAGERS MEET

The Venue Management association will host its fifth international convention and trade show at the Brisbane Entertainment Centre, April 1 through May 4th.

The Association has members from around the Asia/Pacific region, and of note to Connections readers is the Technical Forum, scheduled for Tuesday May 2nd. This will discuss issues like Testing and Tagging of equipment, Motors and Trussing, Noise Pollution, Stage Safety & Lighting, and general related topics.

The forum is open to members and visiting delegates, and is touted as an open discussion. You can obtain further information from the Association, call (03) 684-8484, or fax (03) 682-8282.

AV, Multimedia, Pro Audio, MI, Communications...

DEFINITIONS BLUR

When is a Studio a Project Studio? Indeed, what is Audio Visual and what is Multi Media? These topics baffle marketers searching for simpler ways to get messages to markets & customers in 1994.

While Multi Media is perhaps best described as 'the mixing of images, sound and text', the theme at the just-completed AES Convention in Amsterdam was 'Audio Visual Communication'.

Audio Visual was the tag applied to commercial presentation technology when slide projectors were high tech, and as an industry has been sorely tested in the Australian market, where attempts to run various "AV" Trade Shows in recent years have offered marginal returns and little interest.

The MI tag applies to 'Musical Instruments' or 'Music Industry' and is today mushing into a larger mass that includes pro-audio and 'project' studios. Project Studios? Aren't they MIDI suites? -JG



**LIGHTING
SECTION**

STARTS PAGE 56

WHO? WHERE? WHEN?

The publishers of the Australasian Music Industry Directory utilise Connections to provide updates to entries in the previously published January '94 edition and also to track industry movements of executives, key personnel and contact changes. This is the place to be!

The next edition is July '94 with free listings closing April 15. A listing form is in the present edition or can be obtained from the address below.

Please forward changes or updates to Alison Bruniges by fax on (02) 211 5938 or by mail at 3 Rose Street, Chipendale NSW 2008.

To get the most recent edition of the directory, it can be picked up at that address for \$10 at the door or \$15 prepaid by mail order.

Call (02) 212 6677 for details about being listed in the July '94 edition (listings close April 15).

• **Livewire Management** have moved to: Suite 6, 23-25 Melrose Street, Sandringham NSW 3191. Phone: (03) 521 0322, Fax: (03) 598 3171.

• **Suzie Jones**, formerly of Showbiz Video has been placed by Music Staff as Label Manager of Polygram Video.

• **Polydor** loses Frances Georgeson who replaces David Hunt at BMG in the position of National Promotions Manager.

• **Jerry Wise** Managing Director of Festival Records in New Zealand has died from a heart attack.

• **Lorraine Harvey** has left Immedia! PR.



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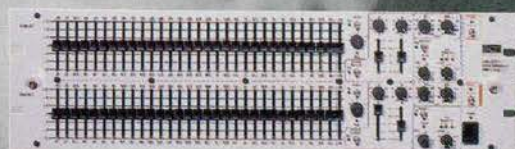
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WIRELESS:

From **SHURE**: a new low cost Diversity system (right) added to the entry point T Series range. The Vocal Artist Diversity system starts at \$995, and can be had with an SM 58 handheld wireless microphone for \$1195. The Guitarist Diversity with body pack transmitter: \$795 retail, and the range is complete with the Presenter Diversity, a miniature lavalier mic and body pack, at \$995. These new Diversity systems join the established non-diversity T Series, which sell for a couple of hundred less. Jands (02) 516-3622.

From **Telex** (USA): A new UHF wireless mic, the FMR-450 which is touted in the USA as the most affordable professional UHF wireless system. It operates on UHF TV channels 23-60 >



the USA, local importers Audio Telex may release the system to operate on the legal 800MHz and partially available 900MHz frequencies. Complete with a lapel microphone, the system is expected to debut here at less than \$3,000 list, which is keen for UHF. Details from Audio Telex, (02) 647-1411 or (03) 562-8566.

BUYERS GUIDES

Connections Buyers Guides bring you the latest, up to date products with prices EVERY issue! Now a **whole year** of BUYERS GUIDES ensures you get **more value from every issue!**

February: Wireless Mics, Studio Monitors, Scrollers, Colour changers, PC Spots.
March: Sequencers, Sound Modules, Test Gear, Flood Lights, Colour Medium.
April: EQ's, Crossovers, Limiters, Signal Processors, Backline amps, Rigging, Trussing, Flying Gear
May: Effectors, Reverbs, Synths, Keyboards, Effects Lighting
June/July: Live Mixing Consoles, Instrument Preamps and processors, Profile Spotlights
August: Studio Mixing Consoles, MIDI devices, Moving Lights.
September: Microphones, DAW, Lighting Control
Oct: Amplifiers, Samplers, Dimmers
November: PA speakers, boxes & components, Fresnel spots
December/January: Recorders, Powered Mixers, Follow Spots, Fog Machines, Studio Luminaires.

Distributors: DEADLINE is the 15th of the month before publication. call Caroline Grafton, (02)876-3530.

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• Sue McAulley, National Promotions Manager at Mushroom Records is now, in addition, Special Projects Manager. Artists Paul Norton and Kings of The Sun are no longer signed to the label. New South Wales Promotions Manager, Jo Wilson and Victorian Promotions Manager, Sarah Morgan, are both to become more responsible for promotions in NSW and Victoria. Jo Corbett has been promoted to Promotions Assistant in New South Wales. Mushroom's Production Manager, Andrew Meadows has been promoted to position of A&R Co-ordinator, while Paul Shanahan has been appointed Production Co-ordinator.

• The new owners of Round Midnight (in Sydney) are Terrence Brogan, Sue Melke and Sam Haoul.

• There have been a multitude of changes at Sydney's Triple M and 2DAY-FM. Cathy O'Connor has been appointed as General Manager of 2DAY-FM. Ron E Sparks has moved from Triple M to 2DAY-FM, taking over Rob McCasker's midday till 3pm slot. Rob McCasker has joined Triple M as station floater and assistant programming director, working with Charlie Fox. Publicist Brian Walsh has also joined 2DAY-FM, having left Triple M. Robert Lee has been appointed Retail Development Manager for the Triple M Network. Kylie Trower has been appointed Promotions Director at 2MMM.

• Sally Bamford has resigned from her position as National Marketing Co-ordinator at Warner Music, her position now held by Lisa Asquith.

MORE >>

Write in Reader Service number: 141

Events

NSCA, Las Vegas, 6 - 8th April
 USITT, Nashville USA, 13 - 17 April
 ISBM Italy 22- 25 April
 MULTICOMM SYDNEY 3-5 May
 EXPOMUSICA Spain 10 - 13 May
 Pro Audio, Light & Music, Beijing May 7-11
 BROADCAST MADRID '94 11-15th May
 BROADCAST ASIA, Singapore 1st - 4th June
 INFOCOMM Anaheim 9th - 11th June
 RADIO MONTREUX Switzerland 9th - 11th June
 World Lighting Fair, Tokyo, 16 - 18 June
 APRS London 22nd - 24th June
SMPTE '94, SYDNEY July 5 - 8
 Pro Audio & Light Asia, Singapore July 6 - 8
 I.A.A.M. Minneapolis July 30 - August 1
 PLASA, London, Sept 11-14
ENTECH '94, SYDNEY 6 - 8 October
 AES 97th, San Francisco Nov 10 - 13
 LDI Reno USA Nov 18 - 20

NSW AES Section Meetings: (Call (02) 948-4577)
Tuesday April 12th, then Tuesday May 10 (AGM)

The Australian Film, Television and Radio School will hold an **Audio Education Conference**, on **July 4th** in Sydney. Call Steve Murphy on (02) 805-6582 for more information on this.

Your EVENT here: FAX the details to us by the 15th of the month for inclusion. Plan ahead, be PR SMART. No cost to you....

WHAT'S HAPPENING

- Expect the AES Convention next April in Sydney. Although not yet official, the move from Melbourne to Sydney's larger Exhibition Centre is also a not too subtle attempt to 'take on' the SMPTE, the Society of Motion Picture and Television Engineers, who have scheduled a Sydney tradeshow for 1995 - as well as this July. Previous to now SMPTE ran alternate years to the AES. SMPTE is then planned for 1997.

This naturally caused blood to heat at the AES (Audio Engineering Society) who perhaps rightly figured they owned the alternate years. SMPTE moved into 1995 -the AES year- so now we have a larger, Sydney AES for the first time!

- Perhaps we are biased, (*because we are promoting ENTECH '94 this October at Darling Harbour in Sydney*), however: the **MultiComm** exhibition scheduled for May in Sydney has still failed to deliver ANY press information that pre-empted an event like this. Press Releases are free promotion, the life blood of any tradeshow. We DID carry two adverts for the event last month, indicating a \$95/day admittance. It's apparently run by acoustic consultant Peter Blackmore.

- Music Sales no longer have a separate mailing address and all correspondence should be sent to their street address: 4th Floor, Lisgar House, 32 Carrington Street, Sydney NSW 2000.

- Chris Gilbey has signed a deal with BMG. He is creating a new Australian artist label Ariola Australia. His title is to be A&R for BMG Australian artists, who will provide the artist roster for this new label. Leon Concannon will maintain his involvement with the artist roster, his emphasis shifting to Marketing.

- Sally Galwey is leaving The Image Group to head Shock Record's publishing department, having being placed by Music Staff.

- Vincent Lovegrove has become involved with the personal management of Jimmy Barnes.

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JANE SPIERS

Ever wondered where touring the world with major international acts can lead you to? Catriona Forcer caught up with a lady whose had a great career ... and is starting another!

I first met lighting designer Jane Spiers in 1985 when she was touring with Gary Numan. Since then I have seen many examples of her work, particularly the Depeche Mode tours, and she consistently came up with innovative designs. Consequently I was surprised when Jane gave it all up to return to her native New Zealand.

"My husband (Jane describes him as the original old roadies who has toured with people like Led Zeppelin and Pink Floyd) decided that he hated London and that scene and wanted to live somewhere else," she told me. "I didn't want to as I wanted to carry on doing rock'n'roll. I told him to give me five more years and he drew up a piece of paper that I had to sign! Five years later to the day he produced the air ticket and we returned to New Zealand. I absolutely hated it at first as I was really lonely. I had my first son Lawrence and then went back on the road again for nine months when he was 1 year old. I pretty much got it out of my system. It was the Depeche Mode tour that Roy Bennet actually designed, which I was operating, and there wasn't the passion left for me anymore. I also didn't have my usually crew with me who were used to me changing the show often and the crew I did have mutinied against me which was horrible. The show was supposed to be a mix of ideas from Roy and me but the crew couldn't see that. It all got a bit nasty. There was no laughter and fun on that tour. There are too many politics involved in touring these days."

Jane originally started her career as a set designer for theatre in New Zealand but, after deciding to become a rock'n'roll lighting designer, she travelled to England. She spent a few months trying to get work and eventually she landed a job with Entec, a London based lighting hire company.

"I gained an interview with them because they had been getting a lot of hassle from the Women's Liberation Movement due to an advert they had placed in a newspaper requesting a 'male only' employee," she told me. "I was taken on to pacify them and, although they originally planned to get rid of me after a couple of weeks, I stayed."

Jane was in Sydney to see Depeche Mode in concert and it was at the show that she finally felt she had put a lid on any urges to tour again. During the show at the SEC it was interesting to see that Jane, after years on the road with the band, could not stop herself

yelling out cues.

When she first arrived back in NZ she got a job as Technical Manager at the Newbury Theatre in Auckland but, after a life with rock'n'roll, she hated it.

"You'd have a stage manager giving you your cues," said Jane. "It was so far from being in charge and doing what you wanted. It was a bit soul destroying and they were very serious and snobby about theatre lighting. To them, nobody was supposed to notice the lighting and I'm not exactly Miss Subtlety herself! Then Depeche sent me a ticket to London for the premier of the movie '101' and they wouldn't let me go. So I left."

When I toured with Depeche it was very theatrical and exciting. All the crew appreciated it and everybody took it seriously with passion. The lighting had to have passion as it was a very clinical situation with the three keyboards there. Despite having a Vari*lite operator, I wouldn't let him touch the desk! I insisted on operating the Vari*lites as well as the Celco."

One of the most memorable tours Jane ever did was with Bob Marley in Italy in front of 100,000 people.

"It was incredibly hard work with very few crew in those days," she said. "Of course all the Italian crew would disappear. It was one of those tours where you were getting out of the gig at 7am and driving to the next to set up that day. After the show in Milan I had the choice of either loading out or driving the band to Turin. At 1am, I chose to drive the band although I had never driven on the left hand side and I didn't know where Turin was. Anyway, I got to Turin and at the first set of traffic lights all the band leapt out of the car and disappeared into the bars and the shops. It took me ages to round them all up. Bob Marley said to me 'how'd you learn to climb like a monkey, man?' Of course I then had to do the load in."

Now living on Waiheke Island, NZ, Jane is putting all her creativity into a new career of glass making.

"I thought I can't work for anybody as I'm no good at being told what to do, I can't type and I'm no good at counting!" she said. "It's really like lighting with all the colours and the glass and I'm very excited about it."



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Write in Reader Service number: 102

DENON introduce their miniDisk recorder, the **DN990R**, which is targetted at broadcasters. The MiniDisk is fast becoming the recording medium of choice anywhere fast recording and robust storage is needed. Denon's DN990R sells for \$3495, a play-only model sells at \$2480,



both ex tax. Remote control via an output port. Call AWA Distribution, (02) 898-7666.

OTARI have a new cassette duplicator, the **DP-4050F** system (right) features 16-times dupe speed. You can start with the C2 Cassette Duplicator, which copies to two tapes from your master, then add on the Z3 slave expander with three additional cassette slave transports. With a buffer unit, you can hookup 21 Z3's, to produce 66 cassettes in one pass. It records both sides at once. The analogue cassette will be with us for quite some time, the Digital Compact Cassette is not yet viable. Details: Amber 02 975-1211



MIXER ON PC, MAC:

General Music Corporation have released the new **Sound Engineer**, a fully programmable MIDI controllable audio mixer. With no traditional manual controls, the device uses a graphic software system for Windows, Atari ST or Mac systems. Timing & sync. are via SMPTE time code, channels feature 3 band EQ with sweep mids, a noise gate, VU metering and four auxiliary sends. The unit can be configured for 16 through to 32 channels, via modules in a 19" rack frame. Priced from \$15,000. Details: Noisebox Ent: 02 890-1709.

• The following changes have occurred at rooArt: Keith Welsh has resigned from his position as Managing Director of rooArt Records. His management company WOW can now be contacted at the following: Phone: (02) 358 1600 or Fax: (02) 358 1915. Nikki Turner has also left her position at rooArt. Personal assistant/office manager Paulette Warwick has also left the company.

• Tommasina Raso, best remembered as Michael Chugg's PA for years, is now working at BMG as Sales and Promotions assistant, reporting to Ken Outch and placed by Music Staff.

• Rebecca Edwards has left Sony and started working for Warner Music as A&R and Marketing assistant to Mark Pope.

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Bits

♦ The stunt show "Dragon Sword" at Australia's Wonderland gave a bunch of **AKG C407** mics a thrashing - including a dunking. Rod Nielsen reports five of the six are still goer's after 147 shows, including explosions, sweat and water torture. Call AWA for more.

♦ **Software Audio Workshop** costs \$995, and gives hard disk editing and up to 8 track multitrack recording on your PC. Call Mainly Multitrack, (03) 558-1155 for more.

♦ **RCF Australia** say West Australian customers can now be handled by Audio RCF. Trevor Williams is the sales manager, call (09) 470-3477.

♦ **Syncrotech Systems Designs** say direct AMS/NEVE Flying Fader resove-to-video can be had via Audio Kinetics ES Lock. Call (02) 417-5088

NewAudioNewAudioNewAudio



WEDGES: Jands' new System 400 foldback wedge is a 2 way, low profile wedge with an unusual dual angle portec cabinet design. This allows two angles- 22.5° or 45° as required. You may also stand the System 400 on end and use it as a PA speaker if need be. The components are the JBL 2206H 300m (12") high power cone driver, and the JBL 2426J titanium diaphragm com-

pression driver, mated with a 100° x 100° JBL 2344A bi-radial horn. The response offered is 60Hz to 20kHz, with 600w power handling. A high power, internal passive crossover is fitted. The cone driver and horn are fully

time aligned, and the wedge is said to deliver very high sound pressure levels whilst being easy to equalise. The finish is black carpet.

The weight 25kg, and the price \$2995 rrp. Details 02 516-3622.

• **NEXO** of France have a neat wedge design (left) that doubles as a PA speaker too. The PS15 has a 15" driver and horn, we thought the cabinet profile might interest some of you. Nexo isn't available here, we think.

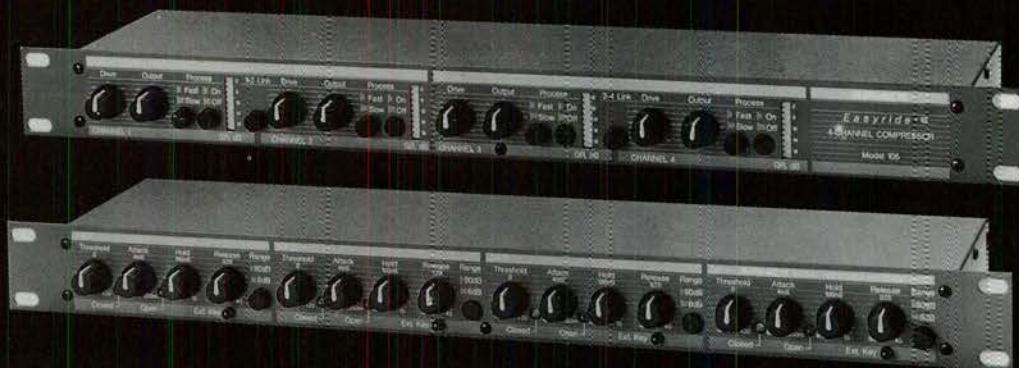


• Jeremy Paul, founding member of Air Supply has been appointed as Channel Ten's Programming Manager.

• Melissa Elsley has replaced John Little as promotions and publicity person for Music Sales and Omnibus Press book titles.

• Some title and shifts of personnel have happened at Polygram as follows: Tim Prescott has been appointed as Commercial Manager at Polygram. Adam Holt will now be Director of Marketing for International and Local Music. Craig Kamber has been appointed A&R/Red Eye Label Manager, while Deborah Gann will be reporting to Adam Holt. Sandra Robertson will now be Polydor/London label Marketing Manager. Bob Croucher is to become A&M/Motown Label Marketing Manager.

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Write in Reader Service number: 136

Bits

♦ **Fairlight** have appointed long serving sister firm **Amber Technologies** sales guy, **Graeme Rothwell**, as their Sales Manager for South East Asia and Australia.

♦ **Australian Audio Supplies**, they of Mackie fame, have a new phone number: (02) 879-6124. Same location, new no.

♦ **ISP** is a brand of canned sea food, we think. It's also the **Institute of Sound Production**, where input is sought from the audio industry. Tell them how YOU think they should train their students! (02) 212-3101.

NewAudioNewAudioNewAudio

CONNECTRONICS

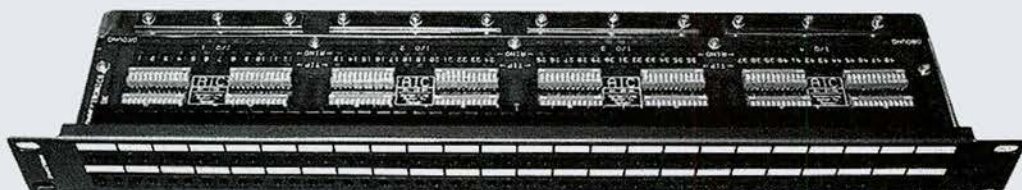
are a leading vendor of cables for audio, in the United Kingdom. Mark IV Audio Australia has just picked up this line, which includes some neat cables indeed. There is speaker multiway cable in 4, 6 and 8 ways, and super flexible foil screened multi pair from 3 to 48 pairs. Musiflex mic cable comes in a variety of colours, and features a unique thermoplastic screening method which is quick to strip and prepare. In addition, Connectronics have cable drums with integral stageboxes, and the JB9600 range of bantam patchbays (below) utilising a unique dip-switch for selecting continuous normalising options. *Call Mark IV Audio for more: (02) 648-3455.*

AMPLIFIER:

the **MAR 250** amplifier from **Phonic** retails at just \$1,095, and delivers 250 watts per channel at 2Ω. The **MAR 350** delivers 350w + 350w, selling at \$1,350. Both are 2 rack units tall, dual speed fan cooled, have turn on protection, and speaker saver input limiting protection. *Call CMC Music on (02) 905-2511.*

WEST PENN WIRE:

are a leading US manufacturer of cables for audio. Jands have picked up the line, and can now offer foil screen installation cable, Ultra-Flex microphone cable, Quad mic cable, Foil multicore (2 - 27 pairs), and Ultra-Flex Black Cobra snake cable (2 - 52 pairs). *Call Jands: (02) 516-3622.*



Wendy Allen becomes National Promotions Manager.

• **New Jack Swing** are about to sign a deal with **Sony Music**.

• **David Bland** formerly of **Sony Music** has been placed in **Hong Kong** at **BMG Records Asia Pacific** offices as Strategic Marketing Manager. This Job was handled by Music Staff.

• **EMI Music Publishing** have announced signing of songwriter **Steve Prestwich** to a world-wide deal.

• **Simon Moore** has left **Australian Talent International/Mushroom** to work with **John Woodruff Management**.

• **Deslie Bishop** has left her position as PA to **Mick Mazzone** at **Mighty Management** to work with **Pegasus Event Management**.

• **Mark Woods**, well known sound mixer (**Men at Work**, **Models**, **Tina Turner**, **Archie Roach**) has just completed almost 2 years with **Frente** as FOH mixer and tour manager. **Mark Woods Audio Productions** is now looking for new and independant bands with the potential for development. Write to PO Box 1119 Richmond North VIC 3121.

MUSIC MI

NEWS & UPDATE

MONTHLY NEWS SECTION, Starts on Page 75.

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BOOKS

A very good book from Tom

Practical Studio Techniques is worth its \$50 cover price for the Demo Mixdown CD supplied alone. This steps you through host of studio subjects, how to EQ and effects, and is a very well produced effort.

The book is written by Tom Misner, and edited by that Greg Simmons guy. It has 102 pages, dealing with everything including: The human ear, Dynamic control, Effects, DDL, EQ, Tape and Formats, Microphones, Recording, Digital Audio, Time Code, and even Video.

Tom Misner is the boss at the School of Audio Engineering, the worlds largest chain of recording schools, headquartered in Sydney. The book is easy to read, easy to use, and a great reference work. Practical Info boxes are scattered throughout, like I said: it's well worth \$50, be you a student or pro user. Call your nearest SAE (in all main capital cities) or Sydney (02) 211-2711. -JG

...hmm. And about AMBI....

For a music industry directory that was promised to be huge, glossy, accurate and comprehensive, the first *Australasian Music Business Index* (AMBI) published by *On The Street* magazine loses on all counts. Its thickness is due more to thick paper, large type and a fair amount of dead space rather than anything resembling a complete outline of the music industry. As for their page count in the rather sloppily produced book, it was impossible to tell since there were no page numbers and the table of contents simply listed sections which seemed to repeat themselves in several instances. One wonders where the 10,000 copies are that were promised, as few in the industry seem to have seen the publication a month after it was released. AMBI touted publication quarterly in April, July, September, November, December 93 and January 94 - finally coming out in late February 94. Poor effort. -JG

Peavey Train Aussie Dealers

In February a bunch of Australian and New Zealand dealers (pictured) flew to Meridian Mississippi for an inaugural week at the new Peavey Education Facility.

Organised by Peavey distributor Australis, the visit saw the dealers divided up into class room sessions, factory tours, and discussions with top Peavey people like their PA guru Marty McCann. The new facility has a 250 seat auditorium, 40 seat class-

room, recording and video studio, and film lab. A translation system is on hand that will work in four languages. At once!

Outside 'business hours', the Peavey folk treated our country-men/women very nicely, with a big time session at the local 'Hungry Heifer, where an impromptu 'Unplugged' jam with Peavey staff took place. The reaction of the Heifer is not known at this time. The trip updated dealers on PA generally.



MULTIMEDIA

VIDEO & AV WORLD

NEW SECTION EVERY 2nd MONTH: Starts Page 63.

MC

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Phil Tripp Writes....

International Media Guide

It's not easy writing a column a month of significant content but it's heartening when I get a reaction. Last month's column dealt with the government and music, referring to the lack of representation that the music production, studios, and professional audio/lighting/musical instrument sectors have with the Federal Government.

Rob Walker of the Australian Music Association read and remedied that by putting a submission to the Music Industry Advisory Council on behalf of manufacturers and musical equipment dealers. And it looks like some of the top studio bods might also make their voice heard according to some rumblings coming through the industry pipeline. But what about the live production sector?

But this column is not about politics or issues. I simply thought it might be a good time to turn you onto several overseas publications which might be of interest to you. I suggest you write away for a sample copy and subscription information but maybe you should get your local library to take the sub rather than you paying out hundreds. I've put their phone and fax numbers below to save space—if you want an address, please call or fax them and mention you saw them in Tripp's column in *Connections*.

Top of the list are the three concert production and touring publications—*Pollstar* and *Performance* which are weekly out of the U.S. and *Applause* which is a U.K. monthly. The two U.S. publications give itineraries of bands on tour around the planet and publish annual directories covering a variety of categories. There's *Talent & Booking*, *Concert Production*, *Personal Managers*, *Transport and Accommodation*, *International*. Clubs and Promoters plus in *Pollstar's* case, *Record Company A&R* lists.

Where these two have their

strength in North America, *Applause* is a great networking tool for the European and U.K. markets. The one other publication that caters to a global market is *Amusement Business*, published by *Billboard*, but it is more geared towards venues on one side; circuses, carnivals, sideshows and jukeboxes on the other. Similarly, *Cashbox* used to be a competitor to *Billboard* but lost the plot a few years back and now is more relevant to pinball, parlor games, jukeboxes and ephemera than straight music business.

Billboard is still the most widely read music industry trade and is weekly with international editorial based in London. Glenn A Baker is the local editor and a wide range of Australian stories make it into the pages but rarely on studios or live production. *Billboard* also has some directories which include *Tape & Disc*, *Talent & Booking*, *International*, etc.

A monthly music business trade launched two years ago is *Music Business International* with local correspondent Marcus Breen in Melbourne. It is more analytical and less news based. I like its features and general writing as a light read compared to *Billboard's* 'must read' weekly news and trends.

Music Week is the English trade mostly for the record trade but the same company also puts out *Songplugger*, a publisher's tipsheet, *MIRO* which is an odd little trade undergoing some change at the moment and they also publish *Music Business International*.

For songwriters and composers, but more for publishers, are two who's-doing-what tipsheets published in America. *A&R 411* is published by SRS Publishing as a regularly updated contact directory of artist and repertoire personnel within major and minor record companies as well as other talent scouts. *Producer Report* is a fax publication on record pro-

ducers published bi-weekly with producer news and activity, a directory and other information, mainly for A&R people and studios.

One of the best resources we've found for the music industry at large is an adjunct to *Mix Magazine*, the excellent audio trade published out of San Francisco. Their Mix Bookshelf division offers hundreds of books on audio, lighting, concert production, MIDI, music business, songwriting, playing and videos or audio cassettes covering a number of areas. Ask them for a catalogue which they mail free.

But if you're shopping for directories of the music industry in various countries, IMMEDIA! in Sydney on (02) 212-6677 stocks the two key U.S. books—*Yellow Pages of Rock and Recording Industry Sourcebook*—as well as the U.K. *Music Week Directory* and the European A-z book, *Eurofile*.

Here are all the key media with contact numbers referred to in this column:

• **Performance**; Phone: (817) 338 9444, Fax: (817) 877 4273

• **Pollstar**; Phone: (209) 224 2631, Fax: (209) 224 2674

• **Applause**; Phone: 44 (71) 700 0248, Fax: 44 (71) 700 0301

• **Music Business International**; Phone: (212) 779 1212, Fax: (212) 213 3484

• **Amusement Business**; Phone: (615) 321 4250, Fax: (615) 327 1575

• **Cashbox**; Phone: (213) 464 8241, Fax: (213) 464 3235

• **Music Week**; Phone: 44 (71) 620 3636, Fax: 44 (71) 401 8035

• **Mix Magazine**; Phone: (510) 653 3307, Fax: (510) 653 5142

• **Billboard (NY)**; Phone: (212) 764 7300, Fax: (212) 536 5035

• **SRS Publishing**; Phone: (213) 850 8946, Fax: (310) 550 8471

• **Producer Report**; Phone: (310) 455 0888, Fax: (310) 455 0894

AUX 2 Gossip

• **Lighting Firm**. STARTEC Pty Ltd have written to creditors requesting details of debts owed and any guarantees offered or in place. The letter directs the information be supplied to a 'professional consultant', one Dalket Pty Ltd of Montrose, Victoria, who will investigate the financial status of Startec P/L. The firm was involved in a nasty altercation with Strand Lighting, who apparently offered them an Agency, which some months later ended up at Bytecraft. Much talk of litigation followed.

• **While A1 Audio** is no more, the latest production company venture for Chris Kennedy, Northwest Productions, is doing well he says. "I am honouring all obligations". There are, he says, only 15 creditors still owed money by A1.

• **Stephen Devine**, the boss at Canberra firm Topstage Productions, advises his divorce is completed. He can now bonk around without guilt feelings, he says. Although of Catholic upbringing, he says he doesn't understand latin!

• **Baby notice!** Cosmic boss John Goldsmith and wife Janice have a new little girl born in March! Hillary was born at the civilised hour of 8.30am, 3210 grams.

• **Joke**: What do you call Hundreds and Thousands? A: Smarty Pooh!

• **Heard about how promoters have targetted Asia as a goldmine?** The Straights Times in Singapore reports that ticket prices won't exceed \$300. Three years ago Eric Clapton's highest price tickets were \$100. Expensive, and hard to make a profit.

• **Oops!** Brett Thomas, music writer at the Sun Herald mis-reported Vince Lovegrove had taken over management of Jimmy Barnes, - and had Michael Gudinski on the line, most upset. Seems Vince will take over from Jane West. Brett dashed to the Peter Gabriel concert the day after the story appeared, and did a major profile/interview about Frontier, a Mr. Gudinski firm. Amends made?

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Australian Monitor Pty Ltd

53 College Street, Gladesville N.S.W. 2111. Telephone: 02 816-3544 Facsimile: 02 817-4303

Russell Allsop, lighting rigger from Noble Park in Victoria, says 'keep going, it's a great book. I have spent over \$6500 through Connections'. He reports that 7-8 people read his copy.

Juanita Khone, tape duplicator of Footscray, Victoria asks for more articles on women in the industry. 3 people read her copy. •*The team here at Connections is equally represented by either sex, who are always looking for interesting subjects - why don't some readers nominate some successful women technicians, who we can profile? Call us.*

Paul Jackson, a sound engineer from Perth, asks for reviews of major sound consoles. "I need to know more about them before I use them". 4 people read his copy. •*We will try, Paul. Switched on distributors could/should offer 'user guides' to people like you, call them, let us know. Maybe some credible, working sound engineers may send us some reviews as submissions for consideration... -?*

Todd Wells, Chief Dude at Soundtracs (UK), says he appreciates the honesty of our product review of his Solo Logic console in February. He likes the chatty nature of the local news and the gossip. •*It's nice some people are not going to shoot us for being honest. Support them!*

Jeremy Smallhorn of Soundstruck in Mt. Crosby (QLD) says "hints, tips, suggestions on all things re EQ!" 3 people read his copy. •*See P. 48!*

Simon Job of Toongabbie NSW wants more Synth and Music Technology. •*Next month we have a Synth/Keyboard feature.*

B. Beatte, Audio Engineer of Fortitude Valley (QLD) says: "Sack Julius and hire Cathy Grey". •*It may yet happen, I'm getting towards the end. -Ed, JG.*

Mark Deluca, Theatre Audio Operator of Wagga, wants more employment adverts. •*Don't we all, Mark. Employment ad's are run FREE here! Fax them to us now.*

Foreign Talent

Phil Tripp raises the point in your March issue of overseas engineers and producers using holiday visas to work in Australia and take work away from local talent.

What he writes is true for local engineers, but totally out the window from the point of view of technical facilities.

Rightly or wrongly, many Australian recording projects see access to a "name" overseas producer or engineer as a critical ingredient in their chances of success. If these overseas "names" cannot work in Australia then the projects will go off-shore.

Perhaps the best course of action is to make sure that these overseas producers do apply for formal working visas, because one of the requirements in granting such a visa is that the visitor provide training for an Australian. In five years of managing Platinum Recording Studios in Melbourne, I was frequently forced to arbitrate between competing assistants desperate to work with overseas producers.

In regard to the "poaching" of Australian talent to work overseas, surely this is just evidence of some of our engineers and producers making it into the elite of the international recording fraternity.

- **Gary Moorhead AUSMUSIC (Manager: Commercial Operations and Business Development.)**

Rich Pickings

What utter nonsense from Paul Rich (Managing Director, Rich Music Studios) in your last issue! The Rich Music group was in deep financial trouble throughout 1993, as evidenced by the constant demands from Rich for money to be remitted from the Melbourne school to prop up NSW - ostensibly as 'loans'. Needless to say, very little of this money was actually returned.

The trouble was, the money used to prop up Rich's Sydney empire actually consisted of fees prepaid by Melbourne students.

The 'unrealistic financial demands' purportedly being made by me were requests to return money which, in my opinion, had been unlawfully appropriated in the first place because it should have been held in trust.

The attempt by Rich to take the credit for continued operation of the Melbourne courses is sick. It was he who suggested to me that I collect fees first, and then close the school! It was Paul Rich himself who wanted to come to Melbourne so that he could sell all of the school's equipment to try to ease his financial burden. If I hadn't arranged a lockout to prevent his getting his hands on the Melbourne assets, he would have closed the operation without compunction. "I have always acted in the best interests of the students" indeed!

As far as the creditor situation goes, I too am a creditor for a very substantial amount of salary and fees - and I am informed that there is no money left to pay any salary claims. The former office assistant here is also owed money. Generally, salary claims are supposed to be paid preferentially. But isn't it interesting that creditors who had security over equipment that Rich needed to re-establish were paid out, while the rest of us with less leverage were hung out to dry? If any "arrangements" have been made to pay out the \$20,000+ of Melbourne creditors, we certainly haven't been told. Or are we amongst the unfortunate who have been written off "due to confidential legal reasons"?

I deeply resent the cavalier fashion in which the students, creditors and staff of the Melbourne operation were treated. I am appalled by Rich's belief in his absolute right to trample all over the spirit of Australian Corporations law and his belief that he only needs to honour those debts which it is politically expedient for him to pay.

Fact is, there is a bunch of us here in Melbourne who have effectively subsidised the rebuilding of the Rich empire to the tune of over \$20,000 without

our permission, and I for one am not going to stand for it.

- **Vyt Karazija, Managing Director, Recording Technology Training Centre P/L**

Penile Punter Probe

I was most pleased to see that you intended to include "Exciter" type products in your next "Buyers Guide".

Our new model **PE1 "PUNTER EXCITER"** takes the shape of a long penile shaped object, weighing slightly more than the average police batten.

Completely harmless to the environment but very effective when used to whack beer spilling punters at the base of the skull.

The result of this action becomes painfully obvious to the punter, who, in a state of "Excited" bliss, (a technical term) is prone to stagger slightly.

Ultimately, the Punters "Excitement" is highlighted by a total lack of bodily functions caused by the obvious numbing sensation.

It is at this point that their rational thought process is escalated to the point of zero and total disfunction of the limbs is experienced by the punter. The result is a rush to gain direct access to the floor.

This well proven method considerably reduces damage to consoles from fast moving drink containers whilst providing Sound Engineers an almost limitless supply of entertainment for the evening.

It is also helpful when extracting payment for the night's gig.

There is one small warning: Do not leave unattended, in full view of certain patrons, whilst in erect position.

Additional information on the **PUNTER EXCITER** can be obtained by writing to:

- **Simon Plynth, Giant Sales Co. PO Box 6495, Melbourne, Victoria 3004**

Sheila's Back!

I refer your March issue Contents page (5), reference to

Send Letters! PO Box 439,
Epping NSW 2121, or fax:
(02) 876-5715.

LETTERS

*#//@%XX -?!

the two people photographed in rear view, and referred to as 'NAMM BIMBO'S'. Yet again your publication denigrates working women. I am personally aware of two female work colleagues who have stopped reading your magazine because of this. When will you ever learn?

- **Sheila Yates, Glebe, NSW.**

* Welcome back Sheila, it's been at least SIX months since you last wrote, and some readers have grown restless. The rest of the caption on Page 6 to which you refer has been conveniently left out of your complaint. It deals with the matter better than anything I say here, which tends not to register with you, our vigilant feminist police PERSON.

PS: Didn't you say you'd CAN-CEL your subscription when last you wrote? Ed from Enrec has a crossword for you, look right>>>

Buyers Guide Split

Great, I like the new layout, but didn't like the Buyers Guide being split up and scattered everywhere. Put it back where it belongs!

- **Charles Adams, Fort Video, Adelaide SA.**

*You'll get used to it, we hope!

Gem of a Mistake!

"We Need Your Great Mistakes" implores the Dec/Jan issue of Connections, and I can't think of a better one than on page 8 of that same issue - the A.M. "Opal" advertisement.

Look closely at the picture. I've got to have one - an amplifier with "stauts" LEDs on each channel is a MUST!

Perhaps as they've flawed them, A.M. might get rid of them

cheap! - **Greg Sheridan, On-Line Audio, Sydney NSW.**

*It's a drawing, Greg, and you've obviously got a microscope

Gaining info.....

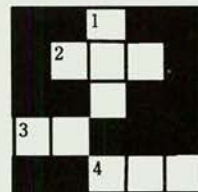
Can someone explain, in a future article, the concept of unity gain and gain structure and why it's important in getting a reasonable sound/signal level out of our PA system?

By the way, keep up the good work, I enjoy getting my issue every month!

- **Tony Romeo, Quakers Hill, NSW.**

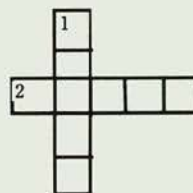
Drummers Crossword

1. The ___ sat on the mat
2. The cat ___ on the mat
3. The cat sat ___ the mat
4. The cat sat on the ___



The Sheila Yates Commemorative Politically Correct Non-Sexist Crossword

1. All words make feminists ____
2. No ____ are safe



Answers: 1) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

Crosswords from Ed at Enrec Studio, Kuri Kuri

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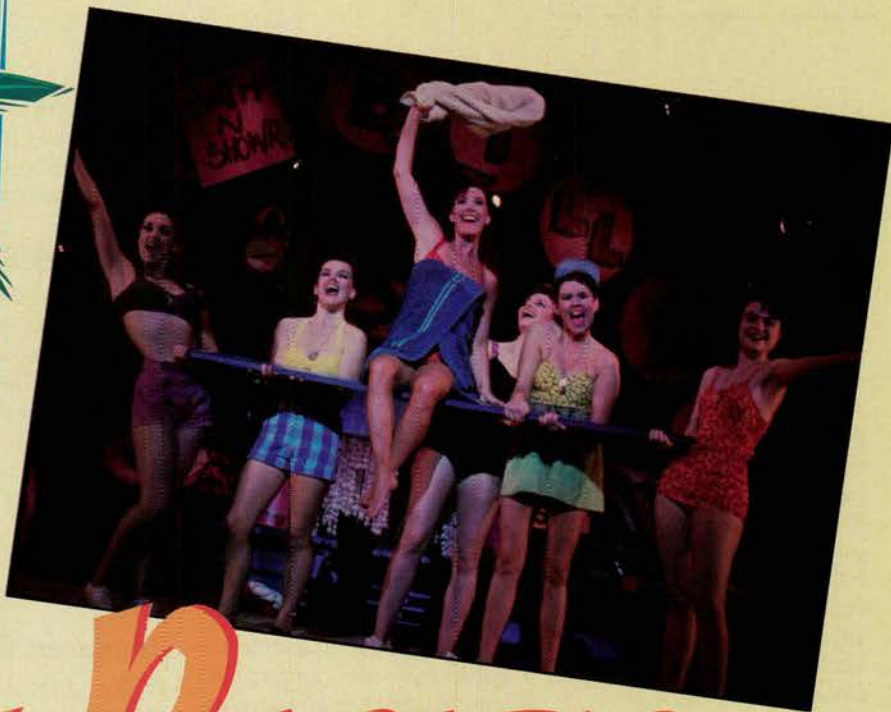
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Write in Reader Service number: 135



SOUTH PACIFIC

The musical 'South Pacific' recently opened at Sydney's Her Majesties Theatre and it was a touring production jointly put on by Adelaide Festival Centre and The Gordon Frost Organisation. The show started in Adelaide last June and, after a six week run, it has since been to Brisbane for six weeks, Perth for nine weeks and seven weeks in Melbourne. It will run in Sydney for an expected three months with a possibility of it heading to Hong Kong later in the year.

Reviews have been good with particular praise for the set designer Brian Thompson and lighting designer Nigel Levings.

LIGHTING

"There's nothing particularly tricky about the show," said the touring head electrician with the production Al Foster. "The rig is pretty straight forward with not much overhead because of the three bamboo bridges that fly in during the show for different scenes. They cut an awful lot of the overhead positions down consequently it's fairly heavy on side booms. There are a couple of transverse hung ladders to get some overhead light. We have five smoke machines but there's nothing particularly special about what they do either. It's a very straight forward, traditional rig for what is a traditional show. It doesn't require tricks, it's just large and fiddly."

The production is touring about 150 Lekos (most with gobos), 100 par cans with 32 Colourset scrollers and eight Selecon 1200 Zoom spots all with gobo rotators. The gobos are standard and are basically cracked water

and horizontal break up. There are four follow spots, two Zebex out the front and two Lycians on the side of the stage.

"There are a fair amount of mini pars dichroics," added Al. "There are a handful on each of the bamboo bridges to do facial shots. They are also hidden nearly within the different stage sets (the nissan hut, radio room and the shower setting for that scene) which move onto the stage, when the operator gets to the middle of the floor he just plugs in the lead. There is also a jeep which has been converted to an electric motor which gets used in the show. We have radio controlled trucks, as well as the nissan hut and the jeep, which is used in the Bali'Hi scene. It's just a radio control to what is effectively an electric fork lift motor."

The real emphasis of any mood to the lighting comes from the back wall where the cyc is used very heavily for the reflection of emotion onstage. There's a big scroller wash on the cyc plus top and bottom cyc lighting as well. So there's quite a lot of option there for colour usage and grading top to bottom, left to right."

The Adelaide Festival own the Lekos, par cans, scrollers, the dichroics and stage follow spots. In each city they pick up a handful of 2K fresnels and the bottom end of the cyc lighting which is generally Pollux's or similar. Front of house is also picked up in each venue.

"Basically we use what ever they've got," said Al. "The only city where we've done a large hire has been here through Chameleon and that was only about 60 or 70 lamps for the front of house rig. The lighting control here is a Gemini 2 Plus."

STAGING

The load in at Her Majesties took five long days with 24 hour shifts in the first 3 days.

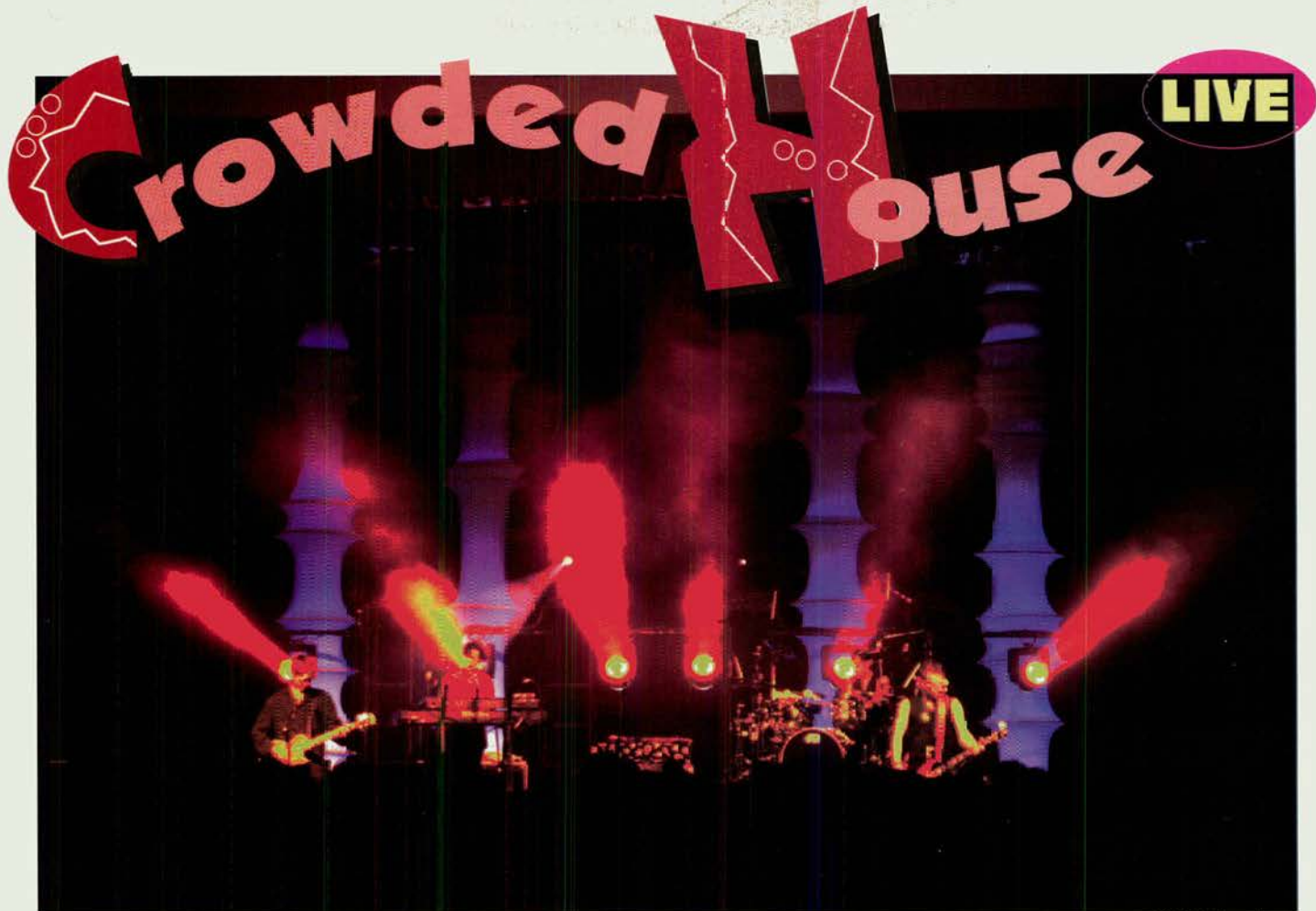
"We got everything as we wanted by opening night but not the first preview," said Al. "We're very limited by space here, there's no room upstage not even enough room behind the cyc for anyone to walk behind it. The wings aren't particularly large either and it was very squeezey getting everything in as it was in His Majesties in Perth. Infact it was even tighter in Perth but in Adelaide, Brisbane and Melbourne it has all been Arts Centres and they are huge."

"We bring a degree of our own power flying with the show, most of the ballasts are on normal fly lines in each venue. The three bridges are on our own motor controls that effectively drive the counterweight system that exists. We just clip onto the top and bottom of the cradle and drum with DC motors. Basically, because they're so heavy and large, you'd need four flymen for each bridge which would take up twelve flymen for the cue, because they all come in at the same time, plus there are other things happening which would make sixteen flymen! So instead we've got motor controls on that, computer controlled, and a DC motor revolve also computer controlled."

SOUND

Sound designer for the touring show was Ron Barrow who fortunately was involved in the building of Her Majesties Theatre and he described his return there as fun.

"The biggest problem with Her Majesties is
(continues on page 24)



PICS: Catriona Forcer

After a successful two month tour of Europe, Crowded House returned to Australia for a short run. Catriona Forcer caught the tour at Newcastle Workers Club

SOUND

Sound engineer Bruce Johnston had only been working with the band for one week having previously worked with acts like Tim Finn, Darryl Braithwaite, Diesel, The Lyrrals and James Reyne.

"I heard a rumour that they were looking for someone so I sent my resume in," said Bruce. "I know most of the crew anyway."

Bruce was using a Turbo rig supplied by Jands which consisted of eight TMS-3 Turbo cabinets a side for standard club shows, with up to 32 for large shows. The main board was a Yamaha PM3000 with a PM2000 for extra channels and the support band. Effects wise there was an AMS, an Eventide 3000, a couple of Yamaha SPXs, eight limiters and eight compressors. There was also a DAT player as they always have to DAT the shows as the songs may turn up on B-sides in the future.

"They are Jands clients and told me I was to use the Turbo system but I could choose the rest of the equipment," said Bruce. "The budget was fairly open and effects wise I could pretty much have what I wanted that was in the Jands factory. At this stage the Yamaha desk is pretty much my preferred choice, they offered me a Midas XL3 but they're quite a large board and I've only used them a couple of times. I wanted to feel comfortable on this tour, as it's a very important one to me, so I stayed with the PM3000."

"They're all good singers and they always play full houses which tends to make it sound

better. The only hard thing about mixing for them is that they have a list of about 45 songs and they don't pick the play list until half an hour before they go on (in Newcastle I witnessed Bruce and Dave being given the set lists moments before the band came on). Some nights they play songs I've never heard before but it's very interesting although you never get into a mode where you feel comfortable which is probably good for a sound guy."

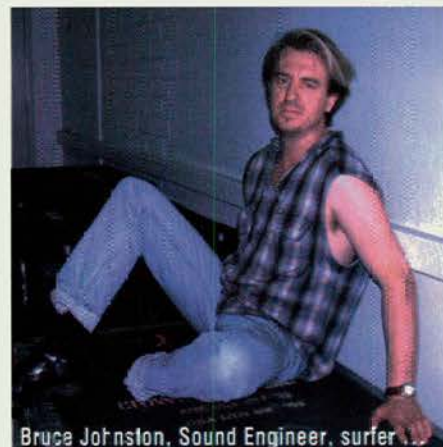
On stage there was a Ramsa 14 send monitor console, 12 standard Jands SLP and DLP wedges, R3 side fills - in fact not much equipment at all, and the monitor engineer was Paul Leparge from Canada. *(I don't think Catriona is heavily into foieback -Ed)*

"They're not a loud band," said Bruce. "They have quite a lot of inputs for a small band with 38 inputs from stage which is the most I've ever dealt with."

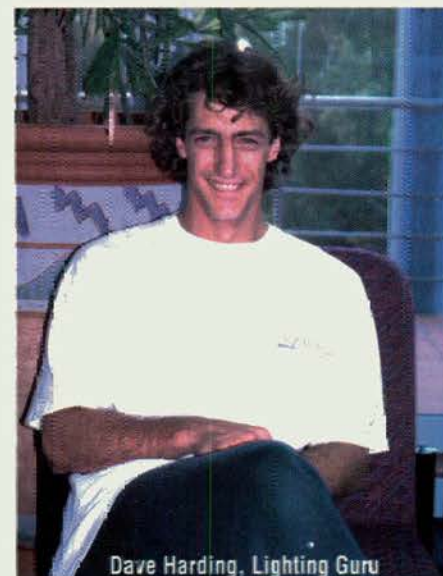
The day prior to the concert the band had performed a free show in St. Martins Place, Sydney which was broadcast live by Triple J. Unfortunately there were sound problems, and Dave explained why. It's every sound engineer's horror story

"We had to use Sydney Councils PA system which had a 16 channel board," he said. "The sends on the board didn't work so I could only get one send. The cue buttons didn't work either so I couldn't listen to the channels individually. I only had a pair of headphones and three wedges. I was doing front of house and

(continues on page 24)



Bruce Johnston, Sound Engineer, surfer



Dave Harding, Lighting Guru

South Pacific

the acoustic difference between upstairs and downstairs," he told me. "Upstairs isn't so bad if you have a full house. I'm using a kind of new speaker system with South Pacific that goes against the normal - it's tannoy with direct drive as opposed to standard horn speakers. To me, it sounds much more like a HiFi system. We're not after power but quality and that's what the system gives us."

Ron is using a typical musical system where the orchestra and vocals have separate speaker systems with the orchestra stereo and the vocals are centre with overhead speakers.

"We use distributed vocal systems to basically get a much more even coverage for the audience and a natural sound," said Ron. "I'm very happy with the results throughout the whole run."

The whole show uses radio mics usually about eighteen with a lot of swapping of radios throughout the show so all the cast are covered. Ron said he was using some new Sennheiser radio mics which, despite a few teething troubles, have been very reliable. The radio mics are mixture of Sony and Sennheiser and most are 900Mg UHF. All the orchestra, which is rather classical with strings and classical instruments, has mics. "Consequently I've been very careful with the mics using condenser mics a bit further off than usual," said Ron. "By backing off a bit we can achieve more natural acoustic sounds. There's no heavy amplification by any means. In Sydney a fair bit of the sound is acoustic so we're just reinforcing that. It's only in the third part of the show that we amplify a bit."

Control is two of the new Soundcraft Vienna boards which were purchased especially by the Adelaide Festival as was most of the sound equipment.

"Again except for a few teething troubles they've been really good," Ron said. "We've had a few faders and switches play up but that's all. It's a good board for musicals. We've also got a third sub-board for the orchestra because we've got 20 channels for the radio mics and 40 channels for the orchestra as well as a few other things."

One of the main audio features of South Pacific are the sound effects which are all done by a digital sampler - Akai 3200 - and DAT.

"The digital sampler has proved to be very useful for us because we have one major sound effect which is the aeroplane taking off," explained Ron. "We reproduce that at rather high levels through Meyer MSL3s. It was done from a live recording of a bomber and we had to extend it, loop it, modify it, fiddle with it to match what is happening onstage! The Akai was slow to set up but fine during the show although I would have liked a hard disk PC system."

Other sound effects include the jeep coming on as it was electrically driven it needed the sound of an engine starting up. The show requires two sound operators Paul Tilley who runs the radio mic and is apparently very busy and Martin Hansford does the orchestra. As one of the reviewers of the show said 'they were able to see the choreography of the sound operator because he was so busy'. •

Re: Theatre Production Reviews.

We invite theatre crew and/or management to contact us seeking production reviews. Large or Small shows considered! Please call the editor, Julius Grafton, (02) 876-2612, or Fax 876-5715.

Crowded House

monitors which I thought would be pretty easy but they put a lot of pressure on me. I didn't think they would be as serious as they are with a big show but they want everything done perfect all the time."

LIGHTS!

Dave Harding was in control of the lighting (Dave has been operating Vari*lights with the band and their lighting designer Steve Swift since 1986) and Bruce Johnston the sound. At the Newcastle Workers Club Dave found it impossible to put the rig in as he would have liked but, having toured small clubs through Europe, it was no problem for him to compromise.

"The concept of the vertical trusses we have here came up in Europe," said Dave. "We couldn't hang anything so we just threw the trusses on their ends and puts some lights up on top. It's become quite useful! With this tour, for economical reasons, it was more viable to take out a smaller amount of lights. Steve designed the show on paper as well as designing the set pieces which are made from heavy duty lycra tubes with hoops in them so they compact down and stretch when lifted up. Steve also put together the deal with the production company - Jands - for the lighting."

The whole lighting rig is run through the Artisan desk although prior to the Newcastle show there had been eight Colourfaders, one for the bottom of the columns and one for the top. Unfortunately, due to prior production commitments, they had been sent back to Melbourne. To compensate Dave had put VL5s underneath each column to add to the Profiles and VL5s on the front truss and, on the stage area, VL2s and VL5s.

"There are also some strobes but it's really a very minimal lighting system," said Dave. "I get what I want out of it with some nice moody looks. Most of the show is broken up into different areas of the board so I've got my standard front wash and side wash for a bit of lift. I've got my Profiles for keylight and that's basically all the front practical lighting that I have. I have six VL5s on the back truss as rear wash and the VL2s, for 90% of the show, are throwing patterns or effects. You can get really nice colour mixes between the lighting on the inside of the columns and the lighting on the outside. We have an oil cracker just to get a bit of atmosphere, not great chuffs of smoke."

Originally it was intended to hang the VL2s just in front of the columns and the VL5s just behind but unfortunately this was not possible in Newcastle hence the vertical trusses.

"They've got fly bars up there but apparently it costs an exorbitant amount of money to take the lamps down and you can't hang anything underneath it because the pipes won't hold more weight than is already there," explained Dave. "There are no fly points and it's a great drawback because it's a great stage - it's high, it's deep, it's wide but you can't put anything in the roof." (WHO did this recent and new venue installation? Is this for real? Someone please tell me! -Editor) •

Footnote: At Newcastle the band played for only one hour and fifteen minutes, not even one encore was performed although the crowd were cheering and, rightfully, expecting more. The evening ended on a sour note with the punters booing and leaving feeling cheated for their money. I wonder if the band would have dared do such a short set in Sydney? -Catriona Forcer.

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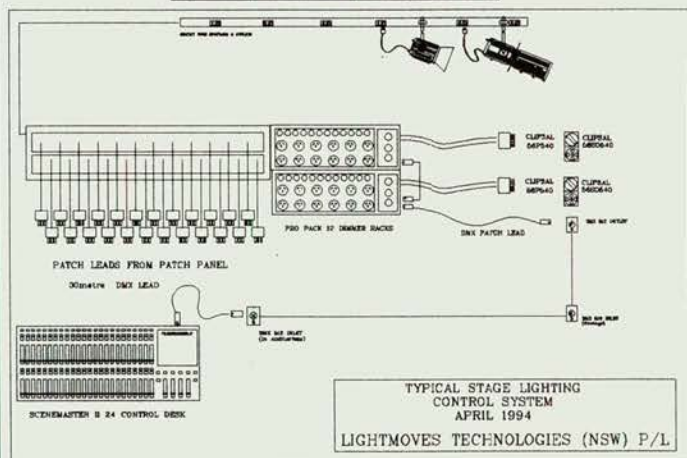
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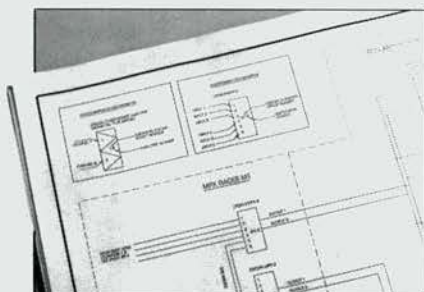


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The Crown MPX-6 multiplexer and SMX-6 sensing multiplexer provide unsurpassed mixing and routing/switching capabilities.

figuration of the SMX-6 are achieved with downloadable software. These downloadable instructions, called Algo™ Packs, allow the contractor to program specific capabilities into the processor of the "intelligent" SMX-6. Automatic mic mixing, video-follow-audio switching and impedance and equipment checking are just a few of the many possibilities. It may also be combined with the MPX-6 for in-

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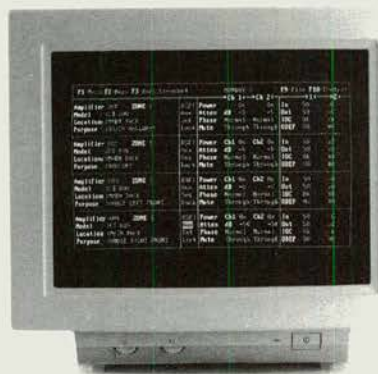


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creased mixing and routing capabilities at a reasonable cost.

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Both IQ System multiplexers provide an option for being driven directly by any computer with RS422 or RS232 communication. An additional multiplexer option provides compatibility with the PA-422 standard and allows multiple PA-422 devices to be independently driven from each multiplexer. This permits control of compatible digital delay units, parametrics, third-octave equalizers and more.

No-Fee IQ System software.

Unlike other systems, the basic IQ System software is provided without charge with any IQ component. Software is available for both MS/PC-DOS-compatible and Apple® Macintosh® computers. Because of the many possible applications for these components, command codes and protocols are included so specific routines may be programmed by the contractor or system user.

IQ COM-Q. Complex system control made simple.

The IQ COM-Q component makes system configuration as simple as playing a cassette tape. Designed to digitally record the commands from an IQ host computer onto almost any tape medium (cassette, open reel, DAT), the COM-Q permits the system to be configured by simply playing back the appropriately recorded tape for a desired system change. This not only



The IQ COM-Q makes sound system configuration as simple as playing back a cassette tape.

allows for quick and simple changes, it permits those without extensive training to control the system. Contractors can pre-program configurations in-house for an installation which then requires only an IQ COM-Q and interface-capable component to run the system. With multitrack recording, the COM-Q can initiate complex audio and system commands

useful in applications such as theater productions and crowd movement at theme parks.

Installation ideas.

The design flexibility and sophistication of the IQ System may make you rethink how you design installations. Here are just a few of the many possible applications.

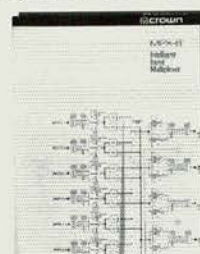
Small Conference Center

The IQ System multiplexers can decentralize audio system installations, reducing wire and associated costs, without decentralizing control. For example, one multiplexer and one Com-Tech® can be used to control the signal routing for two banquet rooms.

Surveillance/Security

The IQ System can be used to create a surveillance system in high-security areas. With strategically placed microphones and Crown multiplexers, audio or video-follow-audio monitoring is easily achieved.

For more information on the IQ System and system components,



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Peter



Gabriel

PETER GABRIEL'S 'SECRET WORLD TOUR 94' HITS TOWN. WE WONDERED IF WE WOULD SEE TWO STAGES, TWO PA's AND ENDLESS VISUAL TRICKERY. CAN THE MEGA TOUR BE FREIGHTED DOWN UNDER IN ITS ENTIRETY? THE ANSWER IS NO, SO HOW DID THEY MAINTAIN INTEREST?

REVIEWED BY CATRIONA FORCER

After hearing fabulous reports of the recent European and American Peter Gabriel tour, which won several industry awards, the Australian 'version' was fairly disappointing in comparison.

Dennis Gardner took over the lighting design for this leg of the tour from Vince Foster (who had gone on to do Phil Collins) and Bill Surtees controlled the moving lights with yet another Wholehog desk. Both Dennis and Bill had been with the tour since day one.

"Vince came onto the tour as sixth man out when the original lighting designer was given the push, after only two weeks of rehearsals, he got the job," said Dennis. "The original designer was a theatre guy, bought in by the stage designer Robert Lepage, and I think he was a bit lost with the way we work as opposed to the way theatre works. Vince inherited the basic trussing concept and the lamps because we only had four more days of rehearsals left when he took over. I looked after all the colour changers and programmed the Arc Diamond for him. The first European leg was very hard because 'people' booked venues without knowing what the size of the show was going to be and our first two shows were Stockholm to Oslo back to back. It was virtually impossible with a show that had two stages. We got there at midday and while the audience were coming in we were still putting the deck panels down. We had to axe the conveyor belt, shorten the catwalk and we were still focusing after doors."

By the time the tour reached America, the crew were happier with the show and on the second tour of Europe a movie was shot for future release. At this point the show featured two main stages, a square one and a round one, linked by a 70ft catwalk which had a conveyor belt on it. There were also

hydraulic lifts so the band could go up and down, a revolving video screen that could track up and down the stage, a phone box, a tree and many more effects.

"It was a totally different show," said Dennis. "This show is more a standard touring show."

"It's very unfortunate," added Bill. "Especially with the show we had last year where the entire stage was custom manufactured. It would have been a mammoth task to bring it all here but it's a real pity. We knew some time ago that the big show wasn't coming down here and it was disappointing but there's no point in moping about and being miserable. Dennis and I have a new lighting rig although the songs are the same, and we literally have carte blanche to create a new look. If Peter doesn't like it, he will say so and he can be difficult in so much as he'll have something in his mind he wants to see. He likes us to be adventurous and he likes to see things happening differently every night. That's a great position to be in."



Rick Pope (Monitors) & Huw Richards (System Eng.)

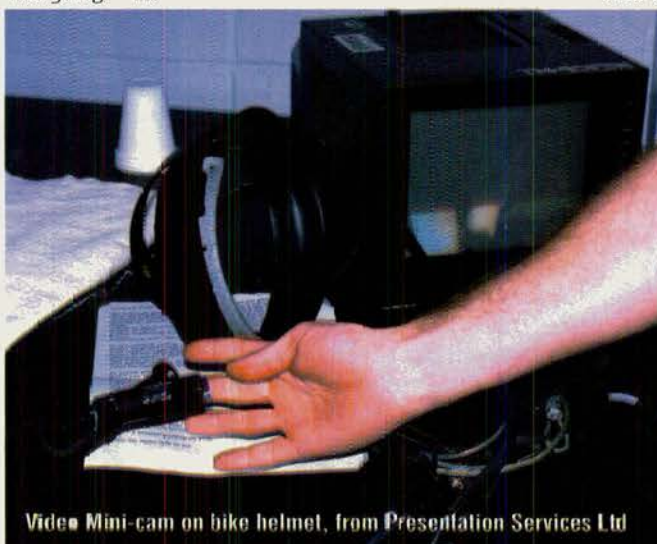


The lighting rig was designed on paper by Vince and interpreted by Dennis. It consisted of a 40ft front truss and an arch truss with four fingers that come down at 60° angles to the stage. Two of the fingers are used as side lights whilst the other two point out upstage left and right. In the middle of it all is the video screen.

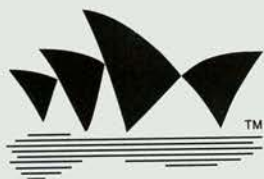
"Peter is a very visual person and he likes to use all manner of effects," said Dennis. "Video is used for about 80% of the show, either playback or live camera footage. The lighting fixtures are rather boring - we have twelve Superscans controlled by the Wholehog console, about 250 Par cans and 32 colour changers. The rest is made up of twelve strobes, eight 5Ks and eight Molemags. We have to all work together to make sure the lighting and video don't compete with each other. This is not a standard rock'n'roll show with flashing lights, a lot of the time it's just moods with the Superscans moving and the video on screen."

Also onstage there were four vertical towers with lights in them and a Superscan on top of each one.

(continued over)



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EnTech

Peter Gabriel (from prev. page)

32 Superscans and straight after the American leg Peter was to play at the WOMAD festival, also in America. The festival rig for the three weeks of the WOMAD was designed by Vince and included the twelve Superscans. Straight after that Peter was due to go to South America for three weeks and tour in a similar situation. Peter decided that it made sense for him to purchase the twelve Superscans, control console, power supply and signal cable for those six weeks as well as future tours like Australia. In Sydney the rest of the lighting rig was picked up from Jands. I asked Bill why he was not running the entire show through the Wholehog as Nick Sholem had with Sting.

"It's perfectly possible and the Wholehog is well set up to do that," he replied. "But it's a major advantage having the two forms of lighting separate. If we had more time and the show was much the same each night, then it would be quite acceptable to put it on the Wholehog. But the show changes every night and you need the quick access of a conventional lighting console whereas with the Wholehog you'd have to go in and type it into the program. I can concentrate purely on the moving lights to get them spot on and Dennis can control the generic lighting, smoke machines and call the spots. Moving lights tend to finicky little things that can happen during the show which you need to concentrate on. I'm a great believer that there should always be a separate person running the moving lights, even in the simplest of situations, because it can all go wrong very easily."

"When we came here to Perth we only had one night to program the show and if you had been doing it all on the Wholehog it would have been an immense work load," said Dennis. "With two consoles you can cover each others arses to get the show working. The Perth show was a bit tatty as we were all so tired but it's fine now. The crews here are excellent and the followspot people are the best."

Bill actually lived in Melbourne for most of his life, moving there from England when he was a kid and so he has found the tour particularly enjoyable.

"I moved to London two years ago to further my career," he told me. "I used to work on the local crew at the tennis centre a lot and having experienced the competence of local crews throughout Europe and the States, I knew coming back to Australia would be a joy. The local guys are prepared to pitch in and do anything cheerfully. They don't have a know-it-all attitude and will ask how you want things done, then do it right."

It was at this point that the guys were called FOH because Peter wanted to rehearse some new ideas he had had for one of the songs. Peter was after a shadow effect on the video screen and so he stood behind the screen with a 2K fresnel, stripped of its lense and front so its just a bulb, shining behind him. The effect worked and was added to the show so that

Peters shadow grew to monstrous proportions against an image of the moon. Peter also wanted to experiment with reflecting a Superscan beam off a hand held mirror (a similar effect was used in his last tour) and, after a few fairly successful attempts, a runner was dispatched to purchase a budgie mirror as apparently they work best.

"This is what is so good about this tour, every day there are different ways of doing the songs!" said Dennis.

VIDEO

Des Fallon was the video tech on the show, freelancing for the video company PSL (Presentation Services Ltd) who supplied the tour.

"The video images come from Peters Real World offices," Des told me. "They're a mixture of bits and pieces taken from his pop promos and videos. They're chopped about a bit so you may have two or three images laid on top of each other in the video. There are also purpose made bits for the show. The most difficult part for me is doubling up the two projectors, having to converge them onto the same screen. It's generally a long day. We've tried to avoid having lots of close-ups of Peter on the screen all the time and we try different things to make it more interesting. There's a lot of keying over with video and camera and a few effects used."

Visually, the highlight of the show was the number 'Digging the Dirt' when Peter wore a bicycle helmet fitted with a minicam which hung, via an arm, a few inches in front of his face. The idea came from the overall show designer and Peter and the apparatus was built by PSL. A cable runs from the camera to a small power supply in Peters jacket, then the cables run to the video system. The video images of Peters distorted face were very powerful and he performed with the medium very professionally.

SOUND

Sound engineer Peter Walsh is more used to working in studios than being on the road. In the past he has done studio work with artists such as Stevie Wonder, The Tubes and Heatwave. As a freelance engineer, his first job with Peter Gabriel was coproducing a live album.

"I'm a studio-based sort of guy," said Peter. "I've always been into that side than the live side. It was only when Peter asked me to do this tour that I felt like a change and something a bit more challenging. I had done an amnesty tour with him about six years ago which I had really enjoyed and basically he likes to have someone doing the mix that has worked with him in the studio, someone who can translate the ideas of the album. Also the way I'm working on this is almost like a producer. I have a good rapport with the musicians and I can ask them to change things. Peters brief was that anything I hear that I

think could be better just do it."

One thing that Peter insisted on when he took the job was that he had someone from the sound company, Britannia Row, to babysit him through the tour. Peter did not want the pressure of not knowing what to do in an emergency.

The mixing desk Peter was using was a Yamaha PM4000 and all the reverbs were Lexicon 480, two PCM70s. All the delays were TC2290s which Peter uses for other effects like flanging, phasing and panning. Other effects were SPX900 which Peter used for pitch shift and the Quantec which is a German echo machine.

"It's basically a room simulator with a very long reverb in it and it works as a sort of real time sampler," Peter told me.

All of the hand held mics were Shure Beta 87s, the mics on stands were Shure 58s, the guitar was a Sennheiser 409, the drum mics were Shure SM98s for the toms and SM91 on the kick drum, there was also a B&K on the kick drum and AKG 451s on the overheads.

The mother company behind the sound for the tour was Britannia Row of England but the main system was too large to bring to Australia so the PA system was hired from Jands.

"Peter has not toured Australia before so obviously he has to come here and introduce himself before bringing down a full scale production," said Huw Richards of Britannia Row. "We're using a TMS3 system with 24 inch subs. It's a pretty standard and rather dated PA system now. The system we were using on the main tour was a Flashlight which is basically all Britannia Row use now. With the Flashlight the components are completely different, Function 1 (owned by the guys behind Turbo) make the components themselves. The advantage of the Flashlight is that the high end is very narrow - 20% dispersion against 60% with the TMS3 - so in arenas you can really pinpoint where you want the sound to go and it covers that area. You can cut down on reflections because you're not hitting the back walls. With this system the sound is basically developing in the room and is just going everywhere, reflecting off so many different surfaces."

"From my point of view last nights show here in the SEC was probably the worst of the tour but then again the reports have been great. Within my camp we know we're capable of better. It's always difficult when you're moving a large PA from room to room especially with someone like Peter who often changes his songs. Today we've made a few adjustments and we feel it will be better tonight. It's a very odd room in so much as this position is probably the worst to mix the sound from because nobody sits here, it's just an aisle way. There's a terrible low build up here - 63Hz - so all night you tend to want to fight it."

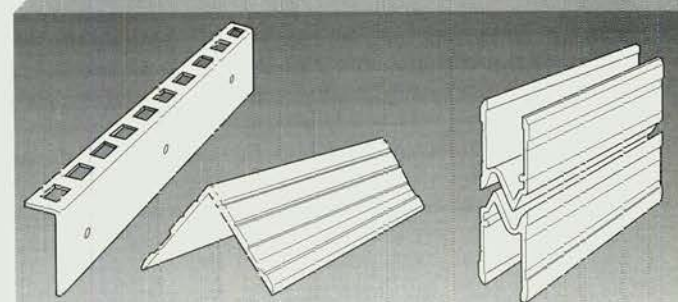
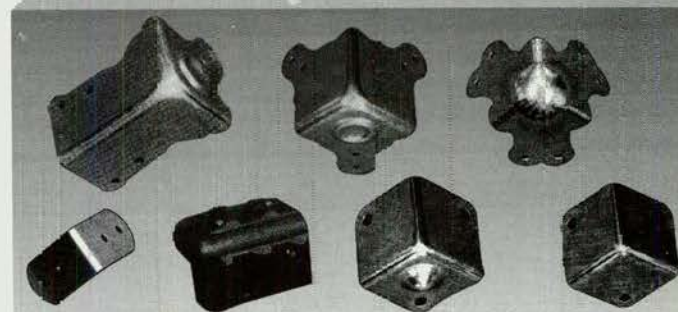
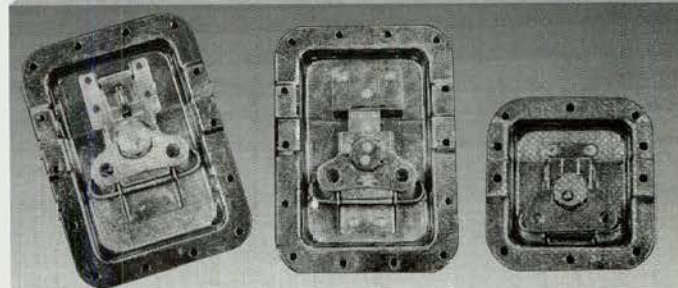
"We've got this BSS Varicurve which we use on the bass guitar where each song has a different EQ because he basically uses five different kinds of bass instruments including extensions which he sticks onto the end of his fingers giving a very metallic sound. So you really have to EQ the base separately from the normal desk EQ and quite a lot of those EQs have got boosted low end programs so we tightened those up. We've analysed the room and we know the 63Hz built up isn't very controllable so we've adjusted the frequencies of the kick drum head so we don't have too much overlay on the 63Hz."

"I think everybody was very tired yesterday and if the band don't play 100% then they can really effect the show as it's so dynamic. Manu Kathe is such an excellent drummer you have to follow him all the way and it's different every night."

"What we've bought with us is our own desks, own effects racks, insert racks, playback racks, monitor system and all our own mics. We're using a Ramsa monitor desk."

"We've been happy with the PA so far and the backup from Jands. It's very well maintained for this part of the world and I think Jands is probably the finest company down here. Brit Row have a good relationship with them and they look after us." •

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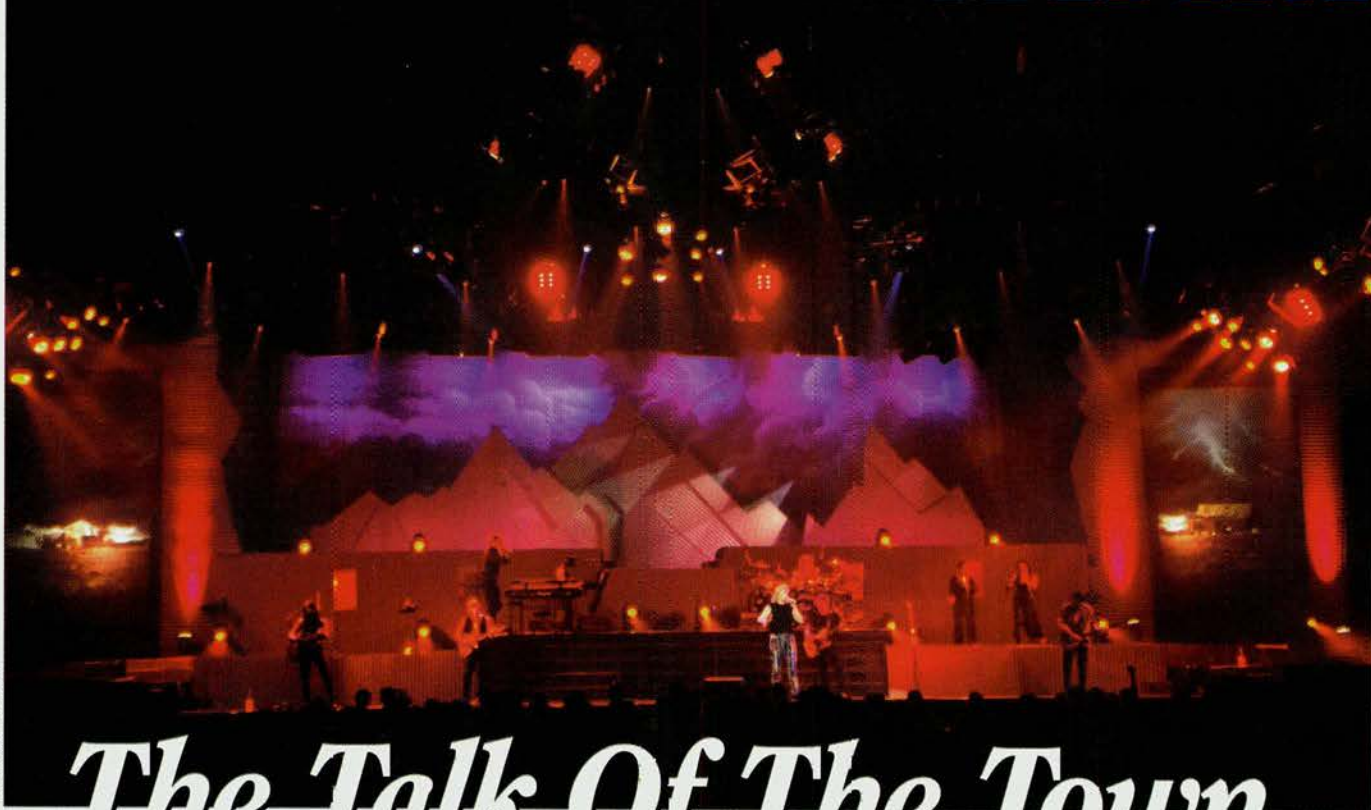
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JOHN FARNHAM

Pic: Serge Thomann



The Talk Of The Town It's the highest grossing Tour in a long time

Touring today is ultra-expensive and often Production money is spent that doesn't improve the show for the audience, some of whom suffer substandard sound and are seated too far from the act. A select few international Performers do well year-in and year-out, one of these is John Farnham, the other Neil Diamond. Both have high production values.

John Farnham's audience enjoy 'on your face' video and a centre-cluster delayed speaker system that overcomes the sound hassles you always get at the rear of a large arena. This is John Farnham investing a little more to ensure his audience get better value, so they respond by coming back each year in larger numbers. A proven reality!

No matter where you are you are immediately struck by the ultra large stage, 83' wide and clean of backline equipment. There is no set, rather the stage steps up to a rear walkway and has risers to each side. The risers and stage rear are dressed in corrugated iron!

Monitors are under the stage right riser, such that stage view is through the riser base. Stage tech's are based under stage left in a similar cave. Monitor speakers are almost all beneath the stage, punching up through steel mesh. Guitar and bass speakers are down here too, along with the minimalist keyboard technical station for new Farnham keyboard player Chong Lim.

Opening the show is maximum impact, a

Paul Kelly track on the interval tape is the cue, it is turned up loud. Suddenly it cuts, simultaneously with the houselights, and most of the 101 Vari*Lights zoom-pan back down the arena towards the stage as the opening song starts. They zap onto the top of the rear riser, snap from deep blue to open white, and there's John Farnham. All done in seconds, masterful coordination between lighting op-

erators and stage personnel.

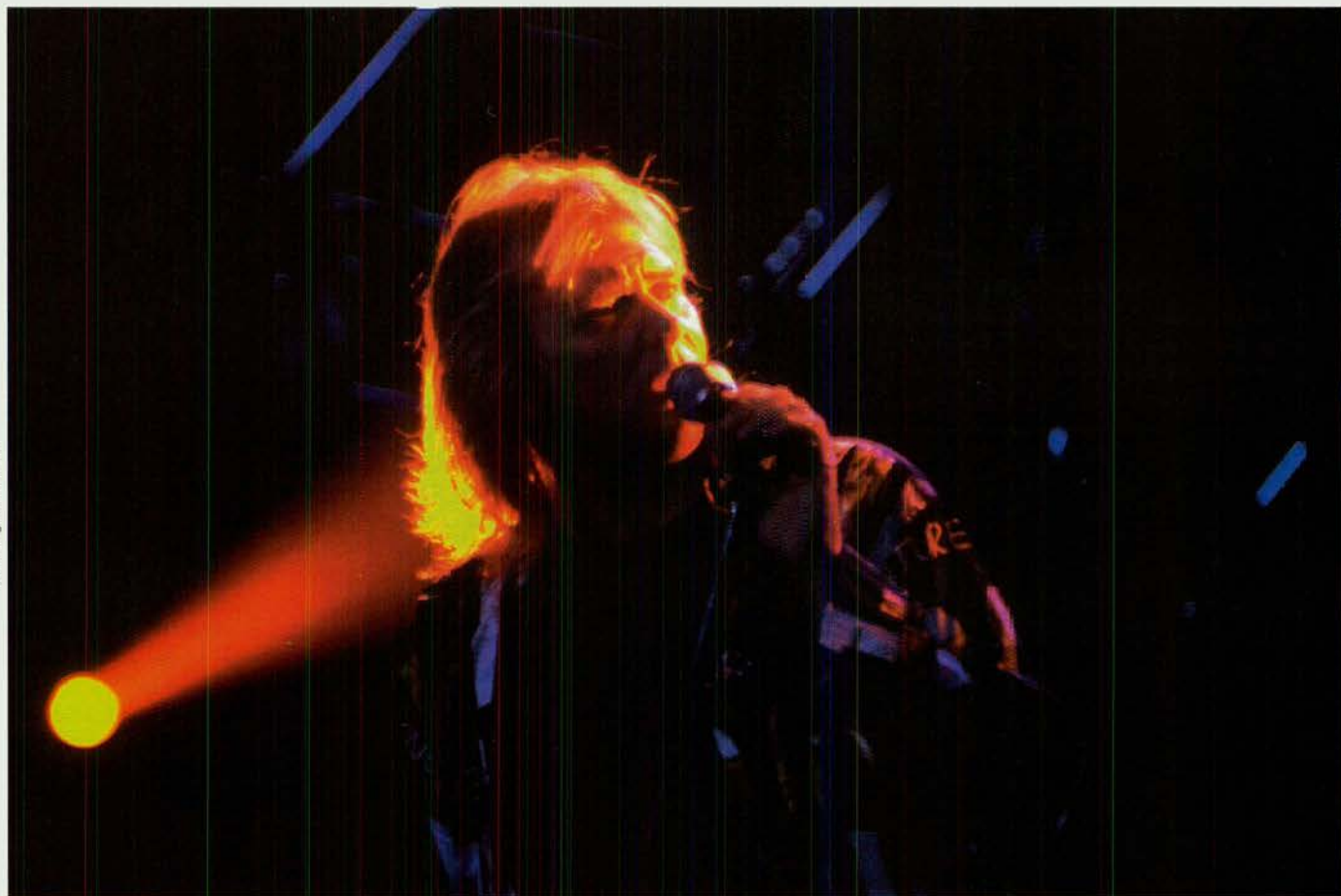
The sound is 100% from the first instant, the delay cluster is in perfect alignment, having been tweaked during the support act so that the delay from the front speakers is matched exactly to account for temperature variations since soundcheck that a capacity audience creates. Sound engineer Grant Walsh

(continued on Page 35)



Pic: Serge Thomann

Long serving John Farnham sound engineer Grant Walsh.



They called it "the Lightshow from Hell!"

Although lighting designer Chris Newman and Vari*lite operator Peter Lothian have known each other for over fifteen years, the John Farnham 'Talk of the Town Tour' was the first time they had worked together on a show.

Chris has been working with John Farnham ever since he left The Little River Band which was about eight years ago.

"I did the last Little River Band tour with him and then went on to do the Whispering Jack tour," said Chris. "Prior to that I worked

with many pub bands such as Morco Rock and Russell Morris. I still work with The Little River Band as they spend three months every year touring around Europe and America. I also do a fair bit of corporate work during the year. I usually hire my gear through CLS, as I'm Melbourne based, although I am freelance."

Peter Lothian has also worked with numerous Australian pub bands over the years before going to work for Jands and training as a Vari*lite operator. He met the English lighting designer Jonathan Smeeton (Wham, Peter

Gabriel, Kylie Minogue) and for the past eight years he has worked as Jonathan's Vari*lite operator on such prestigious tours as George Michael, Phil Collins, Def Leppard and Kylie Minogue. In fact, in a couple of months Peter is due to work with him again on the forthcoming Yes tour.

"Jonathan designs the show, I program it and run it and he leaves," said Peter. "There are a lot of benefits to working overseas with international acts. There's just not the amount of work here on this level with Vari*lites. We have a hundred Vari*lites on this system which I think is the most an Australian act has ever toured with here. I also do a lot of freelance work for Channel 9 so I'll also be doing the ARIA awards as well as The Logies."

Chris admits that John Farnham really doesn't have much input in the lighting because everyone on the crew has been with him so long, he feels he can trust them.

"The look of it is pretty much up to us," said Chris. "The brief I got from the production manager and the tour manager was that they wanted it big. Unfortunately, because it's only a ten week tour, they won't spend much time on production rehearsals so you've only got a week to put it together. Two months before the tour they're talking about it whereas overseas it would be six months and you'd have a month of rehearsals. So the whole thing has been stuck in a short frame of time. They've gone through the 'do we want to use hydrau-

(continued over)



Farnham: Lighting (continued)

lics?' and 'do we want to make a big stage set look?' but there just wasn't the time. By the time someone makes a decision, you're six weeks away from it and Christmas is in the middle of it. So then I think they fall back on just making it 'a big look' and they dump it in my lap."

"As a result you have to keep it pretty much generic stuff that is easy as you don't want to



Peter Lothian at the Vari*Lite console

spend a lot of money on having speciality things made up, like trusses, for such a short space of time. It would be alright if you were on an eighteen month tour."

The rig comprises of 180 par cans with 50 colourchangers amongst them as well as 24 eight-light molefay colourchangers used as block colour wash instruments. Followspots total ten and there were four cracked oil machines which are switched on at 5pm and left to run. The set pieces were made by Illusions in Melbourne. All the lighting equipment was supplied by Jands except for the Pani projectors which came from Bytecraft. This was the first tour where John had used Jands using Melbourne based companies before.

"With the number of moving instruments it was just easier to use Jands," said Chris. "The Melbourne company didn't have them and would have to bring them in. The time frame was a problem too with people having to bring things in from America. Even Jands were doing the same thing with the lamp kits to convert the VL2c's from the VL2b's. It was very last minute. It's basically just par cans, ACLs and molefays really. There are nine individual trusses which move during the show - a reuniversal truss, a V-shape truss just above John and then some spot trusses hung diagonally across the stage. I'm always of the opinion that if it looks half decent with nothing lit up, you're in with a chance to begin with. If you can actually change the look of it as you go then that's half the battle. There are some pretty large changes in the look through the show. John does the show like a two half thing dropping off to a ballad section in the middle. It's not a really dynamic show, there are probably only two songs where you can go crazy ape bananas with and the rest is fairly smooth. We had a bit of trouble with a few songs to begin with where we didn't know what to do."

I asked Chris and Peter if they found that on all tours there was always one song they never

quite manage to get right.

"We have more than one!" laughed Chris. "This album is a lot smoother than any of the rest. With his other albums John has used other writers and so the result has been a diverse range of songs but with this album he wrote most of the songs with some co-writers. I'm not saying it's a bad thing but they do tend to all have the same feel."

Special effects in the show include some Pani 4K projectors for static slide projections on some side screens. There were also a couple of scenic backdrops - one a sunset on a white scrim which drops out at one stage on a kabuki drop (for the song Angels) and the other a billowy cloud look in fairly neutral colours so that Chris can light it in any colour he wishes. In between the two drapes there is a mountain scenery prop which is used during the song Talk of the Town in front of the cloud drape to give an outback look to the show whilst the side screens show slides of the outback. When

not displaying slides, the side screens have a colour wash on them which comes from behind as the material is a Rosco rear project fabric.

Chris controlled the generic side of the show from an Avo QM500 and he also used an Avab to run the Pani projectors which have slide carousels on them. A Colourset controller ran all the colourchangers both the eight-lights and the par cans.

"The colourchangers have been no problem at all," said Chris. "We have Craig Knight full time on those and I think we've only had one unit go down on us during the whole tour. I'm having troubles with time delay on the pick me up cues, I don't know if we have too many units on the one controller. You punch the cue and you get half of them jump to it and the other half trail along fifteen seconds later."

The stage was the biggest problem, being 88ft wide by 50ft, for Chris who starts his design by what he has to cover and then works on a truss design. He then works on lamp positions and angles so that by the time he talked to Peter he had a rough idea of how things would look. It was Peter who had the idea for the four side pods to give a large block wash as they needed to get so far out without adding another 200 par cans.

Jands happened to have some pods left over from the Bon Jovi tour which Peter and Chris adapted by adding VL5s and VL4s grouped together to form a punchy unit.

"We have 38 VL2c's which are brand new,"

said Peter. "They're a 600watt VL2b. We also have 25 VL5's, 20 VL4's and 17 VL2b's active. We're using a VLD for the VL5's interfaced with the dimmer and that's about it! Everything is flown apart from 10 VL2b's used as floor instruments. We've had very few Vari*lite problems and Zois Margaritis keeps them in absolute tip top condition."

Peter only had two nights in Brisbane to programme the show and I asked him if that was enough.

"Put it this way," he replied. "A show this size in the past, as if with Def Leppard, I've had usually six weeks to do it. We coped OK but we were lucky that, because we both live in Melbourne, we spent a week together going through a tape and deciding what we wanted to do with a song before we sat down in front of the rig. It's still a different kettle of fish when you do sit down in front of it though. It was pretty feverish and frantic programming! It was a case of just getting it in there for the first show and then working on it later on. We're still touching up things, we'll probably just get it right when it finishes."

The show had already been to Brisbane, Perth and Adelaide before it reached Sydney and it was then due to go to Melbourne for ten nights. The production is then scaled down to a basic analogue rig (14 lighting rigging points as opposed to 60 points they were using at the SEC) for a Newcastle-Canberra-Tas. circuit.

"It was more an operator thing as opposed to the instruments themselves," said Chris. "Vari*lites take up an operator plus two technicians and I think they were more worried about staffing than the actual equipment itself. They're such small shows I guess it doesn't warrant spending so much money. Not that we're bitter!"

I asked Chris and Peter if they thought it was unfair that they could put on such a spectacular

looking show, which could compete with any international show, which would not get much recognition beyond Australia.

"It doesn't even get much recognition here," replied Chris. "The thing with John is that 90% of the audience don't go to see anyone else but John anyway. You could put him up there on a cardboard box and they wouldn't even notice it. You're only doing it for the 10% who are in the know and see it. Maybe this one is a bit more different as it's a lot more 'whizz bang' than in the past. The audience range from 6 years old to 60 years old and half of them have never seen anything on this scale before. The other half don't even realise what it means for a show to be on this scale, they've never seen anything to compare it with and they probably think all shows here are like this!" • By Catriona Forcer



Chris Newman, Lighting Designer

mixes on a Yamaha PM 4000 console, and has a style I like, mixing up the rack toms for accent, and running a dynamic mix.

The sound system for this tour is a departure for John Farnham and Grant Walsh, being a Jands system. Until this tour John Farnham had been the best customer for Melbourne based Troy Balance Corporation, who utilise Meyer loudspeaker systems. Grant is philosophical about the change, and quite happy with the system used on this tour.

The system comprises 74 Clair Brothers S4 MKII speaker cabinets, which are now something of a world standard. The system engineer for this tour was Greg Rosman, who told me Jands now have only S4 MKII cabinets, the original S4's have been de-commissioned. The Mark II cabinet has newer JBL Vented Gap Cooled woofers, components and steel flying hardware. This enables a much greater rake of the flown columns of speakers, so they can be pointed directly down if need be. The other major change has been the introduction of proprietary Clair Brothers 'System Controllers', which are crossovers, time alignment devices and system limiters all in one. "There is some EQ tweaking in there too", says Rosman.

With so many S4's in the air, the need for sub woofers is negated, the S4 has a pair of 18" speakers for bass, four 10" midrange speakers, and two 2" throat, 4" o/d compression drivers for high frequencies. Amplification is all Carver, which conforms to Clair Brothers standards. A Jands S4 MKII system is for all intents and purposes the same as one you'd find in Europe or the USA.

12 S4's are hung as a centre cluster just behind the mix position, and time delayed. These take the flown weight of the lighting and sound systems to 30 tonnes, on 90 chain motors. This is a nine truck tour, and the setup time is 24 hours. An average setup would see the touring rigger mark out the rigging points on the floor at 7am, with the first loading call at 8am.

Then the day goes like this: 9am Lighting call, 3pm Staging call, 5pm Monitors & Backline, 6pm FOH check, 7pm Monitor/Backline check, 9pm focus lights, midnight programme Vari*Lite.

Next day at 9am the FOH sound is tuned (equalised), then at 1030am all is quiet for monitor equalisation. At midday the backline crew are let loose, and soundcheck starts at 3pm with the keyboards and drums, for a full band soundcheck at 5pm.

This schedule went out the window in Sydney, where an extra Peter Gabriel concert worked the venue the night before Farnham. Production Manager John Phillips faced the largest challenge of the tour, and worked with Peter Gabriel's production to make it happen.

He sent in a crew the day before Gabriel and had a 'Mother Grid' of truss flown from 18 points. Gabriel then worked beneath this. Then on the morning of Gabriels last show, he had his sound points rigged because they were well in front of Gabriel's standard 40' x 60' stage.

Then at 2am when Gabriel's loadout was finished, Farnham's crew moved in. The show went off perfectly that night! •JG.

• **Crew:** David Sneddon, **Tour Manager:** Shelley Maine, **Asst. Mike Emerson, Stage Manager:** John Phillips, **Production Manager:** Gary Fadbourn, Simon Gregg, Barry Woods, Frank Iskra - **Stage Technicians:** Peter Pollard, Don Sudholz - **Staging:** Grant Walsh: **House engineer:** John Henderson: **Monitors:** Greg Rosman, Mats Frankl, Bob Daniels, Paul Newman - **Sound:** Peter Lothian **Vari*Lite:** Chris Newman: **Lighting Designer:** Gary Chamberlain, Kylie Morris, Matt Wood, Michael Kent, Craig Knight, Sasha McKissock, Graham Glassen, Zos Margaritis - **Lighting.**

FOLDBACK MASTER



John Henderson is a monitor engineer with some impressive feats in his career, mixing foldback for John Farnham, and the Little River Band for many years is a major task.

13 mixes (sends) are output from a Midas XL-3 console, which normally has 16 outputs. For the final two sends, a matrix of the normal 16 outputs is used. 18 from 40 inputs!

"Hendo" has a neat trick or two. On stage each vocalist has a foldback wedge or two. That vocalist mainly has themselves in their mix, with whatever else they've asked Hendo to put in. All around the stage are areas of foldback mix, with wedges hidden under the floor, and a pair of Turbo boxes flown each side. As John Farnham moves about, Hendo follows him around, by assigning his main mix to the wedge position he is nearest.

The main trick is that each vocalist has their vocal input split in two, and the second mix channel has a compressor inserted over it. This way, it can be sent to all OTHER mixes, or destinations, such as the adjoining vocal wedge.

Likewise the kick drum is split, one channel has an Aphex 'Big Bottom' exciter across it, for the main stage mix, while the drummer gets an un-compressed kick mix. Bob Daniels from Jands assisted Hendo on this tour.



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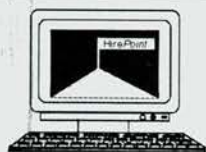
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HIRE BIZBUZ

Music Capital Productions Tamworth NSW Ph: (067) 62-2452 have appointed Phil Hoffman as the new manager of their Tamworth retail shopfront. New: Apogee processed wedges. MCP's opinion, "fantastic". M.C.P. are trialing Apogee 8000's and SCV Graphics for a touring gig - results to date "excellent". Plenty of home-town Tamworth Country Festival gigs for MCP in January too.

BOSE and The PA People and more Country music: 5000 fans enjoyed the 39 degrees temperature at the C.M.A.A. Country Music Awards held at Tamworth this year.

Some crew members apparently had difficulty in distinguishing artists requirements from the sometimes lumpy messages left by masculine rodeo bovines! (*Wha-?! -Ed*)

Audio requirements dictated splits to the Hoyts OB Van (commercial and ABC radio. Sydney's P.A. People supplied the F.O.H. splits, foldback, PM 3000's for Broadcast and nearly everything else required. They even hired Bose 802's to Bose Australia!

The F.O.H. consisted of Bose 802's flown either side of the stage, with a centre fill & two delay rings up the back. Bose 502B subs handled the bottom end powered by Crown VZ5000 power amps. All 802's were powered by Crown MA2401's connected to a Crown IQ system.

The Crown IQ System allowed monitoring and adjustment of amplifier performance at the F.O.H. position. Des Williamson F.O.H. said "the IQ was great, it allowed us to change F.O.H. levels as one stack was directly above the presentation stage. We could drop the gain on this stack at the touch of a mouse."

ANYTHING AUDIO Sydney (02) 879-6788

...has had a change of personnel down in the Hire Dept.. The new manager is a well known figure in the local industry, Glen Wheeler. Glen comes with a big smile and experience.

Glen replaces Damien Cooper who was accepted by NIDA for a three year Technical Production course. Competition was fierce!

ELECTRIC SUNSHINE Ph: (02) 660-6000

SCOOP: The Bohemian Club was the venue last week for a lighting show provided for the anniversary of the 'Jonestown Suicide'.

Each year the Jonestown Club meets to mark the mass suicide of the followers of Jim Jones who went to meet their maker.

This year Electric Sunshine was asked to do a bizarre psychedelic set-up. Theo Pappadopolis, the designer of the lighting set up explains, "we had to light the Raspberry Kool Aid dispensers which were dotted around the room, in a kind of green/blue. The organisers had a special theme this year where a Jim Jones look-a-like would spring from the stage firing a replica sub-machine gun while saying "Hurry, time is running out." get the idea?

FERNANDEZ MUSIC, Cairns (070) 51-8519

"It's been quiet up here this month. Luckily I had no F.O.H. mixing gigs because my ears haven't recovered from the Angels' gig last week, which will go down in history as one of the loudest gigs Cairns has ever heard. People from Innisfail, 90km away rang and said it was too loud!! Ian Taylor strikes again!

We almost supplied production for Jose Feliciano at The Hilton, but some promoter quibbled over \$100. You get that!! And he didn't! (We still made money on the sub-hire).

CENTRESTATE SOUND & LIGHTING Orange NSW Ph: (063) 62-0587 also spent some time at the Tamworth Country Music Festival

and worked with such acts as Lee Kernaghan, Tommy Emmanuel, Ann Kirkpatrick, Paul Kelly, Donna & the Moderation and the Fargone Beauties, just to name a few. Alan and the Centrestate crews provided various size rigs around the traps and as usual had fun.

ACTIVE LIGHTING Hawthorn (03) 819-6912

did production hire for the pre-match entertainment of the 1994 AFT FOSTERS CUP. 10 x Goldenscan III 1200 HMI placed on the grandstand roofs; 8 x Goldenscan 2 for the stage area and over 1000m of DMX Cable was needed to make it all work. LD: Beau Southey, Board Operator: Grant Jennings.

BSS LIGHT & SOUND INNOVATION Thebarton SA Ph: (08)352-8688 have had a busy season to date with the Biennial Festival of Arts, which benefits all the SA companies.

BSS supplied an outdoor PA for seminars. They supplied production for a Fringe Festival play: 'Filling The Silence' performed by Doppio Teatro - Italian Theatre Co. Equipment included: 4 x Tas Mini Ultrascans and Celestion SR1 & SR2 cabinets.

-Caroline Grafton.

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**BF511
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The MD 515 and MD 516 have hexagonal grilles for acoustic transparency and make it easier for you to sing into the mic's "sweet spot." They have precise, supercardioid patterns for outstanding gain before feedback and the ability to handle high sound pressure levels.

The MD 515 and MD 516 are recommended for musicians who move around the stage a great deal. The body is glass composite and the capsule is isolated from handling noise by SCS®. A noiseless ON/OFF switch is included on the MD 516.



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you close mic without distortion. Special moisture protection for the capsule keeps the MD 527 accurate after hours on the stage. The capsule is also protected from handling noise by a spring suspension system



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transmitter's performance remains constant throughout the life of the battery. The three switches on the transmitter (ON/OFF, channel selection, and mic sensitivity) are recessed to prevent accidental switching. The receiver employs the true-diversity technique, where a logic switch continually monitors the field strength captured by two independent receiver sections, choosing the one with the strongest signal. It comes complete with antennas, squelch control, channel selector, and LED status and level indicators.



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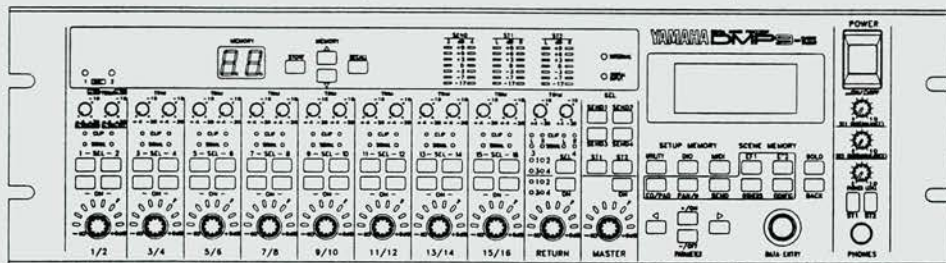
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Review: Yamaha DMP9-16 Digital Mixer

By Bruce Waite & Dave Macken, Blind Lemon Pie



"Digital Mixing Processor" is the more than apt title given to the Yamaha DMP9-16 by its loving factory parents. We'd like to get this straight right now because this is definitely not a complete mixing desk nor is it a console replacement. Putting aside the former comment we can say that this is sure to be a dandy piece of equipment for those who need a box that does what this one can do. Now...who these people are going to be is a little hard to discern at this stage and this is because the DMP9-16 does most things a mixer will do but you can't actually

physically do a full mix on it in real-time.

Packaged as a 3 unit high rack mount the Yamaha DMP9-16 encompasses a host of software features, two slightly varied on-board effects processors, scene stepping automation and an interesting array of entry and exit ports for your audio. The connection of pretty much any current analog or digital format is allowed, however, not to every input available on the processor. (Sorry folks no AES/EBU ports) While we're on this point let us quickly describe for you the situation on the back of

the thing.

All sixteen channels have an unbalanced line input based on ye olde 6.35mm jack sockets, there are two balanced XLR mic input sockets and these must always be used on channels 1 and 2. Still in the analog realm, the outputs are offered as two discrete +4dB pairs, the first is balanced by way of two XLR's known as "Stereo 1" and the second is unbalanced using jacks and is called, you guessed it, "Stereo 2". Added to these are two jacks for extracting auxiliary sends 3 and 4 from the mix and a fur-

(continued on page 40)

EX-TRACK

With Greg Simmons

Here we go with all the news that's fit to print along with considerable amounts of unfit stuff, too.

• First item on the agenda: **Home of the stars?** What's got dreadlocks, 60's attitude, 16 wheels and something large, hot and throbbing between its legs? After a brief call to the guys at **Poons Head** recording studios (WA), eight Harley Davidson's roared up to the front doors mounted by retro king **Lenny Kravitz**. Er... Lenny wasn't mounting all eight hot throbbing Harleys — he was accompanied by **Tom Edmunds** and crew. Plenty of beer was consumed until 5:00am, when Lenny and his entourage departed in the comfort of three chauffeur driven busses with the new demo playing full blast as they drove on down the highway. Poons Head have a Studer 16-track analogue recorder synchronised with two Alesis **Adats** for 32 track recording. They've got a 48 channel automated console with 64 mix inputs, a large selection of valve outboard gear and some classic microphones. Add to this a set of Apogee converters for digital recording and mastering and a brand new Tube Tech LCA2A stereo compressor purchased from **East Coast Audio**. If Lenny and his crew arrived on eight Harleys and left in three busses, where are the Harleys now? To find out, call Poons Head on (09) 339 4791.

• **Where credit's due...** It's **ARIA** nominations all round in the **Russell J. White Management** camp with engineering legend **Tony Cohen** being nominated for Best Producer and Best Engineer. At the same time, **Mark Forrester** and **Michael Letho** both have nominations for Best **Sound Engineer**, whew... Stewart Day hasn't missed out either! At last year's inaugural Malaysian Music Industry Awards held in Kuala Lumpur in November, Stewart picked up the **Malaysian Grammy**



WORKBENCH

With Howard Jones

FAKE AES PORTS!!

A growing area of concern is that of interfacing digital audio devices or, at least, using digital I/O ports to connect various boxes together.

The obvious example is when a user wants to dub material from one DAT to another, but increasing numbers of samplers, effects units, digital audio workstations and hard disk storage devices also offer the option of transferring audio without leaving the digital domain. The intended benefits are obvious: quick and easy interconnection of units from different

manufacturers to allow dubbing and mixing without going through redundant D to A and A to D conversions, and standards exist which should make digital hookups easy. However, anyone who has ever connected two units via their respective digital ports, and then failed to get the connection working properly knows there is a downside which is not always immediately apparent.

In recent times I've spent quite a few hours investigating the failure of digital hookups and analys-

ing why they haven't worked.

We've acquired a tool that has made this job much easier: a handheld status monitor which is plugged into the digital port of, say, a DAT and gives an immediate indication of whether the data format corresponds to the pro or consumer standard. This monitor also gives important information on various status flags embedded within the data stream. It's a powerful tool which has enabled us to progress from educated guess work to exact analysis.

The first observation to make about interconnection problems is that two standards exist: AES/EBU and S/PDIF (or IEC958 type II). AES is intended to be a professional digital interface with tightly specified parameters - any unit

(continues on page 40)

STUDIO PROFILE

Charing Cross Studio, Sydney.

Charing Cross Studio is the creation of Gordon Hervey who wanted to combine inner urban accessibility with the esoterics of a residential project studio. After a year of scouring Sydney for a location and two years of renovations, equipping and upgrading the ambition is reaching fruition.

Nestled amongst the high density larger urban area of the eastern suburbs of Sydney, is a small locality known as Charing Cross. Gordon tells me that the name originated in the 1800's as the area was used as a rest stop and meeting place, for the horse teams and drivers of wagons pre and post scaling the steep climbs to the local coastal farms and later the area was also the junction for a busy tram network. Charing Cross is a quaint name and the area is still inundated with early architecture, but the thing that strikes me the most are the number of lifestyle businesses in the area and the communication between the vendors. Charing Cross is even closed off for an open house and street festival once a year and to date has had very high attendances.

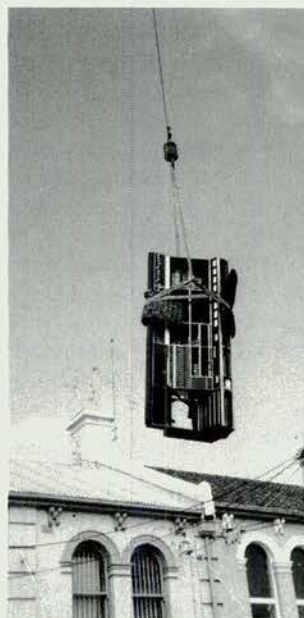
Just down the road you have a choice of some Sydney's most prestigious beaches and accommodation and inner Sydney nightlife is a fifteen minute bus trip away. You are also surrounded by international cuisine and some great

old pubs, so when you have had enough of messing with 'that sound' go for a walk, believe me if you are not an eastern suburbs native the area itself will stimulate the brain.

Gordon has finally decided to hand over full time management (even though he'll still be around) so that he can pursue other objectives within the music industry. The appointment has gone to David Sykes who has recently re-established himself in the recording field after a stint in management with Scary Mother. David has quite a long history in recording, at one stage being the co-owner of Damien Gerard Studios in Ultimo. He's also had live engineering experience with such acts as the Electric Hippies, Scary Mother, Star World and Mr Universe to name a few, this gives David confidence in his ability to trouble shoot most arising situations, because life on the road always throws you a curve ball.

Supported by assistant engineers Keith Cooper and Julian Slade and a swag of freelance engineers including Martin White, Tim Powells and Kevin Shirley who know Charing Cross inside out, David is confident in his new appointment.

Gordon and David both feel that, the fact they only handle one client at a time with discount struc-



tures in place for long term projects, gives them an edge not available from most large facilities. The focus has always been on album tracking but with low rates writers, vocalist and programmers are finding Charing Cross an attractive alternative. Selective overseas promotion has commenced, to attract the smaller acts, vocalists and writers, after all why shouldn't they record in one of the worlds most sought after holiday destinations.

But! Down to the nuts and bolts. The 24hr a day studio exists in a late 1850's workers cottage and *(continues over)*

EX-TRACK

(continued)

for Best Sound Engineering. To book any of these guys for your next session, contact Russell J. White Management on (03) 696 5661.

• **Meanwhile, back on the other side...** Planet Studios offer facilities for transferring between 32-track and 48-track digital formats, with transfers also between both digital formats and 24-track analogue. Contact John Villani or Denise Preston at Planet on (09) 382 2211.

• **Australia's best kept secret?** There's a new recording resort opened in the Whitsunday Islands by a wealthy retired US songwriter who's responsible for a string of hits as long as your arm. For more details, see the SCOOP on these pages.

• Over the Christmas break, Stewart Day mixed the second album for Toshihiko Furumura (Japan's Kenny G!) and has a number of other Japanese record companies interested in his services. He's off to Malaysia again for most of April/May to produce and record a double album for Malaysian super group Wings entitled 'Wings & Super Friends' featuring the band with over a dozen high profile Malaysian guest singers. Rumour has it the album will also include some high profile Austral-

(continues)

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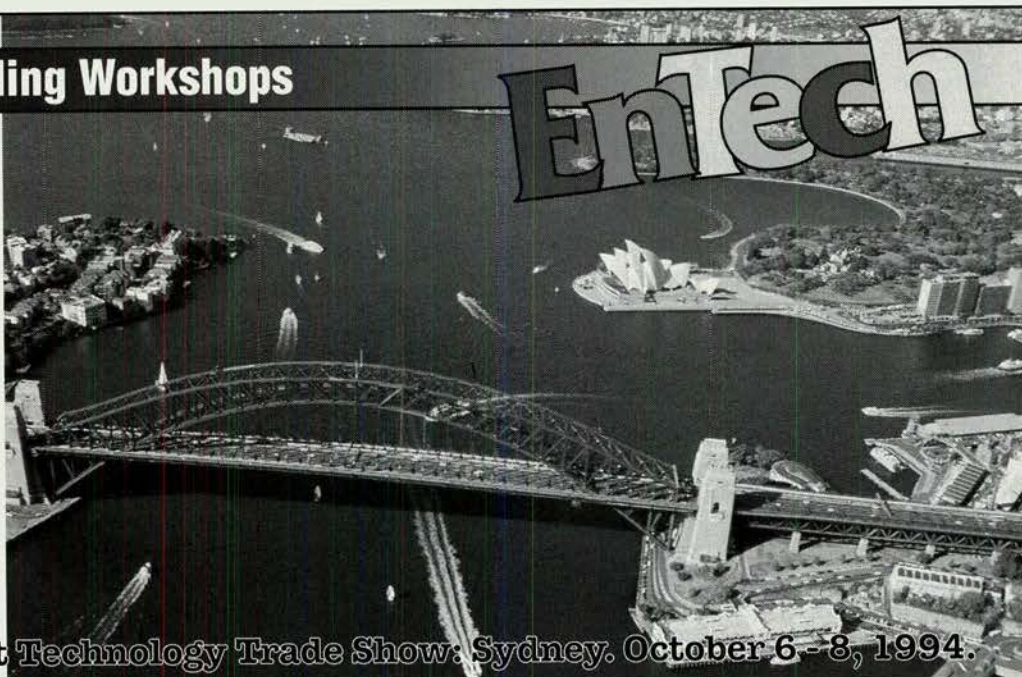
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claiming to have an AES port should be able to connect directly to another AES port and work perfectly. S/PDIF is intended as a digital interface for consumer use and also has defined parameters. The second observation is that these two standards are somewhat alike, to the point that connecting an AES port to an S/PDIF port sometimes works - if it does it's just good luck, and if it doesn't - well, it's not meant to. It's possible to make out a strong argument that having these two standards so alike has actually caused a lot of trouble - if an AES to S/PDIF connection was guaranteed never to work, then people wouldn't try doing the wrong thing in the first place.

However, using our digital status monitor has enabled us to confirm what we long suspected but were not easily able to prove - some manufacturers have been wrongly claiming to have AES ports on their units. Apart from the data format differences between them, a true AES digital link is a balanced connection and appears on an XLR connector, whereas S/PDIF is an unbalanced interface and appears on either an RCA or Optical connector. What has become apparent is that a number of manufacturers are fitting a balanced line driver to an S/PDIF data line, bringing it out on an XLR connector and labelling it AES. Of course, the owners manual continues this fiction, so the user naturally thinks that he or she has a unit with a pro digital interface.

A perfect example of the trouble this can cause occurred when a client was attempting to download material from an Akai sampler to the AES port on a DAT recorder via the XLR connector on the sampler - which is labelled AES. The digital link couldn't be made to work, and quite a deal of time was wasted in figuring out why not - the reason was found to be that this port actually carried S/PDIF format data. Another example arose when we tested the digital outputs from Soundtools: one of these is an XLR connector labelled AES, the other an RCA connector identified as S/PDIF. You pull up a menu selection on the screen and enable one or other of these ports, but what comes out either port, however, is S/PDIF. On top of all the usual reasons why equipment breaks down or won't work in a studio, it seems particularly ironic to place the user in a situation where, in following the instructions in the owners manual, he or she is actually contributing to the reason why the interconnection won't work.

Murphy's Law - a regular feature:

Recently, we were asked to make an interface to allow a Fostex 4030/4035 synchroniser to control an Otari MTR-90. The control outputs of the Fostex are active low and the manual showed the transport control inputs of the Otari as being active high, so the interface was designed to include an inverter to match these differing requirements. When it was all hooked together, the only control on the Fostex that did anything was the 'Stop' button, and it actually caused the Otari to go into Rewind! The Otari had been working a way happily for years and the Fostex worked okay with a Lyrec 24 track for which we had previously made an interface, so suspicion naturally fell on the newly built device.

I pulled apart the interface and tested it separately - no worries. Then I tried to get the transport command inputs working directly at the Otari's parallel input connector by jumpering them one at a time to +5v - they wouldn't work. The realisation gradually dawned that the Otari manual was simply wrong - the commands were active low and worked fine when you jumpered them to ground. Several hours work down the gurgler - Murphy strikes again!

**Howard Jones runs Studio Solutions in Sydney. Call him: (02) 906-4363.*

GLOBAL LINK

Two United States businessmen plan a radical global communications network utilising 840 small satellites, in a 700 kilometer orbit, says the New York Times. Bill Gates and Craig McCaw will have the US\$10 billion network working by 2001, and will carry many different digital signals to all corners of the earth. The new firm is called Teledec Corporation. This could change everything, we think.

DMP9-16 review (continued)

ther four jacks sockets allow access to stereo effect returns 3 and 4. Auxiliary sends and effects returns 1 and 2 do not appear on the rear panel as these are associated with the internal effects processors and so endeth the analog connection sermon.

Digital I/O is limited to essentially two stereo in's and two stereo out's with the option of using either 75 ohm RCA termination for Consumer type IEC958 or, if you prefer, you can use the persistently non-disappearing Yamaha 8 pin proprietary digital bus. (Goody...brand restriction!) To allow remote control, mix data sending and bulk memory dumping the back panel compliment is completed with a word clock output as well as those timeless sockets: MIDI In, Out and Thru.

Using the DMP9-16 is a breeze after the first half an hour or so. Auto menu jumping is the name of the game and multiple parameter access paths mean you really only need to use about twelve buttons and the Data Entry dials, once a few initial setting preferences are in place. The front of the DMP9-16 is divided loosely into three areas, these are the "meter bridge", which shows LED levels for the two stereo outputs as well as the third and fourth auxiliary sends at the same time as encompassing the two digit display and four buttons used for storing scenes. Including meters for the internal effects busses would have been nice here but it was not to be. Under this area is the "desk" part where there are sixteen channels, a Return section and a Master section. At the right side of the unit is the LCD display which resides above the Menu buttons, cursor buttons, parameter buttons and Data Entry wheel.

Channels are "paired up" on the front panel for the ease of mixing stereo sources and after using the unit for a while it is obvious that Yamaha assume that you are going to do this a fair bit of the time. Each channel has a trim control, a clip light and a signal light. Under these are two illuminated soft touch buttons, one for "selecting" a channel to the software for editing and the other for turning the channel on and off within the current scene. The final touch for each pair of channels is a very ingenious data entry dial for you see, this dial turns around infinitely whilst having eight LEDs placed on the panel around the top half of its cycle. These indicators represent gain from minus infinity through to a dedicated 0dB LED at the fifth position on to +6dB at the end. Geoff Crane at Yamaha quite rightly pointed out that switching the unit on does in itself yield an impressive sight. As a part of the DMP9's start up routine each of the above LEDs is tested in sequence and man does it look like some futuristic electro-tripping cat-erpillar or what?

So we begin to make a sound! First we sim-
(continued on page 43)

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Charing Cross (Continued)

the natural personality of a terrace represented some difficult and interesting installation techniques. Basically, the roof was lifted to allow access by crane for the classic 1971 (updated) Neve console and the balance of equipment was wrestled up a narrow and twisting staircase to the control room.

Although renovating a terrace house is never complete, the studios are comfortable, reasonably spacious and kind of homey, which adds a project studio feel even though accommodation is out of house. Down stairs, which is a level load and street accessible, are two large recording rooms, one being a live room, an isolation booth, kitchen, technical workshop and an open courtyard. A small room off the top landing is the vocal booth, another is an office which leaves the bulk of upstairs dedicated to a large, bright and efficient control room. All rooms are linked audibly by headphone stations with independent control and visually by Handicams and monitors.

CONTROL ROOM inclusions:

- 8016 Neve 24 channel console (with newly installed lockable solo buttons), 1064 input modules with stepped controls, 16 input master monitor panel, 8 group busses and 6 effects sends;
 - PM2000 console is assigned from the Neve patchbay for monitoring 32 channels, solo and effects merge into the Neve 8 group busses and 6 effects sends;
 - Studer A80 MkIV 24 track analogue 2" recorder -
 - Studer A80 MkIII 2 track analogue 1/2" recorder -
 - Various DAT's, JVC video PCM;
 - Fostex E-16 analogue recorder and 4050 1/2" remote/generator -
 - Tascam ATS 500 synchroniser;
 - JBL 4430 main monitors -
 - NS10, Krix and Auratone nearfield monitors -
 - Perreaux 8000C amp -
 - White EQs;
- OUTBOARD inclusions:**
- EMT 240 gold foil reverb;



David & Gordon

- Bell BF20 flanger;
 - Roland Dimension D,
 - Publison d/a computer;
 - Stereo SSL compressor;
 - RME limiting amp;
 - CBS audimax 3 leveller;
 - CBS audimax 2 leveller (tube);
 - Pultec EQP 1A (tube);
 - just to name some of the classic valve and solid state equipment available at all times.
- MICROPHONES include:**
- Neumann M249 (tube); Neumann KM88; EV RE20; AKG C12 'The Tube' (1957); etc
- Charing Cross Studio are located at 312 Bronte Road, Charing Cross and can be contacted on (02) 337-8362.*

-Caroline Grafton.

EX-TRACK

(continued)

ian singers with interest in the South East Asian market. June sees Stewart back in Melbourne to mix the album and record the Australian singers. He's recently spent time at Hothouse Audio working on independent productions for **Wood's Dog, Shotgun Alley, Choice, Dragonfly, False Gods** and **Peace Of Mind**. He's also recorded and mixed the debut solo/acoustic album for **Steve Lucas** (front man for **X** and **Bigger Than Jesus**) which features guest performances by Paul Kelly, Chris Wilson, Brett Kingman and Andrew Pendlebury. In February, Stewart was at **Metropolis** co-producing, recording and mixing the hot new solo demo for Tracy Kingman. Busy guy, huh?

• **Even More Music Manufacturing...** They've got a second digital editing room at All Music Manufacturing, featuring the latest Microsound System with over **six track hours** at a sampling rate of 44.1 kHz. The system has four

(continued)

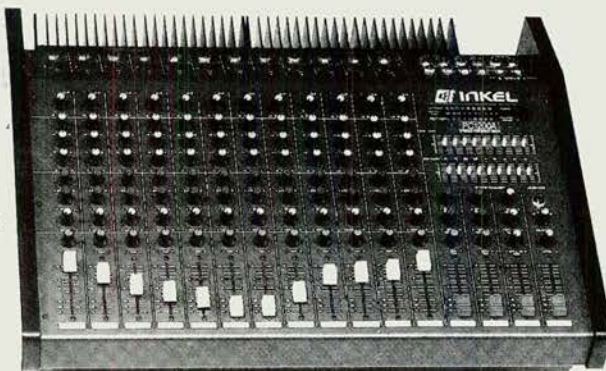
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MASTERING

With Paul Bryant

MASTERING : MIXING AND DAT

Although many "golden ears" still claim that 1/2" analogue masters sound better, the fact remains that most recordings are sold to the punters as digitally sampled 16 bit CDs.

The CD industry standard for digital audio is, at present, the 1630 U-matic system. If you mix to any other recording system your mixes will have to be transferred to this system, either in a mastering suite or in the factory.

1630 U-matic systems are too expensive for all but the largest studio complexes so the most cost effective compromise is DAT. A DAT tape recorded at the correct sampling frequency can be digitally transferred to U-matic, so it makes sense to mix to DAT in the studio and control the sound of your finished product.

ALL DAT MACHINES ARE NOT CREATED EQUAL.

A studio DAT recorder should be capable of recording at the 44.1 kHz sampling frequency without emphasis. It should have "peak-hold" metering which retains the highest peak level of the programme. Do not record "into the red" with DAT. The result will be immediate and severe distortion. As well, some sort of error indication is necessary as DAT is just as capable of dropouts as analogue but with much more dramatic consequences.

If you are using a two-head DAT machine you will need to replay any recordings to check there are no errors - a very time consuming process.

The answer is to use a four-head DAT machine which allows off-

tape monitoring during recording, known as read-after-write capability. In addition, DATs used to prepare production masters should be capable of recording and playing SMPTE timecode. The machine should also be able to "punch-in" and "punch-out", with digital crossfades, at edit points.

A DAT machine with all the above features will not be cheap, but just remind yourself how much that 1/2" analogue 2-track would have cost.

Finally, famous mastering engineer BOB LUDWIG's guide to professional DAT machines:

1. It has four heads for read-after-write recording confidence.
2. It has adjustable balanced +4 dBm inputs and outputs.
3. It can record and play SMPTE timecode.
4. It has good sounding analogue/digital converters.

**Paul Bryant is Mastering Engineer at All Music Manufacturing. Call him on (02) 557-1169*

EX-TRACK

(continued)

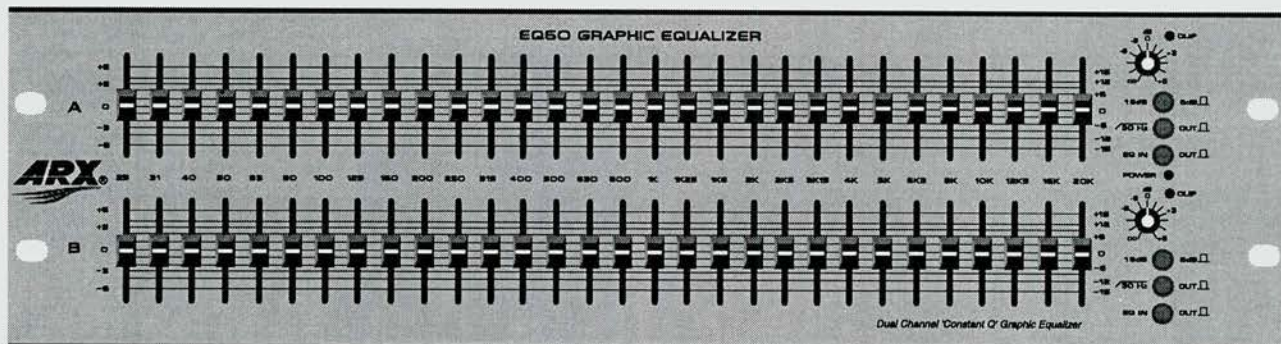
channel in/out while still allowing up to 50 stereo segments within the Editor without bouncing. Other toys include the latest Akai S3200 and a Sony DPS F7. Call AMM on (02) 557 1169.

• **No rest for the wicked!** So far, 1994 has been a busy year for **Tony Cohen** with completed albums for **Nick Cave & The Bad Seeds**, **Dave Graney & The Coral Snakes** and **Powderfinger**. April is intended as a month of well deserved rest for Tony, after which he has a number of major projects lined up in Australia and Europe. • Latest recording at Enrec is from New Zealander Jan Cooper. Her last album 'Just Friends' was recorded at Enrec for RCA and won a gold guitar at Tamworth in 92.

• **Damien Gerard's** are busy as ever with **David 'DP' Price** in Studio B completing a five track EP for **Front End Loader** along with Dave Trump and Mike Woods. DP

(continues)

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Victoria and Tasmania: Tony Hosking 03-888 6555; NSW: 02-879 6788 Dave Croxton;
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DMP 9-16 Review (Continued)

ply select the level display in the Menu and then we hit Select on the desired channel and the dial now adjusts that volume. As soon as any parameter is changed in a scene a dot appears next to the memory number so you know the scene needs to be stored. It's all so simple really but we did get sick of going through the menu to find things. No worries, we discovered the twelve or so buttons we mentioned before and realised that you can virtually jump to any necessary menu point and adjust it by watching the LED wheel on the channel. For example if you hit the illuminated Send 1 button and then the illuminated Select button on a channel the menu is automatically placed at the correct display with the correct channel selected for editing. The DMP9 has this same characteristic for all the parameters which would be needed to be adjusted "on the run" so to speak.

Slightly more detailed editing procedures are required using the cursor and menu keys when adjusting the EQ and selecting and editing effects patches. Equalisation is offered as a two band fully parametric set of filters with many decibels of cut and boost. While not being enough bands for many normal mix applications what there is available is very, very flexible. Grouped with the EQ menu is the Pad menu which also allows many decibels of attenuation on the front end of a "soft-channel", thus allowing gain matching even from scene to scene. The following menu takes care of all panning and L/R balance aspects as well as allowing phase reversal settings.

Level setting screens are allowed to be called to enable quick drawings to be viewed of the relative channel volumes and these screens can also be used in conjunction with the next menu which is used for setting Aux levels. Within this menu is also a set of little drawings which show an oval coloured in at one end or the other to denote if a send is selected as pre or post channel level. DSP is accessed using a further two menus and here lies a Yamaha SPX something or other.

Effects offered are of the usual selection from the now famous "Almanac of Necessary Effects for Design Engineers" and what sets Effect module 1 apart from number 2 is simply that it contains HQ (High Quality) patches for that extra sound definition. The manual here refers, in it's own way, to using effect number two for less important sounds??

For those who may askYES, you can mix two lots of stereo digital together using the last four channels BUT due to the inherent needs of digital audio you must first "sync the word clocks" of the two units issuing the data. Keep in mind also that one unit must have a Yamaha bus and the other must have an IEC958 bus. This may seem a bit wonky at first but the ability to mix two digital sources looks to us like it is actually a thoughtful by-product

of the fact that the manufacturer had to supply various digital I/O ports to allow multiple DMP9's to be chained together.

Anyway, don't forget that all these things of which we speak are remembered scene by scene. Add to this a separate fade time programmable for each scene and with a possible scenario of 50 scenes we can only say that we seem to be saying "scenes" a lot. Think of a place that needs a device which is operated easily in low ambient light and has lots of scenes. Sounds like a theatre doesn't it?

DMP9-16 INFOTAINMENT

Analog Input:	16 mono channels (1 & 2 with mic input), 8 stereo pairs, or combination.
Termination:	6.5mm phone jack x16.
Analog Output:	Stereo x2, headphone x1.
Termination:	XLR-3-32 type x2 (balanced) 6.5mm phone jack x2 (unbalanced)
Aux Send:	2 channels for internal effects 2 analog outputs
Aux Return:	2 channels for internal effects, 2 analog outputs.
Digital I/O:	2 channels x 2. Termination: RCA 1 in/ 1 out [EIAJ CP-120], 8-pin DIN connector 1 in/ 1 out [YAMAHA format].
EQ (input only)	Frequency 20.9 Hz ~ 20.16 kHz sweepable. Gain Q Type Peaking, Shelving.
Display	16-character 4-line LCD
Dynamic range	Greater than 92 dB (1 kHz ST OUT) with Emphasis.
Frequency Response	FS @ 48 kHz 20 Hz-22kHz +1, -3 dB. FS @ 44.1 kHz 20 Hz-20kHz +1, -3 dB. FS @ 32 kHz 20 Hz-14.5kHz +1, -3 dB.
Internal Data Processing	EQ 32 bit. DSP 28 bit. SRAM (delay) 24 bit.
Sampling Frequency	Internal 48 kHz +/- 10ppm.
Digital Input	48, 44.1, 32 kHz +/- 100ppm.
Scene Memories	51 (50 user, 1 initial set).
Dimensions	480 x 144 x 386mm, 3U rack mount.
Weight	10.8 kg.

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EX-TRACK

(continued)

bought along his own Drawmer 1960 valve compressor and Pultec Equalisers to kick things along. Some new power amps and a bit of clever patching gave each band member their own personal monitor send. Following the **Front End Loaders** into Studio B were the **Hardheads**, recording their second CD release with Mike Wood engineering. Further upgrades to Damien Gerard's include a guitar room now available for Studio B which is separate to the main live room. This new area also doubles as a recreation area for album lockouts. Damien Gerard's new album **lockout deal** in Studio B offers two huge live rooms, recreation and coffee area, 32 tracks of recording including **separate mic preamps** for a beautifully clean path to tape, and all the extra percussion, instrument and sound toys you could ever want. For more information call Marshall Cullen on (02) 692 9915.

• **Rush for Letho?** Aussie engineer extraordinaire Michael Letho has been in the US seeing record companies, artist managers and US representatives following the success of the **Rush** album 'Counterparts', which he mixed in Toronto last year and which has just gone double platinum. Well done Michael! He'll be working on another project with producer Peter Collins in the US later this year. Currently back in Australia, he's got an upcoming film score with **David Hirschfelder** and production projects with a collection of local and interstate bands.

• **Oops, we messed up!** Ex-track would like to apologise to **Graeme Storer** of The Enterprise recording studios for possible misrepresentation in these pages. Graeme contacted **Ex-track** recently to clarify some misconceptions about their songwriting

collective. We've mentioned their collective in previous issues of Ex-track, but some readers got the wrong impression. Contrary to what you may have read previously, **Graeme** and The Enterprise crew are always looking for talented songwriters, **programmers, singers and players** to join their collective. If you think you've got what it takes, call Graeme on (02) 564 3225.

• Late news from Foghorn Records is that TV program **Rage** loves **Once Upon A Time's** new video single **GOD**, and **Rage's** Stephanie Lewis has confirmed that it will be shown again, so stay tuned. **Drue Tyson Hoille's** album **Blind Skin** is about to be mixed and, judging from the response to his six track release receiving frequent air time on **Simon Townsend's** **Wonderworld** (among others), the album will be well received. **Blue Ruin** are planning a return trip to Sydney in the near future and singer **Ian 'Quincy' McLean** hints that he may look at a solo album late this year as a side project.

• **Sony Music Studios** are installing **ATC SCM300** monitors and are currently looking for amps. They've also got a new **SSL-style** compressor in the effects rack. Call **Ross Ahern** at Sony on (02) 332 0320.

• **They need your input...** Sydney's newest sound engineering school, the **Institute of Sound Production**, is currently offering a series of one-day seminars aimed at professional and amateur engineers, covering topics such as acoustics, electronics, digital audio fundamentals and psychoacoustics. They're also putting together a course designed to train people for employment as assistant engineers, which is quite different to teaching them how to record and mix. To make the course comprehensive and industry-relevant, they're looking for input from sound engineers, producers and studio managers. If you'd

SCOOP!

RECORDING 'RESORT' OPENS IN ISLAND PARADISE

E602? It's a weird name, but that's what retired US songwriter **Chuck Hayward** calls his new recording studio, located on a private island in the **Whitsundays**. Originally meant to be a private project studio, he's decided to market it as a 'recording resort'. E602 features a **Sony 3348** 48-track digital multitrack recorder, a **Studer 24-track** analogue recorder, a choice of **SSL**, **Neve** or **DDA** consoles, a choice of **JBL**, **Urei**, **Tannoy**, **Genelec** or **ATC** main monitoring, and an **enormous** range of outboard gear. There's also numerous recording spaces available, in-

cluding a unique 'white sandstone' room made from white sandstone mined on the island. "I believe it's the first of its kind in Australia", said **Chuck**.

According to **Hayward**: "I guess the idea of building a 'retirement' studio on a private island in the **Whitsundays** has stuck in my head ever since I toured Australia in the early '70s.". And what does E602 stand for? "Some people think it's a map reference, but it's just an abbreviation for **Elephant 602** — bigger than a rhinoceros and two times 301." We will bring you more on E602 next month.

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Ken Sandell
Audio Advice
Riverstone

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(continued)

like to contribute to this innovative course, or if you want to know about their one day seminars, call the ISP on (02) 212 3101. (*Disclosure - Simmo is a principal at ISP*)

• Mark Forrester has been very busy producing remixes for German solo artist **Breen**, remixing Peter Andre's 'To The Top', completing recording of Jenny Morris' new album and mixing the track 'Salvation Jane' with producer and writer **Andrew Farriss**. His ARIA nominations for Best Sound Engineer for Peter Andre's and G.W. McLennan's albums was a nice cap off to a very busy 1993. Coming up is a project for Melodian Records' **Chill Factor** and a likely trip to Germany for some writing and recording with **Breen** and co-production of Melbourne funk act **Curtis Late**.

• **On a winner?** There's a comprehensive new Midi studio in Sydney. Wins Music Studios offers 32 track digital and 16-track analogue recording with state of the art Midi gear. Studio A includes four Alesis ADATs controlled by the BRC, with a Peavey 1600 console. Studio B uses a 16-track Tascam MSR-16 with Dolby S running through a 32 channel Soundtracs MR series console. They've covered their bases with computers, too. For Mac heads, there's a Macintosh Quadra 650 running Cubase Audio and Sound Tools. For Atari heads they've got an Atari Falcon 030 with Cubase, Notator and Notator Logic software. There's a healthy dose of outboard equipment from Lexicon, Eventide, Symmetrix, Urei, Yamaha, **Ensoniq** and Roland, with microphones from Neumann, Sennheiser and Equitek. To round it all off, there are bucket loads of synths, samplers and other sound generating toys from Hammond, Moog, Oberheim, Sequential Circuits, Kurzweil, Roland, **E-mu**, Alesis, Linn, Korg... the list goes on and on! They're in Brookvale, NSW. If you're interested, call studio manager Ben Booth at Wins on (02) 905 5535.

• **Sleepless in Ultimo?** Studio Iron Man Tim Powells has taken over the Damien Gerards' sleepless title from Mike Wood after the final five days producing and mixing the **Gigantics** debut album with virtually no sleep

(continues)

ARTIST	PRODUCER	ENGINEER/S	NOTES
New South Wales			
Airmotion Contact Kristen Wotek (02) 550 3863	24 Track Recording/Midi Suite/Film Soundtracks		
Chris Abrahams/Melanie Oxley	Chris & Mel	Guy Dickerson	Record Album
All Music Manufacturing Geoff Sturre (02) 557 1169	Mastering Suite		
WongaWilli	Rob Specogna	Paul Bryant	CD Master
Urban Sound of Amsterdam	Reachin' Records	Paul Bryant	CD Master
Clan Analogue 4	Brendan Palmer	Paul Bryant	Digital Editing
Lemon Avenue	Valerios Calocerinos	Paul Bryant	CD Master
Rough Trade	Greg Clarke	Paul Bryant	CD Master
Def Ryme	Russell McKeen	Paul Bryant	Vinyl Master
Bandit Audio Brett Coupland (02) 960 3501	Digital Mastering MultiTrack Midi		
Coloured Stone	Brett Coupland	Brett Coupland	Album
Bird Dog	Brett Coupland	Brett Coupland	Album & Singles
Charing Cross Studios Dave Sykes (02) 387 8362	24 Track Neve Studio		
Jenny Morris	Electric Hippies	Mark Forrester	Tracking - Single
Scary Mother	Rick Will	Rick Will/Julian Slade	Tracking - Album
Bughouse	Paul McKercher	Paul McKercher	Mixing - Album
Vanilla Chainsaws	John Bee	John Bee/Daniel Gillehand	Tracking
Smooth	Matt Hayward	Alex Hodgson	Tracking - Mixing - E.P.
Max Sharon	Nick Mainsbridge	Nick Mainsbridge	Tracking - Vocals
Bush Traks Recording Studio Ruth & Dave (066) 89 1290	24 Track Studio in relaxed productive rural village setting		
Vivid Image	Band/D. Highet	Dave Highet	Album (inc. art. for CD cover)
The Bourkenbacks	Band/D. Highet	Dave Highet	Album
Gary Dennis	G. Dennis/D. Highet	Dave Highet	Demos.
Col Phillips	J. Metcalfe/C. Aronsten/B. McNicol	Dave Highet	Demos
Troy Cassar-Daley	John Sayers	John Sayers	AlbumChar
Ibis	Kym Pitman	Dave Highet	Live Album.
Damien Gerard Studios Contact Marshall (02) 660-8776	16/32 Track		
Gigantic	Tim Powles	Tim Powles	Album (32 Tk)
Bughouse	Steve Bug	Tim Powles	Album (32 Tk)
Front End Loader	Dave "D.P." Price	Mike Wood	E.P.
Gyan		Marshall Cullen	Single
Hard Heads	Michael Cullen	Mike Wood	E.P. (32 Tk)
David Hinds Recording Studios David Hinds (065)811235	8 Track		
Ken MacArthur	David Hinds	Gary Buckridge	Demo
Scott Mooney	David Hinds	Gary Buckridge	Album Tracks
Travelling Leftovers	David Hinds	Gary Buckridge	Demo's
Gary Buckridge	Gary Buckridge	Gary Buckridge	Demo
Chivalry	Gary Buckridge	Gary Buckridge	Demo's
John Roberts Furniture	David Hinds	David Hinds/Gary Buckridge	Jingle
Eastern Acoustic Recording Studio David Best (049)621855	16 Track Otari Recorder, 40 Channel AHB Desk		
Sparx	Sparx/D. Best	David Best	E.P.
Fire & Ice	Steven Pickett	David Best	Pre-Production for single
Kaju	Steven Pickett	D. Best/S. Pickett	Pre-Production
Inga Lee	Inga Lee	David Best	Demos
Stephen Price	S. Price	Jeremy Ireland	Demos
Enrec Studios Ed or Steve 049 361 391			
Jan Cooper	Steve Newton	Steve Newton	Album for EMI
48V Studio Clare Britton (02)2111474	48 Track, 24 Digital & 24 Analog		
Screaming Jets	Grant Walmsley	Dave Henderson	Demos for Album
Gadflys	Gadflys	Dave Henderson	E.P. & Singles
P3	Sean Lowry	Rob Taylor	Hard Core Techno Album
Hullabaloo Glenn Heaton 02 684 2039	24 Track		
Disney Live	Berrick/Heaton/McGarvey	Heaton/McGarvey	Live Show Soundtrack
Watershed	Watershed	Glenn Heaton	Album
Majester	Majester	Lucci	Demo
White Boy Roy	White Boy Roy	Blair Murphy	Demo
SBS 'Big Byte'	Heaton/McGarvey	Heaton/McGarvey	Theme & Incidental Music
Australis Media	Dave Spencer	Heaton	Post Production Sound
JMF Sound Studio , Contact Fran Esther, (02) 790 4097,	24 Track		
George Savva	Paul Gray	Ralph Esther	C.D. Single
Wize Move	The Band	Richard Kershaw	Demo
Josie	Paul Gray	Ralph Esther	C.D. Single
Main St. Studio , Contact Rob or Murray, (042) 834 515			
Jack Jones/Jeff Robertson		M. Nicholas/R. Specogna	BMG Demo's
Wongawilli	R. Specogna	R. Specogna	Album (CD)
Rick The Cat	R. Specogna	R. Specogna	Demo
Urikuna	R. Specogna	R. Specogna	Album (CD)

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(continued)

and then fronting to play drums on a session without even leaving the studio after the final 24 hour session. Rest, Tim, rest!

• **Turning the problem inside out?** While the industry bemoans the trend of importing overseas engineers and producers to do local recordings, it seems **Russell J. White Management** are busy exporting Australian engineers overseas! Their list of clients includes **Tony Cohen**, Stewart Day, Michael Letho and Mark Forrester. **Tony Cohen's** off to Europe again soon, Stewart **Day's** got himself a great reputation in the Malaysian industry, Michael **Letho's** got plenty of interest in the US, and Mark **Forrester** is probably off to Germany shortly. At a time when other top Australian engineers have tried to crack overseas markets and returned with their tails between their legs, the best advice Ex-track can find comes from Michael Letho. According to Michael, breaking the US market is a long and slow process of establishing contacts, nurturing relationships, and doing your best at all times — no matter how big or small the client is. Pretty obvious, huh? Worth mentioning, nonetheless...

• **New console for 301...** Ex-track was on the scene when 301's new DDA DMR12 mixing console arrived, to be installed in their recently upgraded Midi suite. The DDAs have a reputation for very low noise and clean sound, and are starting to appear in numerous studios around Australia.

• **Under New Management** tell us that **Brendan 'Bam Bam' Morley** has just completed demos with **Baby Sugar Loud** at Rondor and is currently producing two singles for New Zealand band **Ardijah**. **Brent Clark** has been mixing the long awaited **Tall Tales** and **True** album for rooArt at Studios 301, and new tracks for up and coming Brisbane band **Braid**. **Colin Simpkins** has engineered **Juice's** debut album 'Wine Of Life', which is to be released in April. The single 'Don't Give It Up' has already been picked up by radio station JJJ. **Daniel Denholm** has been producing demos with **Max Sharam** and will be recording her debut album in March. He's also produced tracks for **Bike**, which includes **Andrew Bough** from Strait-jacket Fits. **Garth Porter** has just been awarded Producer **Of The Year** at Tamworth for Best Country Album. **Lee Kernaghan** also took home **Best Male Vocalist** and **Best Song**. Lee's last album **The Outback Club**, also produced by **Garth**, has just gone gold. **Garth** is about to produce **Gina Jeffries** new album and has recently completed an album with **TC Cassidy**. **Greg Henderson** has produced hot new tal-

ARTIST	PRODUCER	ENGINEER/S	NOTES
Megaphon Contact Kristen, Guy or Shane (02) 516 39917	24 Track, Large	Recording & Control Room	
Cruel Sea	Cruel Sea	Paul McKercher	Film Soundtrack "Spider & Rose"
Paradise Studios Bill Field (02) 357 1599	48 Track Analogue		
Ian White	Peter Bevridge	Guy Grey	Album
Monica Trapigir	Billy Field	Michael Stavro	Tracks
Powerhouse Studio Contact Craig Beck (02) 318 1220	24 Track		
Meryl Leppard	Berger & Henderson	Henderson/Beck	Album
Psychrist	The Band	C. Beck	C.D.
Unseen	The Band		Single
Az-One	Berger/Henderson	Henderson/Beck	Single
Glass Onion	The Band	J. Hresc	Single
'Shattered Silence'	Self Produced	C. Beck	C.D.
R&R Recordings Contact Robert Zimola (02) 624 4484	16 Track		
Eye Cue Communications	Peter Saunders	Robert Zimola	Corporate
Legacy of Sound	Mick Cardy	R. Zimola	MixDown
CJJM	CJJM	R. Zimola/I. Henry	Album
Nu-Skin	R. Zimola	R. Zimola	Corporate
BackBone	BackBone	R. Zimola/I. Henry	Demos
David Cunningham	D. Cunningham	Ian Henry	Demos
Rich Music Studios P/L Contact Jason Nairnsey (02) 264 77	24/32 Studios		
Wes Beavis	Wes Beavis	Randall Waller	Album Recording
Tom Kazaz	Tom Kazaz	Tom Kazaz	Album Recording
Taman Shud	Lyndsay Bejer	Kevin Shirley	Album Mix
Vanilla Chainsaws	John Bee	John Bee	Single Mix
Swami Tom	Al Wright	Al Wright	Tracking
Caligula	NRG Productions	Steve Svitek	Recording of 'B' Sides in Midi Suite
RockingHorse Studio Allan Devandra/Kim Reid (066)884131			
Darpanj (Die Laughing)	Ramesh Sathia/Ross Pepper/Keven Shirley	Ramesh Sathia	Album/Die Laughing
Cartoon	Cartoon	Keven Shirley/Ramesh Sathia	Album/Ovine Bovine
Sony Music Studios Contact Ross Ahern (02) 332-0320	24 Track Analog	Digital Also 4 Track Digital	Pro-Tools Editing Facilities.
Danielle Gaha	Paul Gray	Simon Tonx	Album Track
Culture Shock	Pee Wee Ferris	Simon Tonx/Guy Gray	Single Re-mix
The Angels	The Angels	Hendo!	Album Pre-Production
The Enterprise Graeme Storer 02 564 3225	8 Track/Midi Suite		
Robert Gallo	Robert Gallo	G. Storer	Demos
Various High Schools	Robert Gallo	G. Storer	Mac/Atari Set ups
Ruth Consolidated Industries	G. Storer	Product Info/Advertising	
Midaxis	Midaxis/Storer	G. Storer	E.P./Programming
Enterprise Songwriters Group	Storer	Storer	Publishing Demos
The Vault Studio Contact Michael Tame (02) 953 0332	2" 24 Track		
Andrew Bett	Mark Moffatt	Greg Henderson	Demos
Trackdown P/L Contact Jeff Watson (02) 550 6890	24 Track/16 Track A-DAT & Pro Tools		
Roy Aures	David Poulton's Theatre of Puppets	Tim Ryan	Live Mix, performance at the "Basement"
Magic Pudding	Latent Image	Tim Ryan	Soundtrack
Priscilla	Latent Image	Simon Leadley	Filmscore by Guy Gross
Tracking Station Studios Contact Martin Cass (02) 281 8899	24 Track Analogue		
Helen Kay	Martin Cass	Martin Cass	Album
Fire & Ice	Stephen Pickett	Steve Pomfrett	Single
Wayne Law	Martin Cass	Martin Cass	Album
Clint Beatie	Martin Cass	Steve Pomfrett	Single
Hound	David Price	David Price	E.P.
Martin Reeve	Martin Reeve	Steve Pomfrett	Album
Wirra Willa Studios Contact Will Rout (02)605 1203	24 Track & 8 Track	Hard Disk	
"Spirit"	The Band	Ian Cooper	Demo
Stacy Nguyer	Flame Promotions	Will Rout	Album
"Sanctuary Records"	Will Rout	Ian Cooper	Promo Tape
Mal Baxter	Phil Stein	Ian Cooper	3rd Album
Times Variable	Bob Luxford	Dion Wilton	Film Post
Gizmo	Dion Wilton	Will Rout	Film Post
Queensland			
Grevillea Recording Studios Contact Malcolm Jacobson (07) 262-8422	24 Track Analog/8 Track Digital/8 Track H.D.		
Nick Coetzee	Nick Coetzee/Murray Lalor	Malcolm Jacobson	Album
Lawless Murphys		Malcolm Jacobson	Demo
Jungle Book	Jungle Book	Malcolm Jacobson	Demos
Red Ted	Owen Johnstone	Bruce Jacobson/Steve Lambert	Documentary
Timetrex	Garry McDonald/Laurie Stone	Bruce Jacobson	U.S. T.V. Series
Suite 16 Audio Productions Contact Murray Lyons (07) 369 8733			
Katz on a Swing	Garry Smith	Julian Lynch	Album Demos
Peter Roberts	Garry Smith	Julian Lynch	Song Demo
Gina Jeffreys	Garry Smith	Julian Lynch	Metway Commercial
Total Advertising Production Studio Contact Paul O'Connor (074) 792277	16 Track Digital		
Sunshine Television	Barrie Morrisson	Anthony Marsh	News Promo Jingle
Hallmark Nissan	Barrie Morrisson	Anthony Marsh	Jingle Prod.
Kellyons Hair Design	Barrie Morrisson	Anthony Marsh	Jingle & TVC Prod.
Alan Powell Ford	Barrie Morrisson	Anthony Marsh	Jingle & TVC Prod.
Victoria			
Bel Air Sound Contact Danny Olesh (03) 563 7887	24 Track Digital Mastering		
Uncle Chester	Uncle Chester	Sam Pulley	Demos
Steve Douglas	Ernie	Ernie	Demos
Jhones Town	Jhones Town	D. Olesh	Album
Amnesia	Amnesia	D. Olesh	Demos
Hitz FM	Jason	D. Olesh	Ads.

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EX-TRACK

(continued)

ent Brenda Webb's next single 'Melting Pot', the follow up to her successful debut 'Little Black Girl'. Greg has also mixed local funk heroes Skunkhour's EP, and starts mixing their album next month. He's also been working with The Angels and will be mixing Cold Chisel's new album in March. **Mark Moffatt has produced six tracks** for Cactus Child and continues writing with Ian Moss. Mark will produce an album for Brisbane artist Dan Mullins in March, and two tracks for Andrew Brett. **Mark Ovenden has completed a remix** of Brenda Webb's 'Melting Pot' for UK release. Mark is also working with Kellie Hoggart, best known for her work with **The Teen Queens**. Rick Will has returned to Australia to co-produce **The Sharp's** second album. **Ted Howard** continues engineering Barefoot's latest album, having taken a break to record the **Tamworth CMAA Awards**. Barefoot's first single 'Baby You Got In The Way' received airplay on JJJ along with critical acclaim. Tom Colley has engineered Cactus Child's EP at **The Vault**, and produced Cindy Ryan's EP. To book any of these engineers and producers, call **Under New Management** on (02) 953 0332.

• And that's it for this iss... hold it — here comes another one! • **Just snuck in the back door:** Last minute Ex-track entry from JMF Sound Studios says that **Richard Kershaw**, sound engineer extraordinaire for Kylie Minogue tour and Girlfriend, has recently been in at JMF engineering for Wize Move.

• And that's definitely it for this issue!

HOW TO LIST YOUR STUDIO:

1. Deadline is ALWAYS the 15th of the month before publication. We reserve the right to select suitable material. No cost!
2. Mail or Fax the information to us, you do not need a specific form, but you do need to follow the format of the guide, which is obvious - have a look.
3. We must limit listings to six or less separate artists.
4. Please note your studio NAME, phone number, state and your contact details so we may check anything odd.
5. If we have any doubts we will contact you around the 20th of the month. It's FREE!
6. Questions? Verification? Call Elaine on (02) 876-3530 (BH).

Send to: Connections, BASF Guide, PO Box 439, Epping 2121, or Fax: (02) 876-5715.

ARTIST	PRODUCER	ENGINEER/S	NOTES
Gotham Audio Contact Tom Kehoe (03) 879 9400 48 Track Digital			
Richard Pleasance	Richard Pleasance		Album Rec.
Peter Andre	Mark Forrester		Album Track
Takao Hariuchi	Hisashi Sate		Vocal O'Dubbs & Mixing
Borrowed Time	Nigel Derricks		Album Rec.
Hot House Audio Contact Cryss (03) 525 3703 24 Track			
False Gods	The Band	Stuart Day/Simon Roberts	E.P.
Viscious Vinyl	Base Culture	Tony Espie/Cryss	Single
Peace of Mind	Craig Harnath	Stuart Day/Cryss	Single
Shotgun Alley	The Band	Stuart Day/Cryss	Demos
Jackie Whitelock	Stratos	Stuart Day/Simon Roberts	Single
Newmarket Studio Contact Anne (03) 329 2877 24 Track			
Graeme Bell & Dive Jive	Terukazu Arita		Album for Japanese Release
The Plumbs		Daniel Desiere	CD Mastering
Kieren McCarthy		John Ruberto	MixDown & CD Master
John Dallimore		Robert Dillon	Demo
Nick Smith		Robert Dillon	Demo
Judith Durham		John Ruberto	CD Mastering
001 Recording Studios Owen Bolwell (03) 348 1300 24 Track/Midi Suite			
David Birmingham		Brett Taylor	Demo
Phillip Michaels		P. Pomeroy	Mixing
Rain Factory	Band	D. Aristo	Album
Aaron	Joe Pulla	B. Taylor	Single
Peter Andre	Peter Andre	B. Taylor	Acapella
Many Faces	The Band	B. Taylor	Single
The Screens	The Band	B. Taylor	Demo
Feelers	The Band	B. Taylor	Demo
Platinum Aust. P/L Contact Jim Mountford/Susan Minchin (03) 827 7483			
The Sharp	Peter Farnan	One 48 Trk. SSL, One 24 Trk. Harrison	
Things of Stone & Wood	James Black	Rick Will/Kalju Tonuna	Album
Tomoko Fujita	Koji Ono	Chris Corr	Album
Cezary Skubiszewsh	Cezary Skubiszewsh	Yoshide Mikami	Over Dubb/Mix Album
Def Ryme		Chris Corr	Skytrackers TV Score
Sing Sing Studio Contact Kaj Dahlstrom (03) 428 4622 24/48 Track Sony Digital Studio with Dolby SR.Ampex 1200			
Black Sorrows	Joe Camilleri	Rick Will	Mix Track
Robert Forster	Robert Forster	Phil Butson	Album
Buzzards	Andy O'Byrne	Andy Parsons	Album
Maurice Milani	Trevor Reading	Andy O'Byrne	E.P.
Body Jar	S. Stevenson/Stefan Egerton	Trevor Reading	Album
Sam See	Sam See	S. Stevenson/S.Egerton	Album
Studio RB-X , Contact Ross Burton, (03) 429 6199. 24/48 Music & Post Production			
Paul Gibbs	Self	Michael Letho	Rythm Tracks
Miaraid Sullivan	Donald Lunny	Mark McDougall	Album
Marcia Jones & The Cookies	Doug Reece	Doug Brady	Album
Casino Promotions	Adam Dion	Matt Voigt	Album
Degenerates	Jamie Durant	Mark McDougall	Theatre Tracks
Cox/Brady	Mike Brady	Kaj Dahlstrom	Demos
Whirled Records Contact Craig McArthur (03) 427 1436		Doug Brady	E.P.
The Plumbs	Craig & Band		
Peachfuzz	Craig & Band	Craig	Album
Hard Candy	Craig & Band	Craig	E.P.
Painters & Dockers	Craig & Band	Craig	Album
Billy Baxter	Ted Lethborg/Billy/Craig	Craig	Album
Anne McCue	Craig/Anne	Craig	Album Tracks
Western Australia			
Bonsai Recording Studio Contact Tom Thorpe (09) 349 6023 24 Track			
PMFM	Tom Thorpe	Tom Thorpe	Morning Crew Jingle
Andrew Breen	Tom Thorpe	Tom Thorpe	Demos
Greg Hastings (Essence)	Tom Thorpe	Tom Thorpe	Album
Burning Daylight	Tom Thorpe	Tom Thorpe	Re-Mix
Planet Sound Studios Contact John Villani & Denise Preston (09) 382 2211 48/32/24 Track			
Jacko	Jacko	Les Williams	Album Tracking
Festival of Perth	Gary Chard	Les Williams	Album Tracking
Josiah	John Villani & Band	Les Williams/John Villani	Mix down
Jeff Brownrigg	J. Villani & Jeff Brownrigg	John Villani	Single
Oz Connection	J. Villani & Oz Connection	John Villani	Album
Paul Graham	J. Villani	John Villani	Album
Poons Head Contact Rob Grant (09) 339 4791 32 Track			
Lenny Kravitz	Tom Edmunds	Rob & Tom	Demo
Circus Murders	Rob Grant & Band	Rob Grant	Album
Whittam Years	Rob Grant & Band	Rob Grant	Album
Danny Farrow	Rob Grant & D. Farrow	Rob Grant	Album
Alva Romeo & Romeos	Rob Grant & Band	Rob Grant	Demo
Cinema Prague	Rob Grant & Band	Rob Grant	Album
South Australia			
Mixmasters Productions , Contact Mick Wordley, 018 822 986, 24 Track			
Numb Skulls	Band/Wordley	Mick Wordley	Album
Miltons	Band/Turrell	Mike Turrell	Album
Milton Trott	Milton Trott	Mike Wordley	Film Demos
Robin Mann	Robin Mann	Mick Wordley	Album
All Flight Crew Are Dead		Mick Wordley	E.P.

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EQUALISERS

Model	# Bands / type	Range in dB	Input Connect.	Outputs Connect.	Balanced	Rack Height	Retail Price
A.B. International, Horwood Australia, (02) 718 8054							
A231	Stereo	6/12	XLR/6.5/RCA	XLR/6.5/RCA	Yes	2	\$1169
A131	31	6/12	XLR/6.5/RCA	XLR/6.5/RCA	Yes	1	\$699
A215	2 x 15	6/12	XLR/6.5/RCA	XLR/6.5/RCA	Yes	1	\$699
Alesis, from Electric Factory, (03) 480 5988							
MEQ2302	Dual 31	12	6.5 & RLA	6.5 & RLA	No	1	\$669
Altec Lansing, from Mark IV Audio, (02) 648 3455							
1753A	28	12	XLR	XLR	Yes	2	\$2906
ARX, from ARX P/L, (03) 555 7859							
EQ15	15	15/6	XLR/Jack	XLR/Jack	Yes	2	\$1335
EQ30	30	15/6	XLR/Jack	XLR/Jack	Yes	2	\$1348
EQ60	Dual 30	15/6	XLR/Jack	XLR/Jack	Yes	3	\$1992
MultiQ	6 Para	18	Jack	Jack	Yes	1	\$1315
Ashly, from Production Audio Services, (02) 954 5100, (03) 852 0900							
PQ16	4 Para	15	Jack	Jack	Yes	1	\$1195
PQ26	2 x 4	15	Jack	Jack	Yes	2	\$1895
GQX150	2 x 15	15	Jack/XLR	Jack/XLR	Yes	2	\$1530
GQX3101	31	6/15	XLR/Jack	XLR/Jack	Yes	2	\$1795
GQX3102	2 x 31	6/15	XLR/Jack	XLR/Jack	Yes	3	\$2995
Audio Logic, from Central Musical Instruments, (03) 315 2244							
AL-SC31	31	±12	XLR	XLR	Yes	2	\$1369
AL-SC215	2 x 15	±12	XLR/Jack	XLR/Jack	Yes	2	\$1469
AL-SC131	31	±12	XLR	XLR	Yes	2	\$1569
Blamp, from Production Audio Services, (02) 954 5100, (03) 852 0900							
EQ301	30	12	XLR	XLR	Yes	2	\$1730
uEQ152	2 x 15	6/12	Jack	Jack	Yes	1	\$1260
uEQ301	30	6/12	Jack	Jack	Yes	1	\$1195
Citronic, from G.U.V.T. 008 773 187							
EQ260	Dual 10	12	RCA	RCA	No	2	\$524
SPX7-21	Dual 15	6/12	XLR/RCA	XLR/RCA	Yes	1	\$1227
SPX7-27	31	6/12	XLR/RCA	XLR/RCA	Yes	1	\$1315
DBX, from Syntec Int. P/L, (02) 417 4700							
1531	31	18	XLR	XLR	Yes	1	\$1059
Drawmer, from Amber Technology, (02) 975 1211							
1961	24	18	XLR	XLR	Yes	2	\$4395
DOD, from Central Musical Instruments, (03) 315 2244							
DR231	2 x 31	±12	Jack	Jack	Yes	2	\$1189
DR430	2 x 15	±12	Jack	Jack	Yes	1	\$699
DR431	31	±12	Jack	Jack	Yes	1	\$719
DR830	2 x 15	±12	Jack	Jack	Yes	2	\$699
DR831	31	±12	Jack	Jack	Yes	2	\$719
Electro-Voice, from Mark IV Audio, (02) 648 3455							
2710	27	12	XLR	XLR	Yes	2	\$2739
Furman, from Artech Systems, (03) 752 4088							
GQ151	2 x 15	12	XLR	XLR	Yes	1	\$995
GQ301	1 x 3	12	XLR	XLR	Yes	1	\$995
GQ602	2 x 3	12	XLR	XLR	Yes	2	\$1795
JBL, from Jands, (02) 516 3622							
5547A	2/3 Oct	12	XLR/6.5	XLR/6.5	Yes	2	\$2895
5549A	2/3 Oct	+0-12	XLR/6.5	XLR/6.5	Yes	2	\$2995
Klark Teknik, from Mark IV Audio, (02) 648 3455							
DN300	30	12	XLR	XLR	Yes	2	\$3160
DN301	30	12	XLR	XLR	Yes	2	\$3160
DN332	Dual 15	12	XLR	XLR	Yes	2	\$2970
DN360	Dual 31	12	XLR	XLR	Yes	4	\$4798
DN405	5 Para	12	XLR	XLR	Yes	1	\$2560
DN410	Dual Para	12	XLR	XLR	Yes	2	\$4200

Technology Explained About EQ

<< (Using the Buyers Guide chart: See Page 50.)

Equalisation, or **EQ**, can be used to modify the frequency balance of any sound source, from an individual instrument to a complete stereo mix. The basic concept of equalisation is to focus on a particular group of frequencies and boost or cut their level — how the frequencies are chosen, and how they are boost or cut, is determined by the type of equaliser.

Most equalisers are based around one of two different response curves, known as **shelving** and **peak/dip** (also called **bell** response). These names refer to the effect the equalisation has on the signal's frequency response. Shelving puts a shelf into the response, while peak/dip puts a peak or dip into the response.

The point at which shelving EQ takes effect is known as the **shelving frequency**, and is specified as the frequency that is three dB below maximum boost or cut. Two types of shelving EQ are commonly available: **low frequency shelving** affects all frequencies below the shelving frequency, while **high frequency shelving** affects all frequencies above the shelving frequency.

The point at which peak/dip EQ takes effect is known as the **centre frequency**, and refers to the frequency at the centre of the peak or dip. This will be the frequency with maximum boost or cut.

The amount of boost or cut available is specified in decibels, or dBs. Most equalisers offer ±12 dB of control, meaning they can boost or cut by as much as 12 dB. Some equalisers offer up to ±15 dB of boost and cut. Hav-

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BUYERS GUIDE FEATURE

Model	# Bands /type	Range in dB	Input Connect.	Output Connect.	Bal-anced	Rack Height	Retail Price
Peavey, from Australis Music Group, (02) 938 3466							
EQ215/RTD215	2 x 15	6/12	XLR/6.5 in	XLR/6.5 out	Yes	1	\$995
EQ31/RTD31	1 x 31	6/24	XLR/6.5	XLR/6.5	Bal	1	\$995
AUTOGRAPH/CEQ28	1 x 28	Variable	?	?	?	1	\$1679
AUTOMATE/CEQ28R	1 x 28 Slave	Variable	?	?	?	1	\$1349
PME 4	Para 4 Way	18	?	?	?	1	\$695
PME 8	Para 2 x 4	18	?	?	?	2	\$795
Phonic, from CMC Music P/L, (02) 905 2511							
PEQ3300	31		Jack	Jack	Yes	1	\$450
PEQ3400	2 x 15		Jack	Jack	Yes	1	\$450
PEQ3600	2 x 31		XLR	XLR	Yes	2	\$799
Rane, from Jands, (02) 516 3622							
FME15	2/3 Oct.	6/12	XLR/6.5	XLR/6.5	Yes	1/2	\$1040
ME15	Dual 2/3	6/12	6.5mm	6.5mm	Yes	1	\$1295
ME30	1/3 Oct	6/12	6.5mm	6.5mm	Yes	1	\$1295
ME60	Dual 1/3	12	XLR/6.5	XLR/6.5	Yes	2	\$2095
MQ15	Dual 2/3	6/12	XLR/6.5	XLR/6.5	Yes	1	\$1695
MQ30	1/3 Oct	6/12	XLR/6.5	XLR/6.5	Yes	1	\$1595
GE14	Dual 2/3	+12-15	6.5mm	6.5mm	Yes	2	\$1795
GE27	1/3 Oct	+12-15	6.5mm	6.5mm	Yes	2	\$1795
GQ15	Dual 2/3	+12-15	XLR/6.5	XLR/6.5	Yes	2	\$1995
GQ30	1/3 Oct	+12-15	XLR/6.5	XLR/6.5	Yes	2	\$1995
GE30	1/3 Oct	+12-15/-20	XLR/Screws	XLR/Screws	Yes	2	\$2495
MPE14	1/3 Oct Midi	+12-15	XLR/6.5	XLR/6.5	Yes	1	\$2495
MPE28	1/3 Oct Midi	+12-15	XLR/6.5	XLR/6.5	Yes	1	\$2395
RE27	1/3 Oc/RT An.	+12-15	6.5	6.5	Yes	2	\$2695
THX44	Multi EQ	6	RCA	RCA	No	2	\$4195
FPE13	3 Para	+15-20	XLR/6.5	XLR/6.5	Yes	1/2	\$1040
PE15	5 Para	+15-20	XLR/6.5	XLR/6.5	Yes	1	\$1295
PE17	5 Para	+12-15	XLR/6.5	XLR/6.5	Yes	1	\$1695
SP15	5 Para	+12-15	XLR/6.5	XLR/6.5	Yes	1	\$1995

ing covered these fundamentals of EQ, we can now look at some specific types of EQ.

Fixed shelving EQ is the simplest of all equalisation, and has a single control for boosting or cutting. The shelving frequency is 'fixed', meaning it has been determined by the manufacturer and is not user-adjustable. Fixed shelving EQ is found on most live mixing consoles and low cost recording consoles. Typical shelving frequencies range from 63 Hz to 120 Hz for low frequencies, and 8 kHz to 12 kHz for high freq.

Fixed peak/dip EQ is also very simple, having only a single boost/cut control affecting a centre frequency chosen by the manufacturer. Low cost mixing consoles often feature one or two fixed peak/dip EQs, with typical centre frequencies fixed somewhere between 400 Hz and 4 kHz.

The fixed frequency equalisers described above are useful for overall tone control: making a dull

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BUYERS GUIDE FEATURE

Model	# Bands /type	Range in dB	Input Connect.	Output Connect.	Bal-anced	Rack Height	Retail Price
Rocktron, from Central Musical Instruments, (03) 315 2244							
PRO-Q	3 Para Mid	25	Jack	Jack	No	1	\$1219
Ross, from Central Musical Instruments, (03) 315 2244							
RX-15S	2 x 15	12	Jack	Jack	Yes	1	\$469
RX-31M	31	12	Jack	Jack	Yes	1	\$429
RSP Technologies, from Central Musical Instruments, (03) 315 2244							
STUDIO-Q	4 Para	±15	Jack	Jack	Yes	1	\$1129
Samick, from Australasian Music Supplies P/L, (03) 872 4488							
EQ215	2 x 15	12	XLR/Jack	XLR/Jack	Yes	1	\$449
EQ31	31	12	XLR/Jack	XLR/Jack	Yes	1	\$469
Symetrix, from Audio Telex, (02) 647 1411							
SX201	Para	-30+15	Jack	Jack	Yes	1	\$587
T.C. Electronic, from Amber Technology, (02) 975 1211							
1140	1 Para.	20	XLR	XLR	Yes	1	\$1525
2240	2 Para	20	XLR	XLR	Yes	2	\$2535
1128*	28	12/16	XLR	XLR	Yes	1	\$5550
Yamaha, from Yamaha Aust., (03) 699 2388							
GQ1031B11	31	12	XLR/6.5	XLR/6.5	Yes	1	\$699
GQ2015	2 x 15	6/12	XLR/6.5	XLR/6.5	Yes	1	\$799
Q2031A	2 x 31	6/12	XLR/6.5	XLR/6.5	Yes	2	\$1395
GQ1131	1 x 31	12	XLR/6.5	XLR/6.5	Yes	2	\$2495
YDG2030*	2 x 30	12	XLR	XLR	Yes	1	\$2595
YDP2006*	2 x 6 Para	Variable	XLR	XLR	Yes	1	\$2495

*Digital, with extra features.

The Buyers Guide: How To Use.
Bands/Type: If a mono, 1/3 octave graphic equaliser, it will be expressed as 1 x 31, or 1 x 28. If a stereo 15 band graphic: 2 x 15. If

Parametric: "Para" and the number of separate equalisers, ie: 2 x 6 para denotes a stereo unit, with each side having six parametric equalisers in a chain. Range is the

maximum possible amount of cut or boost, expressed in dB. The rest should make sense to you! Height in rack units, etc. Price is Retail.

EQ (continued)

sound brighter or making a bright sound duller. To solve more difficult problems there are the **sweepable** equalisers, which feature an additional control that allows the user to choose the frequencies affected by the equalisers. This is usually done with the use of a rotary knob which allows the user to 'sweep' through the frequency range and choose the appropriate point to apply EQ.

Sweepable shelving EQ has two controls, one for cut and boost, and the other for selecting the shelving frequency. This sort of EQ is found on some of the more expensive mixing consoles, particularly those used for recording.

Sweepable peak/dip EQ is very common on mixing consoles for control of the high midrange and low midrange frequencies. Typical frequency ranges for good sweepable EQ are from 50 Hz to 1.6 kHz for low midrange, and from 500 Hz to 16 kHz for high midrange (frequencies taken from Soundcraft Spirit Studio console).

Full parametric EQ

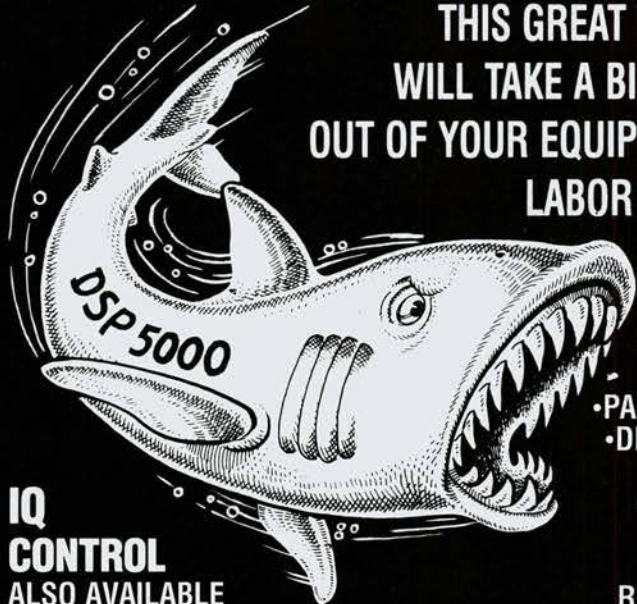
Unlike the other forms of peak/dip EQ, full parametric has a third control called **bandwidth** or **Q**, which offers control over the range of frequencies that are affected either side of the centre frequency. This is the most powerful type of equalisation, since it offers control over the three parameters of amplitude, frequency and bandwidth (hence the name 'full parametric'). See diagram at right>

Graphic EQ

The graphic equaliser is actually a set of fixed peak/dip equalisers with centre frequencies chosen to cover the entire audio frequency range. Graphic equalisers are generally specified in terms of how far apart the centre frequencies are. For example, a **third octave graphic equaliser** has centre frequencies spaced one third of an octave apart (an octave is a doubling of frequency). Each equaliser is controlled by a single cut/boost control in the form of a small fader or 'slider', rather than a rotary knob. Once set up, the front panel of the graphic equaliser shows its frequency response, giving it the name 'graphic'.

-By Greg Simmons.

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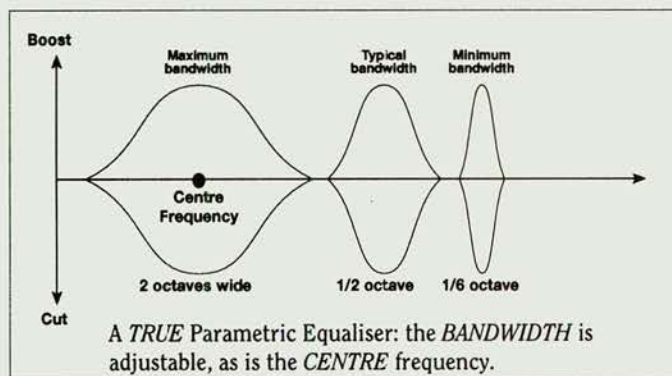


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BUYERS GUIDE FEATURE



PROCESSORS

A frighteningly generic title, to be sure, includes exciters and enhancers, a strange set of devices that have developed over the years from novelties to serious tools for sound recording and reinforcement. The original concept of excitation was pioneered by Aphex, with their patented 'Aural Exciter'.

In most cases, these devices make things sound brighter and clearer in a way that traditional EQ cannot.

Also below you'll find some of

the more exotic equalisers from people like Klark and Yamaha. These modern processor controlled devices have features beyond the standard chart on the previous pages, and so appear here.

The traditional equaliser, limiter, noise gate and compressor/limiter as shown in this buyers guide will very soon disappear, replaced by multi processors like some of the units below.

Sabine's feedback exterminator is here too, and more.....

Audio Logic, from Central Musical Instruments, (03) 315 2244

AL-PA888, Psycho Acoustic, Signal Processor. 2 Ch. 4 Modes, Balanced XLR, Inputs & Outputs. \$719

Aphex, from East Coast Audio, (03) 428 9797

C2, Aphex Aural Exciter with Big Bottom, 2 Ch./Jacks/By-Pass Switch, \$675.

Crown, from Bose Australasia Inc., (02) 684 1022

SMX-6, 6 x 2 Ch., Terminal Connectors, Gated Intelligent indoor mixer, Automatic with Input & Output and Auto Level. 1 Rack Unit \$3596

Drawmer, from Amber Technology, (02) 975 1211

M500, Multi-Dynamics Processor with Programmable Noise Gate/De-Esser/Compressor/Expander/Limiter/Auto Panner & Auto Fader. Full Edit Control, 2 Ch., 1 U High, Balanced XLR In/Out, Midi. \$3995.

Furman, from Artech Systems, (03) 752 4088

RNCH10, Bass Enhancement Processor/XLR Balanced/One RU \$799.

Klark Teknik, from Mark IV Audio, (02) 648 3455

DN3600, Programmable Equaliser. Dual 30 Band, 12dB Range, XLR In & Out with Midi; Balanced, 2 R/U High, Retail \$6,778. Has 66 memories. Has DN360 & DN27 Curves.

Sabine, from Audio Telex (02) 647 1411

FBX900, Feedback Exterminator, 9 Filters, 1/10 Octave, XLR/Jack Connections, 1 R U, \$1616.

FBX1802, 2 Ch., Feedback Exterminator, 9 Filters, 1/10 or 1/5 octave, XLR/Jack.

\$3232.

ADF1200, Feedback Exterminator 12 Filters, Output Delay, Noise Gate, LCD Display, 10 Memories, Password, Protection, XLR Connections, 2 R U, \$3732.

ADF2400, Feedback Exterminator, 2 Ch., 12 Filters, Output Delay, Noise Connections, 2 R U, \$5794.

Symetrix, from Audio Telex (02) 647 1411

528, Voice Processors - XLR/Jack Inputs, Output, Five Processors in 1 rack unit. \$1510.

601, Digital Voice Processors - Digital/Analogue Inputs, Midi, Nine Processors in 1 rack unit, 256 presets. \$5606.

421, Auto Gain Controller - XLR/Jack Connections Expansion/AGC/Limiting, 1 R U, \$1225.

White Instruments, from Horwood Australia, (02) 718 8054

DSP5000, 19 Bit Processor, User Configurable, 1 Input, 4 Outputs, X-Over Filters, Parametric EQ, Delay, Limiting & Shelving, 1 R.U.

DSP5001, 19 Bit Processor, User Configurable, Digital Inputs only, X-Over Filters, Parametric EQ, Delay, Limiting & Shelving, 1 R.U.

Yamaha, from Yamaha Aust., (03) 699 2388

D1030, Crossover/EQ/Delay/Parametric - Midi + Memory, Balanced, Mono, 3 Way, \$2095

D2040, Crossover/EQ/Delay/Parametric - Midi + Memory, Balanced, Stereo 4 Way, \$7495

DEQ30, Dual 30 Graphic or 6 Band Parametric with Motorised Faders, Memory and More. \$5695.

DEQ5E, Slave for above \$4695

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The DL251 'Spectral Compressor'... unmistakably Drawmer.

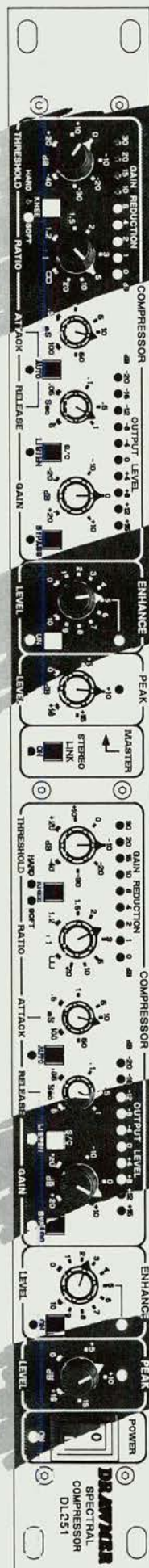
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COMPRESSOR/LIMITERS

Model	# ch	with noise gate?	input connect	output connect	Balanced Yes/No	Height in R/U	Retail
Alesis, from Electric Factory, (03) 480 5988							
3630	2	Yes	6.5mm	6.5mm	No	1	\$799
Altec Lansing, from Mark IV Audio, (02) 648 3455							
1712A	1	No	XLR	XLR	Yes	1	\$1756
Aphex, from East Coast Audio, (03) 428 9797							
AX106	4	No	Jacks	Jack	No	1	\$862
AX651	2	No	XLR	XLR	Yes	1	\$1000
ARX, from ARX, (03) 555 7859							
Quadcomp®	4	No	Jack	Jack	Yes	1	\$1296
Afterburner	2	No	XLR/Jack	XLR/Jack	Yes	1	\$1070
DDP-1	2	Yes	XLR/Jack	XLR/Jack	Yes	1	\$1315
Ashly, from Production Audio Services, (02) 954 5100, (03) 852 0900							
CL50E	1	No	Jacks	Jacks	Yes	1	\$850
CL52E	2	No	Jacks	Jacks	Yes	1	\$1250
Audio Logic, from Central Musical Instruments, (03) 315 2244							
AL-660	2	Yes	Jack	Jack	Yes	1	\$739
AL-266	2	Yes	Jack/XLR	Jack/XLR	Yes	1	\$1099
Citronic, from G.U.V.T., 008 773 187							
SPX3-51	2	Yes	XLR/RCA	XLR/RCA	Yes	1	\$1667
DBX, from Syntec International, (02) 417-4700							
160	2	No	XLR	XLR	Yes	1	\$1169
166	2	Yes	Jacks	Jacks	Yes	1	\$1269
163	1	No	Jacks	Jacks	No	1	\$429
Drawmer, from Amber Technology, (02) 975 1211							
DL-441	4	No	XLR	XLR	Yes	1	\$2495
1960	2	No	XLR	XLR	Yes	2	\$4395
LX20	2	No	Jack	Jack	No	1	\$1075
DL241	2	Yes	XLR	XLR	Yes	1	\$1895
DL251	2	No	XLR	XLR	Yes	1	\$2295
DOD, from Central Musical Instruments, (03) 315 2244							
DR-866	2	Yes	Jack	Jack	Yes	1	\$599
Furman, from Artech Systems, (03) 752 4088							
LC3A	1	Yes	XLR	XLR	Yes	1	\$699
LC-XB	1	Yes	XLR	XLR	Yes	1	\$899
LC-6	2	Yes	XLR	XLR	Yes	1	\$1099
JBL, from Jands, (02) 516 3622							
M712	2	No	XLR	XLR	Yes	1	\$1095
Klark Teknik, from Mark IV Audio, (02) 648 3455							
DN500	2	No	XLR	XLR	Yes	1	\$3220
DN504	4	No	XLR	XLR	Yes	1	\$3820

Technology Explained Compressor Limiters

The basic idea behind compression is to reduce the volume of all signals that exceed a pre-determined level. The process of reducing the volume is called **gain reduction** or **GR**, and the level at which gain reduction is applied is called the **threshold**. The amount of gain reduction applied to the signal is determined by the **ratio** control, which selects ratios of input level vs. output level. Typical compression ratios vary from 2:1 to 20:1.

The fundamental operation of the compressor is based around the ratio control, and the easiest way to understand this is to think in terms of input signal level versus output signal level. Bearing in mind that the compressor does not affect signal levels below the threshold, we can think in terms of 'input level increases above threshold' versus 'output level increases above threshold'.

A compression ratio of 3:1 means if the input level increases by 3 dB above threshold, the output level will only increase by 1 dB above threshold.

Output gain control. This is used to return the output signal to a reasonable level. The difference between the compressed and

To Use This Guide: Some Compressor/Limiters also have noise gates on board. This is noted in the chart above. The chart doesn't go anywhere close to differentiating the features of each unit, rather this is somewhere to start. Good metering is helpful, as is output gain boost ability.

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BUYERS GUIDE FEATURE

Model	# ch	with noise-gate?	input connect	output connect	Balanced Yes/No	Height in R/U	Retail
L.A. Audio, from Southbank Trading, (03) 699 7809							
Classic	2	No	XLR	XLR	Yes	2	\$3300
4C	4	No	Jacks	Jacks	Yes	1	\$1292
4 x 4	2	Yes	Jacks	Jacks	No	1	\$999
MHB, from MHB Music Systems, (08) 352 3685							
FRC4	4	No	Yes	Yes	Yes	1	\$670
FRC2	2	No	Yes	Yes	Yes	1	\$465
Peavey, from Australis Music Group, (02) 938 3466							
CDS2	2	?	?	?	?	1	\$395
Phonic, from CMC Music P/L, (02) 905 2511							
PCL3200	2	Yes	Jacks	Jacks	No	1	\$599
Rane, from Jands, (02) 516 3622							
DC24	2	Yes	XLR	XLR	Yes	1	\$1395
FPL44	4	No	6.5mm	XLR	Yes	1/2	\$1380
FSC22	2	No	XLR & 6.5mm	XLR & 6.5mm	Yes	1/2	\$1290
FVL22	2	No	Screw Terms	Screw Terms	Yes	1/2	\$1050
Rocktron, from Central Musical Instruments, (03) 315 2244							
MDL-300G	1	Hush	Jack	Jack	No	1	\$799
Symetrix from Audio Telex, (02) 647 1411							
SX208	2	No	Jacks	Jacks	Yes	1	\$630
501	1	No	XLR/Jack	XLR/Jack	Yes	1	\$755
425	2	Yes	XLR/Jack	XLR/Jack	Yes	1	\$1285
Urei, from Jands, (02) 516 3622							
LA10	1 Comp/Lt	No	XLR/6.5mm	XLR/6.5mm	Yes, Tx	1	\$1545
LA12	2 Comp/Lt	No	XLR/6.5mm	xlr/6.5mm	Yes, Tx	1	\$2245
LA22	2 Comp/Lt	No	XLR/6.5mm	XLR/6.5mm	Yes, Tx	1	\$2545
1176LN	1 Comp/Lt	No	Screw Terms	Screw Terms	Yes, Tx	2	\$3195
1178	2 Comp/Lt	No	Screw Terms	Screw Terms	Yes, Tx	2	\$4595
COMP1	1 Comp/Lt	Yes	XLR	XLR	Yes	custom	\$895
Yamaha, from Yamaha Aust., (03) 699 2388							
GC2020B11	2	Yes	XLR/6.5	XLR/6.5	Yes	1	\$699

uncompressed signals does not lie in their maximum level, but in their dynamic range. The dynamic range of a compressed signal is less than an uncompressed signal, which might be just the right amount to make it 'sit' comfortably in the mix. The dynamic range of a uncompressed signal may be too large to allow the softest and loudest parts of the signal to be heard clearly when placed in the mix.

Apart from threshold, ratio and output controls, some compressors also have **attack** and **release** controls. The attack control determines how quickly gain reduction is applied after the signal exceeds the threshold, while the release control determines how long it takes the compressor to stop reducing the gain.

A limiter is really just a compressor operated at an extreme. Rather than controlling the signal's dynamic range, limiting is used to prevent signals going above a certain level. Limiting is often used in recording vocals & sound reinforcement systems.



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850W bridged into 8 W,
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CROSSOVERS

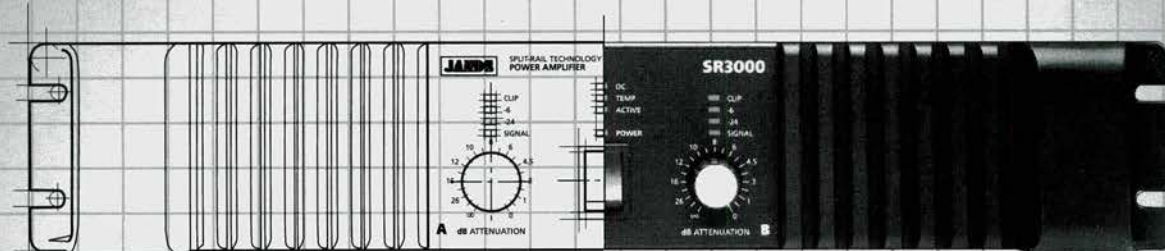
The input/outputs are important here, a mono 3 way unit is expressed as 1 x 3, many are variable. 2 x 2 is stereo 2 way, 1 x 4/5 is 4 or 5 way.

Model	Input/outputs	Range in dB	Input connect	Output connect	Height in r/u	Balanced	Retail
Altec Lansing, from Mark IV Audio, (02) 648 3455							
1632A	2x2,1x3	24	XLR	XLR	1	Yes	\$2770
ARX, from ARX, (03) 555 7859							
EC-1	2x2/1x3	24	Jack	Jack	1	Input	\$665
EC-2	2x2/1x3	24	XLR	XLR	1	Yes	\$842
Ashly, from Production Audio Services, (02) 954 5100 (03) 852 0900							
XR1000	2x2,1x3	24	XLR	XLR	1	Yes	\$1150
XR2000	2x3,4x2	24	XLR	XLR	2	Yes	\$1695
XR4000	2 x 4	24	XLR	XLR	2	Yes	\$1995
Audio Logic, from Central Musical Instruments, (03) 315 2244							
AL-X324	2 x 3	18	XLR	XLR	1	Yes	\$879
AL-X22	2 x 2	24	XLR	XLR	1	Yes	\$999
AL-X23	2 x 2	24	XLR	XLR	1	Yes	\$999
AL-X32	2 x 3	24	XLR	XLR	1	Yes	\$1099
AL-X34	2 x 3	24	XLR	XLR	1	Yes	\$1199
Citronic, from G.U.V.T. 008 773 187							
SPX5-41	2x2/3/4	12/18	XLR	XLR	1	Yes	\$1403
Bryston, from Syntec International, (02) 417-4700							
10B	1 x 3	6/12/18	XLR	XLR	1	Yes	\$2675
Crown, from Bose Australia Inc. (02) 684 1022							
FFX-2	2 x 2	24			1	Yes	\$663
DOD, from Central Musical Instruments, (03) 315 2244							
DR-835	2 x 2	18	Jack	Jack	1	Yes	\$529
DR-834	2 x 3	18	Jack	Jack	1	Yes	\$679
Electro-Voice, from Mark IV Audio, (02) 648 3455							
XEQ-3	1 x 3	24	XLR	XLR	1	Yes	\$3100

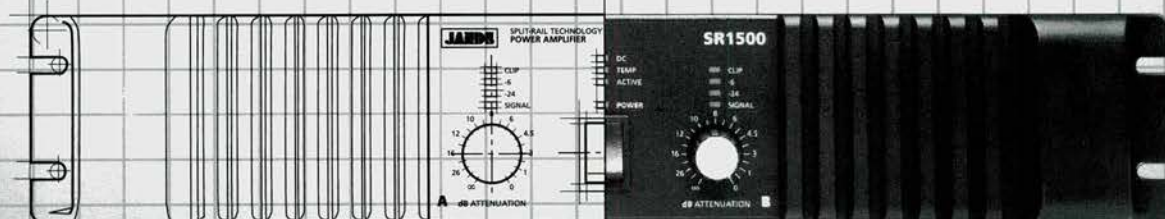
EX-18	2 x 2	24	XLR	XLR	1	Yes	\$1184
EX-24	2 x 2,1 x 3	24	XLR	XLR	1	Yes	\$1540
Furman, from Artech Systems, (003) 752 4088							
TX324	2 x 2	24	XLR	XLR	1	Yes	\$1099
TX424	2 x 3	24	XLR	XLR	2	Yes	\$1499
TX524	2 x 4	24	XLR	XLR	2	Yes	\$1899
JBL, from Jands, (02) 516 3622							
M552	2 x 2	24	XLR	XLR	1	Yes	\$1095
M553	2 x 3	24	XLR	XLR	1	Yes	\$1295
5235	2x2,1x3	24	XLR	XLR	1	Yes	\$3495
ES52000	2x2,1x2,3,4	90	XLR	XLR	2	Yes	\$7495
ES52000T	2x2/1x2,3,4	90	XLR	XLR	2	Yes	\$8495
Klark Teknik, from Mark IV Audio, (02) 648 3455							
DN800	4x2,2x3,2x4	24	XLR	XLR	1	Yes	\$3300
MHB, from MHB Music Systems, (08) 352 3685							
2Way	2 x 2	18	XLR/Plug	XLR/Plug	1	Yes	\$399
3Way	2 x 3	18	XLR/Plug	XLR/Plug	1	Yes	\$449
3 uM	1 x 3	18	XLR/Plug	XLR/Plug	1	Yes	\$359
Peavey, from Australis Music Group, (02) 938 3466							
VSX/PSX	1x3/2x2	24	XLR/6.5	XLR/6.5	1	Yes	\$769
Rane, from Jands, (02) 516 3622							
AC22	2x2,1x3	24	6.5mm	6.5mm	1	Yes	\$1295
AC23	2x2/3,1x4/5	24	6.5	6.5	1	Yes	\$1595
AC23B	2x2/3,1x4/5	24	XLR	XLR	1	Yes	\$1695
FAC24	1 x 2	24	XLR	XLR	1/2	Yes	\$1180
FAC28	1 x 2	48	XLR	XLR	1/2	Yes	\$1550
Samick, from Australasian Music Supplies P/L							
DV230	2 x 2	12	XLR/Jack	XLR/Jack	1	Yes	\$449
Symetrix, from Audio Telex (02) 647 1411							
524E	1x4,2x2	24	XLR	XLR	1	Yes	\$2425
Yamaha (See 'Processors' entry for digital signal devices that crossover too!)							

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NOISE GATES

Side chain means ability to be triggered from a 2nd source, which can be frequency selective, thus the mentions here. Important features!

Model	# of Ch	Side Chain?	Freq. Selective?	Input Connect	Output Connect	Height in r/u	Retail
ARX, from ARX P/L, (03) 555 7859							
SixGate	6	Yes	Extly.	Jack Bal.	Jack Bal.	1	\$1150
Aphex, from East Coast Audio, (03) 428 9797							
AX105	4	No	No	Act.Bal.	Yes	1	\$862
AX622	2	Yes	Yes	XLR	XLR	1	\$1690
Ashly, from Production Audio Services, (02) 954 5100, (03) 852 0900							
SG35E	4	Yes	Yes	Jack	Jack	2	\$1750
Audio Logic, from Central Musical Instruments, (03) 315 2244							
AL-440	4	Key	No	Jack	Jack	1	\$899
DBX, from Syntec International, (02) 417-4700							
363	2		yes	jacks	jacks	1	\$599
904	1		no	jacks	jacks	custom	\$679
172	2		no	XLR	XLR	1	\$1999
274	4	Yes	No	Jacks	Jacks	1	\$1059
266	2	Yes	No	Jacks	Jacks	1	\$699
Drawmer, from Amber Technology, (02) 975 1211							
DS-201	2	Yes	Yes	XLR	XLR	1	\$1695
DS-404	4	Yes	Yes	XLR	XLR	1	\$2495
DS-301	2	Yes	Yes	XLR	XLR	1	\$2495
DOD, from Central Musical Instruments, (03) 315 2244							
DR-844	4	Key	No	Jack	Jack	1	\$599
Furman, from Artech Systems, (03) 752 4088							
QN44	4	Yes	No	XLR	XLR	1	\$1299

JBL, from Jands, (02) 516 3622							
M644	4	No	No	6.5	6.5	1	\$1095
L.A. Audio, from Southbank Trading, (03) 699 7809							
Multigate	16	Internal	Yes	Jacks	Jacks	1	\$2999
4 x 4	2	Yes	Yes	Jacks	Jacks	1	\$999
4G	4	Yes	Yes	Jacks	Jacks	1	\$1292
Klark Teknik, from Mark IV Audio, (02) 648 3455							
DN510	2	Yes	Yes	XLR	XLR	1	\$3158
DN514	4	Yes	Yes	XLR	XLR	1	\$2970
Peavey, from Australis Music Group, (02) 938 3466							
NGT2	2	Yes	?	?	?	1	\$395
RSP Technologies, from Central Musical Instruments, (03) 315 2244							
MDL-300A	1	Yes	No	Bal.Jacks	Bal.Jacks	1	\$849
MDL-360	2	Yes	No	Bal.Jacks	Bal.Jacks	1	\$1129
Rocktron, from Central Musical Instruments, (03) 315 2244							
HUSH20X	2	No	No	Bal.Jacks	Bal.Jacks	1	\$849
PROHUSH	2	No	Yes	Bal.Jacks	Bal.Jacks	1	\$1399
HUSH8X	8	No	No	Bal.Jacks	Bal.Jacks	1	\$1119
Symetrix, from Audio Telex (02) 647 1411							
564E	4	Yes	Yes	XLR	XLR	1	\$2462
Urei, from Jands, (02) 516 3622							
Gate 1	1	Yes	Yes	XLR	XLR	Custom	\$895

Notes. 1. All prices shown notified correct by distributors at 15 March 1994, inc. tax.
2. Many brands not shown here due information not received by Connections.
3. Non appearing brands may well be worth consideration too, this is NOT the bible!
4. Whilst all care taken, details, specifications and prices may be incorrect. (Sorry!)

Next month: Effectors, Reverbs, Delays!

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LIGHTNING

MONTHLY

New fixture utilizes Lithopattern gobos, bi-directional data exchange, and features pitched at the 'High End' of the moving light market

HIGH END DEBUT CYBERLIGHT



High resolution lithopattern designs on metal coated glass or dichroics - new from Lightwave Research. Shown with designer Rebecca Kittrell.

ICON for Bytecraft

In a bold move Melbourne based Bytecraft have become the ICON moving light system franchisee for Australia, appointed by ICON builders, Light & Sound Design.

"It is in keeping with our specialist hire business, for example

we also have we have Sky Trackers", said Bytecraft Business Development Manager Durham Ritchie. The firm operate with branch offices in Sydney and Brisbane, and are the Strand agents
(continued on page 59)

Cyberlight is the new entrant in the High End Systems/Lightwave Research stable. Designed as the new company flagship, it complements the existing range of fixtures such as Intellabeam, Emulator, Dataflash, and Trackspot.

Lightwave Research has sought feedback from their product users, the Cyberlight luminaire is the result of that feedback.

Designed using the latest computer aided design (CAD) technology, Cyberlight has a unique optical train and enhanced elliptical reflector, resulting in increased optical efficiency that maximises the power and intensity of the 1200 watt lamp, say High End.

Lightwave Research is renowned for the pure colours of their Dichroic filters, and Cyberlight takes full advantage of that Dichroic technology. With two separate colour systems, the Cyberlight can provide almost any describable colour. An eight position colour wheel provides for the seven primary colours plus white. Additionally a CYM colour mixing system allows the LD to select any number of other colours or subtle hues. Also included is a CTO colour corrector plus upward, downward, and centered colour correction for modifying any of the selected colours.

The Cyberlight gobo system incorporates two separate gobo systems, one comprised of four rotating gobos, the other with static

(continued over)

Bits

• **ENTERLITE** are about to launch (is that the right word?) a new DMX input fibre-optic head to run curtains, set and floor lighting. The device is 80% through R & D, a prototype was seen working in Adelaide on a large scale product launch show. Call (08) 270-2637 and ask them when.

• **SHOW TECH** say 'business is booming', Rod Salmon and Emmanuel Ziino are travelling the countryside building a network of pro dealers, who now include Black Express, Nightshift, Noisebox, TCP, Lightmoves and Custom Audio in NSW, Topstage in ACT, AVL Electronics, DM Marketing and Lightmoves PES in Victoria, and Air Electronics, Mick James and SkyPak in Queensland. Rod and Emmanuel are off to SIB in Rimini as we print (as is co-publisher Caroline Grafton,) to search for new ideas and products.

• **AUSTRALIAN DISCO SUPPLIES** have smart new premises, Nick Karafinas has also added a new mini Ultra Scan system to his stock. Visit their Northcote (Vic) premises.

• **BRISBANE STATE** High School have taken delivery of a Microlux 1000 theatre lighting design package, for the drama department there.

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Stacks - 99 Cues per stack	12	24	36
Sound-to-Light setups	12	24	36

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(Cyberlight,
continued)

gobos, maximising the number of beam effects. Both gobo systems operate either independently or can be combined for "static on static" or "rotating on static" gobo mixing effects. The four variable speed rotating Gobo's feature both forward and reverse rotation with all protected images being fully positional and programmable. The static gobo's incorporated into the eight position gobo wheel feature one open, two fixed and five replaceable gobo's. Designed for easy modular replacement, Cyberlight uses 1.75" metal or glass substrate gobo's for enhanced resolution.

Cyberlight has remote focus, variable frost, remote zoom, vari-

able speed strobe, prism and dichroic mosaic effects, and more, and of course full dimming capabilities.

The remote focus allows for razor sharp beam projection over a variety of distances. No longer do you need to choose between sharp beam edge and sharp image projection. By bringing in the variable frost you can achieve soft edge

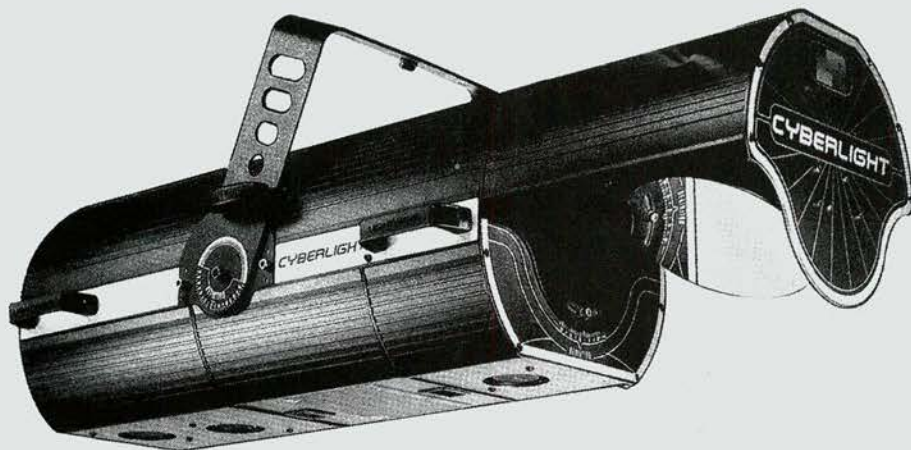
and soft to gobo or from gobo to white. The remote zoom facility (13 degrees to 22 degrees as standard or 16 degrees to 26 degrees with a wide angle lens) allows for total flexibility in sizing projected images, all without sacrificing overall power.

Other design features include power factor correction, a break resistant mirror, recessed power

switch, easy lamp replacement and thermal overload protection. The Cyberlight's yoke system with its graduated scale and locking system can greatly reduce pre-focus time.

Lithopattern designs can be created to order, according to High End Systems. They say the new etching system can be applied to either their

dichroic colour media or to metal coated glass. Photolithography Designer Rebecca Kittrell can accept most artwork, even faxes, to produce an etched master plate that is then utilized to make the desired pattern on metal coated glass. The custom sizes are available up to 6" x 6", and can also be printed on dichroic glass. Call GUYT 07 358-5022 for more.



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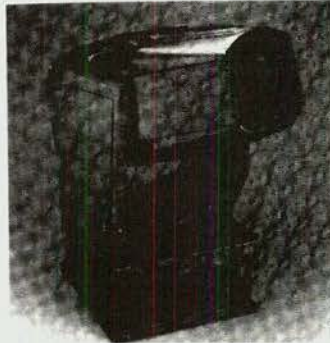
ICON for
Bytecraft (Cont)

for Australia. Most famous for manufacturing innovative lighting and stage control systems, Bytecraft today export products like their 'State' flying system to Theatre markets around the world.

The ICON is a fully manoeuvrable moving light system, operating in a market perhaps best typified by the Vari*Light, which is available in Australia from a franchise operated within Jands Production Services.

ICON joins the Morpheus Pan Command system (owned by CLS) in the Australian hire market of fully manoeuvrable, proprietary moving light systems rented rather than purchased. These systems represent a multi-million dollar investment, so are serious capital items.

Also available across the country are rapidly growing numbers



of Clay Paky Golden Scans, and High End Systems Intellabeams,

(and many others) used in many cases as an alternative for ICON or Vari*Lite type fixtures, although non-moving, as these use a moving mirror.

Bytecraft have gambled that the large client list of touring acts that ICON manufacturer, Light & Sound Design have, will translate into local business for ICON. This is certainly true of the recent Depeche Mode tour (story next issue) which used ICON. More than half the international tours mov-

ing through Australia are LSD customers in the Northern World. More business will be found in traditional Bytecraft hire markets too, they say.

Durham Ritchie seems quite prepared to venture into the 'boots and all' touring market, indeed happy enough to tough out the politics, which can be vicious. "We've already had calls" he said, "and squashed some rumours". The firm certainly have enough nerve, having dealt with lighting politics originating from the last days of Strand Lighting in Australia, where the game was played hard and fast.

The 600 watt HTI light source matches the latest VL2C Vari*Lite, while the ICON has rotating gobos, split colour, wide beam variation and a host of features. Control is via the ICON Control Console, itself fairly unique. •

*** SEE ICON: Bytecraft plan open days in April, call them NOW for details: Melb: (03) 587-2555, or Sydney (02) 646-5999.**

Bits

- **Nightshift Entertainment** (Syd) have 16 new Clay Paky Miniscan 300HTI, while **Lots Of Watts** added 4 Golden Scan 3's, as did **Active Lighting** in Melbourne. **West's Leagues** in Newcastle, and **The Village Tavern** in Adelaide have new Clay Paky moving lights.
- **Microlux** version 2.3.1 comes this month, with library of Euro truss & spots. Existing users with the USA library will be upgraded. Call CDA: (03) 467-8666.

- **ShowCAD** version 2.03 released at Rimini, with many new features including DMX IN. Thus it can be a cool expansion device for your channel limited DMX board, also from CDA: (03) 467-8666.

- Melbourne based hire and production firm **Entertainment Warehouse** have added more TAS Mini Ultra Scan moving lights to stock.

- **TheatreCrafts** in Perth have been appointed Jands Lighting Console service agent

status. Cosmic are also agents.

- Below is the **Corona 100** motorised shutters system for discharge lamps, from Compulite. It fits a variety of fixtures, including fol-



low spots, can be DMX 512 or analogue voltage controlled, and will dim with enhanced resolution while keeping quiet about it, they say! As well as control voltage, the thing also accepts The Real Thing, you may give it 0 - 235v and

it will dim! From Coemar DeSisti Australia, (03) 467-8666.

- **Dichroic UV Filters** transmit harmless long wave UV radiation, fit onto controllable theatre luminaires and followspots, and give you cooking amounts of UV on demand. Sure beats ballasted or fluoro UV's any day! Available from Selecon agents everywhere.

- **Rainbow Colour Changers** have had a shot in the arm, with funding for the next bunch of R & D in place. A Cash Injection it says here, which is the best kind, eh? Watch for the Next New Thing. Selecon sell Rainbow in our region.

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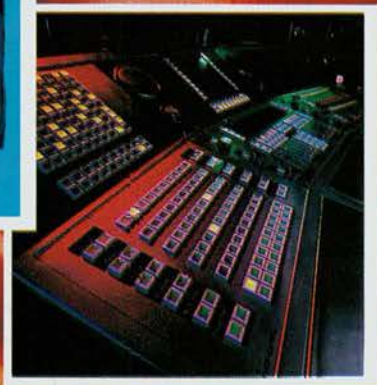
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The IDIOT

The psychedelic lighting era started in 1969 with Jands, UBU and Ellis D Fogg in Sydney. By 1973 the youth music industry had expanded past the two distinct streams of Pop and Rock, which had uneasy meetings at large outdoor rock concerts. Music now needed lighting.

Until then the lighting was often incidental, a projected psychedelic display above a band, or a couple of coloured Par lamps and a followspot if you were famous enough. Around the burgeoning suburban dance scene, promoters hired Lightshows direct, but bands always arranged their own PA's.

When the column PA was replaced by speaker bins and folded horns, the Kombi Van became too small to lug the gear in. With the arrival of the 1.5 tonne pantech, bands started using lighting. The lighting companies involved in lighting suburban dances now discovered The Touring Band as a new source of revenue.

Given this was 1973, the equipment of the day was only just shaking off the 'dark ages' of incandescent lamps, tungsten halogen lamped theatre luminaires were taken on the road, but didn't survive. Jands had 24 Patt 743 1000w fresnels, then at Sunbury rock festival in 1973 Deep Purple shipped in 24 black Altman Par 64 cans which Jands promptly purchased. They set about making their own, and within a year had several hundred.

Krazy Maze Lighting in Sydney introduced Par Cans at the same time, this new lighting source caused a sensation because the available light output put traditional 2000w fresnels to shame. Bands like Hush, Sherbet and Skyhooks toured the first real 'touring' lighting rigs.

Roadcases started to be made from plywood instead of pine board, Chenney 'school case' locks were replaced by the first 'Sessions' type roadcase hardware. Wheels appeared, not dinky fur-

niture castors, but real, heavy duty 3" rubber castors!

Control was still a problem, the conventional switch board ruled, but three phase power was needed to run the 2,000w Par pairs. Most venues didn't yet have 3 phase power outlets for visiting bands, so the lighting tech of the day became adept at risky and illegal temporary hookups to the power board.

I still can't believe I'm alive after getting fried when trying to disconnect after a show with sweaty hands.

The touring dimmers of the day were Strand Minisets, which lacked flash buttons. They also fell apart after two days, and exhibited unacceptable mechanical and RF emissions- but a 24 channel system was big time.

While lighting techs struggled to find gear that didn't fall apart, band managements tested new markets, opened up by Sherbet who toured everywhere. This tested crew too, who couldn't accurately predetermine setup times, didn't know about venue access or power until they got there, and often underestimated travel time in the slow and undergeared rental trucks of the day. In the period 1973 - 1978, we lost a disproportionately high number of crew to road accidents, brought on by bad planning, ignorance and opportunism from managements before crew learnt how to say 'no'.

What the Par Can did was spawn many of the lighting rental firms in operation today, because for a reasonable capital cost you got a fixture that never died. At the time traditional theatre lighting fixtures had been priced at five or six times what a Par Can cost, and were fragile, needing spare parts and maintenance. The Par Can came along, and was hired out for 3/4 of the return of a 1k theatre fresnel. It made a lot of people a lot of money in the decade 1975 to 1985, it was an era not to be repeated. •

Peter Kemp

DISCHARGE LAMPS

This subject is an area that is has been, and still is, rapidly changing with the end result being found in the Television and Film industry as well as the entertainment industry. I recently attended an International dealers meeting for De Sisti Lighting in Rome and one of the subjects covered was lamps, with particular emphasis on discharge lamps. Personnel from Philips lamp division attended the meeting and spoke on their latest developments.

From Philips the MSR - Medium Source Rare earth lamps are one of their latest areas with current production including non-hot restrike range 200, 400, 575, 700 & 1200 and hot restrike range 125, 200, 400, 575, 1200, 2500, 4000.

These lamps are single-ended, high pressure with short arc length. The lamps are filled with a noble gas, mercury, halides and additives of rare earths. They are dimmable down to 30% and feature constant colour temperature. The colour temperature of the lamps is 5600 K with a high luminous efficacies of between 75 and 96 lm/w.

Other features of the MSR range are: Axial arc with single ended lamp base giving optimum efficiency in optical systems, universal burning position, restrike time of 5 to 10 minutes, depending on cooling conditions, for the non-hot restrike range, continuous spectrum.

This range, plus the singled
(continued over)



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The Arena High Performance Fresnel has already established itself as a firm favourite on the stage and in the studio. Significant sales include 80 units to the festival Theatre, Adelaide Festival Centre, South Pacific Television who have some 60 units

lighting their current soap "shortland Street". And the Victorian Arts Centre who recently purchased 30 units. The high Performance Fresnel utilises a 250mm (10 inch) supprex glass lens providing a minimum 20% increase in light compared to the industry standard 200mm units with a very even beam distribution. New Arena 2.0/2.5kw Zoomspots have a 230mm front lens which means serious performance. The ZS2500N delivers 1000lux at 26 meters set at 8°. The Arena Theatre Fresnel is a general purpose theatre fresnel with 200mm lens. Arena PC 2000/2500 is a high performance 200mm plano convex

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60° - 47,100
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60° - 39,100



ARENA PC 2000/2500

Short Spec
2.5kw - 4.5° 546,350 candela
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ARENA THEATRE FRESNEL 8"

Short Spec
2.5kw - 7° 338,400 candela
- 60° 34,560 candela



ARENA 2.0/2.5kw ZOOMSPOT

Short Spec
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Zoomspot 2500 Medium 14° Peak 509,600 candela
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PETER KEMP (continued)

ended HMI lamps from Osram, are finding their way into the television and film industry, being used in place of the HMI double ended lamps that have been prominent in the industry for many years.

Osram have also not been quiet in this area, and have a range of HSR lamps non-hot restrike 400 & 700 W. In addition to these lamps, Osram offer single-ended HMI range 250, 575, 1200, 2500, 4000 which use GS (gap short) technology, whereby the short gap between the electrodes improves the luminance of the HMI GS lamps by about 50%.

Another area Osram have been working on is their HTI range, which, according to Osram can generate three to four times as much light as their conventional tungsten halogen lamps. This, in turn, means they consume three to four times less electricity for the same luminous flux. Osram say that the HTI lamps are available in 150 to 600W, however I have recently seen a 1200 & 2500 version of the HTI lamps.

A very valid point raised at the conference I attended was end users not getting the rated lamp life out of these fixtures. The people from Philips covered this very well, raising the point of whether or not the lamps are being operated in their optimum conditions. This is particularly relevant to the operating temperature that the lamp is being run in. The lamp manufacturers have found many fixtures run the lamps at well over the specified temperatures and, hence, this is very detrimental to lamp life. Along these thoughts De Sisti Lighting are submitting a number of new products to the lamp manufacturers with a view to having the lamp manufacturers endorse the fixture for use with their lamps, based on the suitability of the operating environment for the lamp concerned.

I wonder how many other manufacturers would be prepared to submit their fixtures for such scrutiny. •

Peter Kemp heads Coemar DeSisti Australia, call (03) 467-8666.

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SONO VISTA IS HERE



"Vibrations reach on up to become light, And then through gamma, out of sight. Between the eyes and ears there lies, The sound of colour and the light of a sigh." (Moody Blues - In Search Of The Lost Chord.)

Within the entertainment industry the perceived divisions between lighting and audio have progressively eroded over the last few years. More and more of the latest Hi-Tech lighting fixtures utilise audio input as a trigger to produce the brilliant visual effects we have come to expect.

Even in a light show controlled directly by a Light Jockey, it is the feel, tempo, and the rhythm of the music that is interpreted to convert the sound to the visual aspect of light.

The evolution of sound-to-light processing has continued, with its ultimate interpretation, the SonoVista™ video graphics system recently arriving here in Australia.

The SonoVista video graphics system from Tecnation turns any video screen into a dynamic and psychedelic light show. Loaded with VideoGobo's™, images that strobe, twist, and bounce to the tempo and intensity of the music source, SonoVista creates a constantly moving and changing multi-colour display guaranteed to captivate any audience.

The SonoVista is an audio triggered video effects generator based on the Atari computer, well known for its powerful graphics and audio processing hardware. Combined with Tecnation's BIT HOPPER™ software, the SonoVista generates and manipulates computer images in response to any audio source, complimenting existing video systems. It's ideal for music and dance venues, concerts,

corporate presentations and anywhere else that dramatic visuals are required.

The SonoVista creates spectacular real-time visual effects, the likes of which have only been available in the past on a pre-recorded basis, and then only after many hours work in a video editing suite. With the SonoVista the operator can interact directly with the system allowing for total improvisation, ensuring an original and exclusive show. Alternatively, SonoVista can be left to run completely unattended generating its own automated light show.

Included as part of the SonoVista system is
(continued over)

Video On The Road

(The) BIG PICTURE

Know that sinking feeling you get when your concert tickets turn out to be row W and the band are way-far-gone-binocular distant? Concert goer and man-of-the-people John Farnham knows, so he decided to spend extra on Production Video to overcome the problems of a sellout arena concert.

Enter **Big Picture** Australia, with five touring video screens, three of which are hung to the rear of room centre for the benefit of the second half of the house. The result is almost what should be a new standard, and much stronger audience reaction, for up the rear you'll often find enthusiasm wanes.

The provision of Concert Video isn't new, but today needs to be efficient, with systems and operators attuned to touring timetables. Enter Big Picture, a combined effort from two operators, Dennis Murphy of Achieve Productions, and Joe Bonanno from System Video Services.

Big Picture have established a good reputation both on the road, and in the video world. TV stations have lifted material direct from the show tape for news and background use,
(continued over)

Dennis Murphy & Joe Bonanno, 'making the Big Picture'



Sono Vista (continued)

the CyberWriter™. The CyberWriter allows messages to be typed and displayed live in an easy to read and eye catching text. Great for announcing coming events, special offers, or personal messages from the audience.

Another feature of the SonoVista system is the innovative iCUE™ intelligent cue system. The iCUE system allows the user to store up to 10,000 presets. Each preset containing either a visual effect or text message for future use, all available for instant recall.

Other features include an in-built 80mg hard drive capable of storing over 600 VideoGobo's and a 3.5" floppy disk drive for installing software up-upgrades or additional VideoGobo images.

SonoVista is the world's first and most advanced interactive sound-to-light graphics system and can be connected to a variety of video displays. Such as video projectors, video walls, video monitors, and even domestic television.

According to the inventor of SonoVista, Tecnation's Alex Blok: "With the cost of video display devices falling, and the rapid acceptance of converging multimedia technologies, SonoVista and the lighting-by-video concept is now an exciting and affordable component of every music event or venue."

With all these features and the many others not mentioned, SonoVista creates a totally new visual experience on any video screen. Designed with today's music trends in mind and with the ability to be easily upgraded to reflect new trends, the SonoVista is the future of sound-to-light processing. The future is here.

The SonoVista from Tecnation is sold exclusively through the High End System worldwide Distributor network and compliments their existing range of intelligent lighting effects such as Cyberlight, Intellabeam, Trackspot, Emulator, Dataflash and Colorpro.

In Australia your High End Systems Distributor is Greater Union Village Technology (GUVT). For further information on the SonoVista or any other High End Systems product, please feel free to contact the GUVT Brisbane office (toll free 008 773 187).

Big Picture (continued)

and in some cases bands have been able to use show tapes later on for video clips. "Copyright integrity is vital", Dennis says, "we seek clearance in every case", the value of recorded performance material is very high and these guys know it.

The trick to providing good live video is to make three cameras look like six, says Dennis, and the concert I saw certainly had some smooth video work. The operation of the system took place behind the stage, at a control centre made up of three racks.

Dennis acts as director and crew chief, while Joe operates the number one camera, usually in the pit at stage front. He is everywhere at once, as our Catriona Forcer discovered, she was also in the pit trying to take some photos.

Big Picture had its origins in the video system that Arena Technical Services built for the Mick Jagger tour in 1988. Joe and Dennis worked as freelance technicians for A.T.S., who did video for quite a number of tours. Joe and Dennis brought the system from ATS, & rebuilt it for the last Rod Stewart tour.

On tour Big Picture pickup camera crew in each state, having worked on the road for some years they can do this. 2 projectionists were on the road with Dennis and Joe for the Talk Of The Town tour. The projection system utilises Sony 1271 data projectors, handy because they can be aligned by remote control.

In the Sydney Entertainment Centre, a 16' x 12' screen was hung either side of the stage and the projector flown in front on a section of concert truss. The centre cluster is ordinarily

three screens on this tour, with the projectors switched to rear projection, but in the Sydney Entertainment Centre are 7 house screens, so the video was sent to them instead.

The system toured by Big Picture will typically accept up to six cameras, the Sony DXC537 is the current camera of choice. The system is made up of three racks, with a removable workbench. The Technical rack has 4 Sony CCV's, a camera control unit, Hitachi WaveForm monitoring, a 10way video distribution amp, 10 way switcher 4 mono and 2 colour monitors. The middle rack has the SPUMatic edit suite which can provide the network splits as previously alluded to, and a Sony edit controller.

The Production rack features a Sony SEG 2550 switcher, a 10 way sub switcher, 6 mono preview and 2 colour preview monitors. An FA100 timebase corrector and effects unit provides synchronisation for the playback tape and digital effects. The system is completed with a four channel Creative Audio comms unit.

The road work rigours mustn't be overlooked, equipment needs to be tough, spare parts carried, everything roadcased, and the video crew sympathetic to the timeframe that a modern tour works to. The big Picture rig used for the John Farnham tour packed down into about 18' of truck space, remember they had eight chain motors, 3 phase power distribution, and sections of concert truss too.

Big Picture have done all kinds of live work, even sending to the StarVision truck for some of the festival concerts in Sydney's Domain Park. When not touring together, the partners do virtually everything video, including teleconferencing, broadcast work and documentaries. They also insist that John McInernew from FP Focussing gets a plug, he supplies their lenses.

Call the Big Picture on (02) 972-2222 or (018) 441-831.

•Julius Grafton.

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Entertainment Technology Trade Show: Sydney, October 6 - 8, 1994.



New Laser Code Coming

The Australian Radiation Laboratory have issued a draft code of practice for safe use of lasers in the entertainment industry, which is timely given the expansion of this field. In recent months we have heard of new laser projection developments, at least one such radical system is headed here in the near future.

The draft code has been circulated amongst the video industry for comment, and has now moved into consolidation phase. It clearly defines the very real hazards of laser radiation, and lays down exposure definitions and rules.

If adopted, the code would see the end of 'Laser Dancers' or mirrorballs used with lasers. In addition a buffer zone of 3 metres would be required above the heads of patrons at an event of the laser system is under continuous operator control.

A Laser Safety Officer must be appointed by the owner of the laser equipment before any event is planned. A contentious recommendation that will hopefully be quashed from the code is the requirement to notify the 'relevant Regulatory/Advisory Authority' of your intention to hold a laser display. This sounds like a permit system to us, surely the industry can self regulate itself? In the case of Melbourne, this would entail contacting the Chief Radiation Officer in the Radiation Safety Section of the Health and Community Services Department.

Laser usage now appears to be governed by an Australian Standard, AS 2211, which specifies that larger lasers to be used for display purposes must be used under the supervision of an experienced operator. The proposed new code is designed to ensure that any person viewing, operating or participating in a display or any other form of public entertainment using lasers can do so without being exposed to potentially hazardous levels of radiation.

The code in its present draft form would appear to bring us into line with most Northworld places, many overseas readers of Connections were amazed at the cover of our November issue, which under the new code would not have been possible. It appears the laser dancer and the photographer were at risk if you accept the definitions in the proposed code. -JG

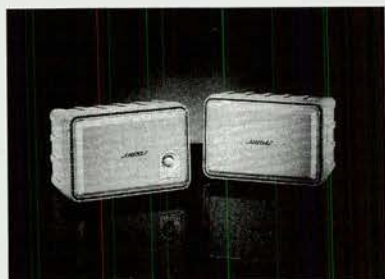
● **VideoLab Brisbane** announce the appointment of Pam Collis to the position of Sales/Liaison Manager.

● **Hoyts Entertainment Ltd** have restructured, so TV and Media Services Ltd is the new parent company. What was Hoyts Television Group is now Global Television. Still with me?



Amanda
Dennis>

● **Global Television** have hired a bunch of great people now that they are after more market share. **Amanda Dennis** (above) is a Paintbox artist, previously at Val Morgans. **David Oyang** is the new Post Production Manager, previously from Apocalypse and Channel Nine earlier. **Charles Cole** is field production manager, previously with Comcorp



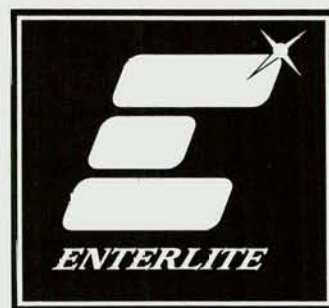
Bose have neat new computer monitors with inbuilt amplifier. These magnetically shielded RoomMate monitors have volume controls on the front, and deliver enough to keep you happy. Priced at \$699 a pair.

Contracting

returns in May ... send us news of your installations, products and people ... and do it

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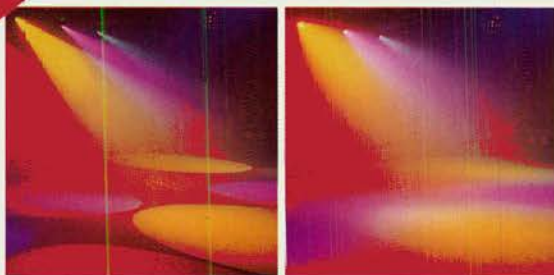
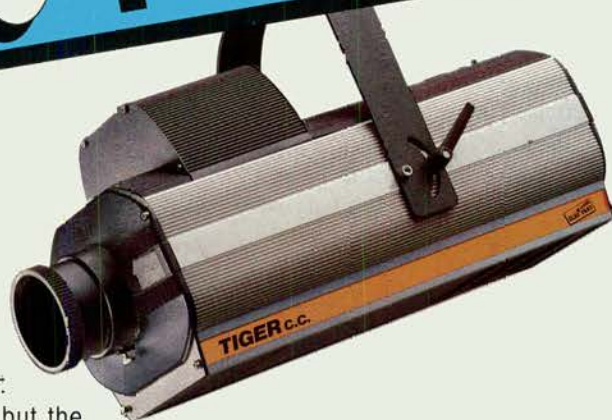
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Acoustics — and how you are affected with Dave Connor

Apparently (so my niece tells me) there are 101 ways to use a dead cat. Well, I don't know about that, but there are a number of ways to get low frequency sound into a room without the usual trouble that is caused by stacking sub-woofers each side of the stage.

Systems almost always have more than one sub-woofer loudspeaker, and so fall victim of the time/space continuum. The operating principle is that at each position, sound adds if the waves from each of the speakers are 'in phase' (0°) and subtracts if they are 'out of phase' (180°). Of course there is a whole world of grey in between 0° and 180° , and the sound adds or subtracts accordingly.

Lets look at three different configurations of six sub-woofers and the variation in sound level throughout a room. The idea is to look at the behaviour of loudspeakers, and so I won't consider the room acoustics this time. The room is 20 metres long and 20 metres wide. The stage is 10 metres wide, 1 metre high and situated at one end. The results are predicted for a person standing at 1.7 metres high (which is about right for a pub gig). All results are calculated for 80Hz.

1. Three a side.

The first is the good old standby of piling up sub-woofers each side of the stage. You can see an enormous sound variation. This prediction would be reasonably accurate for an outdoor situation. Inside, the room acoustics fill in a few of the holes as well as cause other problems, but if you start with a sow's ear (or perhaps a dead cat's ear), what

3 subs each side of stage. 80 Hz.

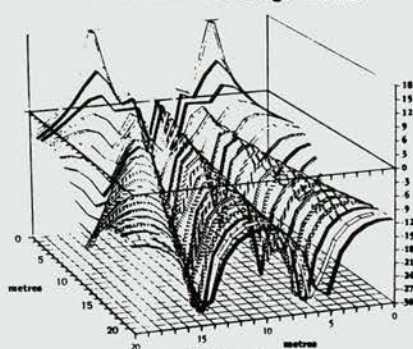


Figure 1.

5 Speaker Bessel Array. 80 Hz.

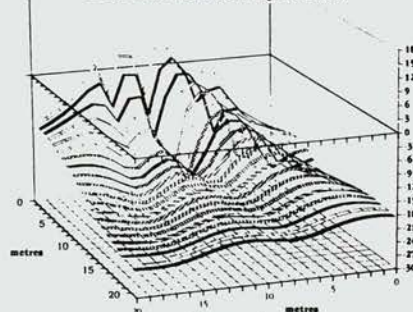


Figure 2.

6 subs evenly distributed along the stage. 80 Hz.

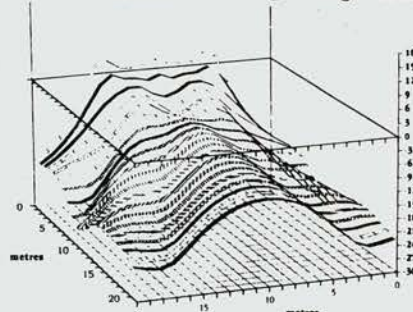


Figure 3.

more can you expect but problems.

It's easy to see why someone standing only metres away could complain about your mix. This is the way we're used to systems being set up, and we're also used to the problems, but there are other ways to handle the situation which can give much better results both indoor and outdoor.

2. Bessel Array

A Bessel array is a particular type of array of loudspeaker drivers. In this example, it is much like a line array, but with different configurations of polarity and power. It has advantages and disadvantages when compared with a line array.

The Bessel array in this example has five sub-woofers across the stage, with the two outside subs attenuated by 6dB. One of the subs (2 or 4) is connected out of phase.

The sound at the back

and sides of the auditorium is much more consistent than either the stacked subs or line array.

3. Line Array.

For large outdoor rigs, dance clubs, theatrical and permanent installations, it's possible to improve on the previous set up by mounting under or over the stage a line array of subs. The following graph shows the same room with the six subs placed evenly across the front of the stage.

I think with this set up you've got a much better chance of pulling a good mix for more of the audience than with the stacked subs each side. Also the fall off in sound level at the sides more appropriately matches the usual HF horn pattern and so the people standing there would get a more balanced sound.

An extension of the line array is the tapered line array, which gives you added advantages, particularly in 'live' rooms such as concert halls.

That's it for this month.

Dave runs Elecoustics, who consult in Audio. Call (02) 799-6742.

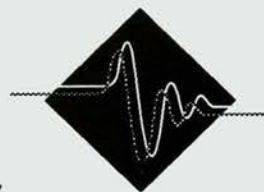
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Random Comment with Duncan Fry

A Travellers Tale or 'Hey, where's the steering wheel gone?'

Everyone comes back from the USA with tales about how different it is to drive on the other side of the road. And it's true - it's a really strange feeling, a cross between Alice through the Looking Glass and a really bad hangover. All your perceptions are different, things you do without thinking you suddenly have to concentrate and think about.

At the last AES held in LA, Algis Renkus, the ex-ARX man on the spot, said that he was staying the night at a local hotel to avoid the long trip home, but I could drive his car back to my motel in Anaheim and bring it back in the morning. So, I got in the car, and realised with a jolt that it was a manual, with 4 on the floor, and I'd have to change gears with my right hand. Not an easy thing to learn on the spot, as the other folks on the freeway found out that night! I'd whizz up the on ramp in first gear, and then start waving my left arm out the window trying to find the gear lever!

Then I'd realize my mistake, put my right hand onto the gear lever, the wheels would bounce on the wonderful bumpy concrete freeway, and the car would lurch into the next lane until I brought my left arm in from the window and grabbed the wheel!

Add to this the fact that I missed my turnoff, so I was trying to read the street map at the same time, and I'm sure my fellow drivers that night would have agreed that it was one of their more interesting drives home!

At the end of one of the NSCA shows Colin Park and I rented a car from the Las Vegas airport, a vast rambling piece of architecture out in the middle of the desert, so we could drive back to LA. The early morning mist was just rising, and the whole place looked like a scene from Mad Max III.

"I'll drive" said Col (his first time behind the wheel), and we wound our way through the airport complex. "Hey, this driving

on the other side is easy," he said as we zoomed onto the big new highway that leads to the Interstate to LA. Being early morning, there was no other traffic. I was in the passenger seat, and everything sure looked OK to me. Remember how I mentioned that all your perceptions are different? I could see the traffic lights change down the road, and as we moved down towards them, as if by magic a light suddenly went on in my head. "Holy shit," I screamed, "We're on the wrong side of the road" (other expletives deleted due to lack of space!)

"Shit a brick" yelled Col, as a large semi loomed up towards us out of the mist, its air horns honking like a 40 ton goose on heat. Savagely yanking the wheel to the right, we bashed and bounced our way over the median strip, and into the correct lanes. We dawdled along in the slow lane for a while till we had got our breath back, and then, with the relief that comes from still being

***"...a large semi
loomed up towards
us out of the mist, its
horns honking like a
40 ton goose on
heat"***

alive, we both burst out laughing. It was a good thing we had a rental car, because as everyone knows, nothing goes round corners, or from 1st to Reverse, or over the median strip faster than a rental car!

These days, if you're planning on renting a car in the US, make sure you have some credit cards with you. If not, you'll be shafted left right and centre, with companies wanting a huge deposit plus your return air tickets and passport as security. But it wasn't always like that. Harkening back to 1975, and my first starry eyed trip to the States, all they wanted was the money for the rental. In cash. In advance. "Don't you want to see my driver's licence?" I asked. "Or my International

Driver's Permit?" "Nope," said the guy behind the counter, "I just want to see your money!"

To digress slightly, after 2 days in LA I had decided to rent a car for the next 3 days until I flew home. Getting around by public transport was even less enjoyable than in Melbourne (if that's possible). The buses stopped every block, which is about 200 yards. Since I was staying in Downtown LA, and I wanted to hang around Hollywood, it was about 10 miles as the crow flies, or about 2 hours as the bus grinds. It didn't look so far on the map, so when I went downstairs to the hotel lobby on the first day, the doorman said "Where are you off to today, Mr Fry?" "I thought I'd go to Hollywood," I said. "How are you getting there?" he asked. "Oh, I thought I'd walk," I replied. His eyes popped out of his head. "Walk?" he repeated. "Hey, no-one walks anywhere. Shoot, that's about 10 miles. Why don't you catch the bus? It stops right outside here.". Sheepishly I said OK and waited outside for the bus, along with what seemed to be half the population of Mexico.

I climbed on the bus when it arrived, and popped my small change into the plastic box bolted to the floor by the driver. "Excuse me," I said to the driver, "But could you tell me when we get to Sunset Strip?" He stared at me. "Look man," he said, "Sunset starts just on the corner there, and runs all the way to the beach for about twenty miles. I ain't calling out Sunset Strip every block, you know. Whereabouts on Sunset do you want to go?" I

***"He rolled his eyes
upwards. Goddam
tourists, he muttered
under his breath."***

beamed at him. "Take me where the action is," I said. A chuckle ran through the bus, and I instinctively knew I'd put my foot in it again! He rolled his eyes upwards. Goddam tourists, he muttered

under his breath. "Look buddy," he said, "it's nine o'clock in the morning. There ain't no 'action' anywhere until about midnight." "Oh," I said, listening to the whole bus sniggering. He sensed my embarrassment. "Tell you what, buddy," he said, "I'll take you to Sunset and Vine. If there's any 'action' this time of the morning, then that's where it'll be." When we finally got there, the trip had taken so long that it seemed like it was midnight. "Sunset Strip...where the 'action' is!" he yelled out, as the whole bus shook with laughter. Glowing a bright shade of red, I got out, but he was right. The place was about as lively as a sleepwalkers convention.

So, I decided to spare myself any more embarrassment and rent a car. A Ford Pinto (famous for their exploding petrol tanks, as I later found out!) and luckily automatic. \$20 a day for three days. Not too bad, especially when the good old Aussie dollar was worth \$1.25 US in those days, compared to 65 cents now. Personally I blame Gough Whitlam but I don't really think I'm alone there. Anyway I handed over the money, the guy handed me the keys, and pointed through the window to the car. Bear in mind this was the first time I'd ever driven a Left Hand Drive car. Armed with the keys, I marched out to the car, AND GOT IN THE PASSENGER'S DOOR! Uh oh. As I sat in the seat I suddenly realised that something was missing. Yup, the steering wheel! The car rental guys must have had tourists do this kind of thing before, because as I sat there in the passenger's seat, feeling like a prize fool, the guy leans out of the office door and yells "Hey buddy, ain't ya gonna drive it?" I could hear everyone in the office cackling and pissing themselves with laughter as I slowly got out of the car, walked around and got in the correct side.

And to think I rented the car to spare myself any further embarrassment!

People Pictured Places



Jim "Tripoc" Peisley, veteran sound engineer (don't you HATE that tag?) and John "Yoda" Pascoe, not quite veteran, but Lighting Person of long standing.



Les Jones, installation guru, one time Proudution Hire King (remember SoundCo?) and cake eater, pictured with the smiling David Ahearn, customs wizard.



Ray Arnold, one time Strauss Amplifier Hire man and roadie to Billy Thorpe, now Michael Clegg's driver, and captured selling merchandise for Grace Knight. Smile Ray come on smile RAY Grrrr



People looking bored for the camera at a sound industry lunch which went on to become a late sound industry evening. Foreground person is Malcolm Savage, from Sound On Stage, now known as SOS in Sydney.



Long serving Jands sales boss David Williams ... we know THREE David Williams, how many do you know?



Col Formston, head of Mark IV Audio in Australia, with Michael White, long time owner of SOS in Sydney. Michael is very switched on to alternative markets that make money ... smart operator, say we.



Peter Wait, jack of all trades, sound engineer, system engineer, tour manager, production manager, etc etc, with Diana Baily, manager to Grace Knight & others.

Our happy snappy camera has flown off to the S:B show in Rimini, Italy as this issue is printed, so next month look out for some exotic shots. Why not SEND us your happy shots of people We always are on the lookout and need new subject matter. Send to PO Box 439, Epping NSW 2121, and note the name of the person on the rear of the pic. Ta!

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STOLEN

STOLEN in December from the Agriculture Centre at the R.S.G. - GK400RB Gallen Kreuger Serial No. 72774, Silver in colour. Call Charlie 06.46 2363

Chris Argent, bass player of *The Childs* recently suffered the ultimate humility when his guitar, borrowed from his brother, was stolen out of his car, along with leads, tuner..... and no insurance! The loss came two days away from a major out-

door event and four days supporting The Angels in Adelaide. So, if anyone sees a B.C. Rich wine-coloured bass and a white crate of muso stuff let me know. My friends would like to talk to them! Alan Mourant 018 840206

STOLEN - Equipment belonging to The PA People, Liverpool Road, Enfield was stolen in a smash and grab on 15th March, 1994. The equipment taken was: 1 x Soundcraft MBI 10 Con-

sole - Serial No. MS10-20 00006, 1 x Soundcraft Live 4/24 SPIRT4 24023982, 1 x Yamaha S3112MT Speaker - 11280, 1 x Yamaha S450S Speaker - HI01029, 1 x Yamaha S115MT11 Speaker - 11347, 1 x Ross R152 Speaker - 7852. The power supplies for the consoles were left behind and only one each of the above speakers maybe a little problem for whoever needed/stole them. We would appreciate your attention to this theft in the event you may be approached for parts or to buy the above. Please contact us immediately should you hear or any of this equipment. Roger Rapsey, Sales Manager. (02) 642 5344

Employment Adverts are FREE in Connections Classifieds! Call or Fax by the 25th! 'STOLEN' ad's also free.

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NEWS & UPDATE

Short Bits

- **KORG** say the Audio Gallery offers a dream come true for home computer owners ... with 4mb of sampled sounds on board, MIDI in/out, and bundled software including Trax sequencer with notation. All this and no MIDI interface required, for under \$900. See Korg Dealers for more ...

- **Computer Games** shows are under development at three TV networks, and record label marketing types say they will spend advertising collars there.

- This is the **Sabine** Guitar-Mount auto tuner, you stick it on and play. It tells you, via an inbuilt mic, if you are in, almost, or way out of tune. Retail less than \$150, details from Moore Music, (03) 419-0344.



- **Ensoniq** have added General MIDI to the TS Series Performance/Composition Synthesizer, the V 2.5 upgrade provides this and much more. For \$49.95 you can buy the new ROM chips to upgrade your TS-10 and TS-12. Call the Electric Factory for more: (03) 480-5988.

- The **Australian Tape Manufacturers Association** are still fighting the governments plan to levy blank tapes, but concede consumers practice of recording their CD's onto tape for use in the walkman or car cassette player may be not be illegal after all. They say it could be considered "format shifting".

- **Industrial Strength Music News** from Beat Magazine: **Christie Eliezer** reports the US recording biz hit \$10 billion last year, with CD sales hitting 955,600,000. Wow!

Melbourne Music Festival sets pace

VRF event resounding success, other States look on

The 10 day Melbourne Music Festival in February included a swag of events that ranged from so-so to sellout. The 2 day *National Music Conference* fell flat, while the *Concerts Of Excellence* pulled people to the city.

With the moribund Festival of Sydney recently infused with new management, and the Adelaide Arts Festival upstaged by the Fringe, arts and cultural promoters have watched the Melbourne Music Festival closely.

- The **Melbourne Guitar Show** in its third year again proved popular, held across the last three days of the Music Festival, in the Melbourne Town Hall. Some com-

ments (from Australian Music News): "seems to be the same faces - we need new customers," (Ted Frye), or "it was the most successful show we've ever been in - and we've been in them all" (Sieve Jackson), "we were disappointed with the numbers of people" (Music Link), the phone hasn't stopped ringing all week" (Darren from Guitar Emporium) "we were very happy with the response" (Mannys).

It seems the Australian Music Association have observed the Guitar Show closely, with future promotion of retail/end user shows in other states in mind. Rob Walker organised the show.

Australia is voted a fast growing market

Roland Chief Visits

This is no ordinary Japanese businessman, I discover. At a dealer lunch in Roland Australia's boardroom, Ikutaro Kakehashi - Mr "K" - sidles up for some casual conversation with this reptile.

Roland Australia is a different animal to other Japanese subsidiaries, and I make the point of telling this to the owner, who nods sagely and proffers why. "I'm in business with Australians, I put Australians in charge, and I trust Australians". Roland Australia is part owned by John Egan, whose culture is active there, complementary to the firms Japanese values. This is reflected in an easy-going kind of atmosphere around the halls of the modern Dee Why facility, which boasts an education studio and some actual R & D that

finds its way back into product ex Japan.

"The manufacturer must stimulate appetite and serve. If customer hungry and visit store, no food, no good!"

Some thoughts from Mr. K, this time about the video games market: "Sega & Nintendo are cheap because they hijack the TV set. If you add a monitor, they are expensive!" The notion of 'hijacking' the TV set goes towards explaining the explosive growth of sound cards and peripherals for the Personal Computer, which is purchased first, then added to continually.

Some good news from Roland: "No manuals is best way!" So, look out for the next wave of interactive products, sans-manual!

BUYERS GUIDE

Guitar Amps & Speaker Boxes

ABBEY, from Abbey Sound P/L, (03) 786 4211
Project X, Combo, 85W/110W, Est.Cab., 1 x 12", 2Ch., Reverb, \$895
HV120S, Power Amp, 120W, Stereo, Valves Only, \$1775
HVP, Preamp, N/A, N/A, Valves Only, \$950
AQ12(4x12"), 400W, 4 x 12", Abbey/Redbook, \$895
AG212(2x12"), 200W, 2 x 12", Speakers, \$695
AG12, Spkr.Cab., 100W, 1 x 12, Redbook Spkrs., \$449
AGPX, Spkr.Cab., 100W, 1 x 12, Project/x Ext.Cab., \$449

AMPEG, from Music Link Aust., (03) 429 9299
VL-1002, Head, 100W, 2Ch. tube Des. by Lee Jackson, \$2399
V-412TC, 4 x 12" Enclosure, 300W, 4 x 12" Celestion G-12T-75, Stereo, Slant Face Cab, \$1699
VH-140C, Combo, 140W, 2 x 12" Celest on G-12K-85, 2 Ch., Stereo Chorus, 2 x 75W Amps, \$2399
VH-140CH, Head, 140W, 2Ch., Stereo Chorus, 2 x 75W Amps, \$1879

Crate, from Music Link Aust., (03) 429 9299
Stealth All Tube Series
GT-100H, Head, 100+W, 2Ch, All Tube, \$1999
GT-50H, Head, 50W, 2Ch., All Tube, \$1799
GT-50, Combo, 50W, 1 x 12" Crate, 2 Ch., All Tube, \$1899

Quadradrive Lead Amps
GT-200H, Head 160/200W, 4 Ch., Tube/Mofset Stereo Chorus, \$1799
GT-200, Combo, 160/200W, 2 x 12" Crate, 4 Ch., Tube/Mofset Stereo Chorus, \$1999
GT-80 DSP, Combo, 80W, 1 x 12" Crate, 4 Ch., Tube/Mofset 31 Preset DSP \$1459
GT-80, Combo, 80W 1 x 12" Crate, 4 Ch., Tube/Mofset, \$1799

Excellibur Series Lead Amps
GX-15, Practice Combo, 12+W, 1 x 8" Crate, 2 Ch., Flex Wave Distortion, \$289
GX-60, Combo, 60W, 1 x 12" Crate, 2 Ch., Reverb, *SCG, \$859
GX-80, Combo, 80W, 1 x 12" Custom L, 2 Ch., Reverb, *SCG, \$999
GX-212, Combo, 80W, 2 x 12" Custom L, 2 Ch., Reverb, *SCG, \$1099
GX-1600, Head, 160/220W, 2 Ch., Reverb, *SCG, \$1299 *Sequential Cascading Gain
(continues next page)

Reviewed: BOSS DR-5 RHYTHM

Industry Innovators

AUCTIONS CONTINUE TO GROW

Leading audio and video industry auctioneers, Gray Eisdell Timms, confirm that 1994 may be one of their busiest years in our industry.

Following successful sales for clients such as Jands, Total Concept Productions, A1, Audio Brien, Showcorp and many others in the past, enquiries this year have been constantly increasing.

Mark McGee says "we have constant enquiries from buyers as well as vendors and have a number of sales planned for the future. Demand at the moment is high, due

to the continuing need to update equipment to be competitive".

"We have been pleasantly surprised at the increased number of buyers and the resultant increase in knockdown prices. We believe the market has increased about 15% over 1993."

This also means many companies are selling their touring and rental equipment to put cash into buying the latest equipment to make their company more attractive, thus creating a chain of available equipment of various qualities as people upgrade.

Even venues that own their own equipment need to constantly update to attract the crowds.

An Auction is an excellent means of generating cash flow and has the benefit of quitting all assets at an optimum market value within a specified time due to competitive bidding.

Gray Eisdell Timms also sell new, superceded second quality stock at their Auctions and conduct valuations Australia wide.

For enquiries, phone Mark McGee (02) 740 6611.

No Stigma in '94

In years gone by, a firm putting gear to auction raised eyebrows as all kinds of equipment was sold by auctioneers who knew nothing about the industry. It just wasn't the done thing.

In 1991 I saw a big change in attitudes, caused by the huge Jands auction that Gray Eisdell Timms conducted. Jands reasoned they were so well established that an auction would work for them—and it did. This changed industry attitudes, because a proper Auction works!

-Julius Grafton.

9 STEPS TO A SUCCESSFUL AUCTION

1. WE INSPECT AND VALUE YOUR EQUIPMENT on the basis of age, capability, condition and our knowledge of the current market - we'll give you a realistic estimate of the total dollars you can expect to realise.

2. THEN: THE AUCTION METHOD IS DETERMINED - Straight commission sale or We will provide a guarantee of nett return and we both participate in additional proceeds over that figure.

3. PLANNING THE SALE - A Sale Manager from our staff takes charge and assumes responsibility for all preparations. We'll set the sale date based on the time needed to prepare the equipment and advertise the sale efficiently.

Most sales are one day events; however, where the quantity is greater, we have conducted sales that spanned as much as five days.

4. PACKAGING PAYS - Our clean up and lotting crew prepares the equipment so it will be attractive to the bidders. Support items and components are positioned with major machines to which they are related. The auction sequence is worked out in detail to maintain buyers' interest and attendance for the entire event.

5. ADVERTISING AND PROMOTION - are a high priority element in our auctions. It is our experience that an appropriate budget - expended expertly by professionals who specialise in auction advertising - is an essential investment to generate good attendance and spirited top-dollar bidding. Skimpy advertising is a cost; the right amount is a profitable investment.

(a) Direct Mail. The sophisticated capabilities of our computerised data bank enables us to identify potential buyers for virtually any

type of equipment, in any part of the nation, or even worldwide. Our lists are constantly updated to ensure effective mailing.

The brochures we mail are customised for each sale but they share in common high impact, colourful presentation and a reputation for strong response that produces profitable results.

(b) Media Advertising. We use large circulation newspapers, both business orientated and general, as well as selected trade journals, as the auction date approaches.

6. PRE-SALE INSPECTION - This may be from 1 to 10 days depending on the amount of equipment involved. During this period, our staff is on hand to answer questions regarding the equipment and auction procedures.

7. AUCTION DAY - This is planned as carefully as a theatre

production. Catalogues and bidder identification are distributed at registration. The sale sequence has been expertly plotted to maintain bidding action and to move from item to item with minimum interruption. Our floor men in the crowd, relay bids to the auctioneer to avoid confusion and pace the bidding.

8. WHEN THE BIDDING IS DONE - WE'RE NOT - We maintain control for a long as is required for purchase payments to be completed and equipment to be released to the buyer.

9. PAYOUT - Our settlement with you with complete accounting follow within 10 working days of the auction.

On the basis of performance - service; dependability, recovery of asset value and cash guarantee - nobody matches the "Gray Eisdell Timms" record of success.



Gray Eisdell Timms Pty Ltd
AUCTIONEERS & VALUERS

30 Legge St Lakemba NSW 2195

(02) 740 6611

BRASH MUSIC SPLIT

Brashs, the largest music retailer in Australia, have announced they will establish their Musical Products Division as a separate business unit, flagging the possibility the business may be sold off.

New M.D. Adrian Kloeden is quoted in Australian Music News as saying the highly specialised nature of the musical product industry is such that the move was required to allow the new division to reach its full potential.

Michael Brash is now GM of the division, Roy Mears in Merchandise Manager, and John Piccolo returns after a stint at the Electric Factory.

Industry observers have differing reactions to the move, a common belief is that the Music Equipment Retail operations were one of the few shining stars in the mega giant retail chains activities. The chain has found the going tough in recent years, fighting for razor thin margins in markets like white goods and computers.

The new team will operate the business from Caldwells in Richmond.

A.M.A. to run pilot promotion in Qld

The Australian Music Association plan a \$100,000 music promotion involving Queensland Music retailers. The program is a pilot scheme, aimed at attracting more people in the community to takeup the musical instrument.

The association apparently believes the takeup rate in Australia is 7%, against 10% of comparable populations overseas having musical skills. Aside from jabbing the retailers in Queensland for a contribution, the AMA will also ask product distributors for some money too.

• The A.M.A. has concluded a deal with **Robert Walker**, former organiser at the VRF, whereby Walker's new outfit Walker Resources, will provide full time support and services for the association, as well as organise shows and projects.

Review: Boss DR. 5 Rhythm

By Dave Macken & Bruce Waite from Blind Lemon Pie



When guitarist Kim Humphries told us about the "new toy" he'd been using we puzzled over it's place in the greater scheme of things and then didn't really think much more about it. But it's a little different, the DR-5, it was hard to get back from people who tried it and, well, well just because it's a drum, errr, rhythm machine for guitarpersons.

Adding further weight to the theory that the drum machine, as we have known it, is dead, the DR-5 is another hybrid searching for an opening in the market. A smallish table top machine (226W x 180D x 45mm H) capable of storing Patterns and Songs in its battery backed up RAM. This type of design is almost uncomfortably familiar in this day and age, though it's not the 256 instruments, nor is it the 200 preset or 200 user patterns, or even the room for 20 songs that sets it apart from other devices of this genre. Most of these things are available on any number of contemporary "boxed bands". No, there are two features that really put this unit out there. The first: is that it has a guitar jack. You can plug your guitar in and play along with the song you've written and hear it all through the L/R outputs. Simple, useful, good.

To understand the second feature you have to consider the layout, as there is a sneaking suspicion that guitarists were who they had in mind at the DR-5's inception. This doesn't mean that the unit is prone to posturing or grimacing in musical ecstasy, rather it's layout is partially that of a

fretboard. Not a KEYboard, a FRETboard, like on guitars!

By incorporating six rows of six buttons to represent six open strings and their first five notes and then giving the user "Fret" control so as to be able to move this group of notes up and down the presumed fretboard, Boss have touched on an interesting design. You see, for most guitarpersons it's a visual thing, they recognise and comprehend notes much better looking at or playing on a fretboard rather than a keyboard.

At the heart of the DR-5 are 256 instruments or sounds, these are playable on the 'fretboard' section of the front face or via a MIDI connected external keyboard. The instrument list won't have you clambering to hear new sounds but it will provide an honest and usable cross section of drums, basses, guitars, keys and percussion. An adequate summation of the DR-5's onboard sounds would read as follows: heavy on drums, light on keys, forgettable wind instruments, usable clean guitars and guitar slides all with that unmistakable Boss tone. Suffice to say, the internal instruments are able to be edited, somewhat, by adjusting the pitch, decay, pan or volume parameters.

Instruments are arranged into kits, of which there are 48 preset and 16 user kits. A kit consists of up to 33 instruments, which sounds very generous though keep in mind that instruments 1 to 30 in most of the preset kits make up the drumset. A cowbell, for instance, is one of the 33 instru-

(continued over)

Buyers Guide Guitar Amps (cont)

4 x 12 Enclosures

GS-412SS, Stackable Enclosure, 200W, 4 x 12" Crate, Slant Face, Stereo, \$1199
GS412RS, Stackable Enclosure, 200W, 4 x 12" Crate, Straight Face, Stereo, \$1199

Fender, from Fender Australia P/L, (020) 666 5077

Custom Shop Amplification, point to point hand, wired

Vibro King™, Combo, 60W, 3 x 10", Reverb, \$4700

Vibro King™ 212, Spk. Cab., 140W, 2 x 12", Vint30's, \$1200

Tone Master™, Head, 100W, Reverb., \$3700

Tone Master™ 212, Spk. Cab., 160W, 2 x 12", G12-80s, \$1200

Tone Master™ 412, Spk. Cab., 140W., 4 x 12", Vint30's, \$1500

Dual Professional, Combo, 100W, 2 x 12", Reverb, \$5500

Reissue Series

'65 Twin Reverb, Combo, 85W, 2 x 12", Re-Issue, \$2499

'65 Deluxe Reverb., Combo, 22W, 1 x 12", Re-Issue, \$1999

'59 Bassman, Combo, 45W, 4 x 10", Re-Issue, \$2299

'63 Vibroverb, Combo, 40W, 2 x 10", Re-Issue, \$2199

'63 Reverb, Reverb, Spring Tank Reverb., \$999

Pro Tube Series

Super, Combo, 60W, 4 x 10", Pro-Tube, \$2499

Concert, Combo, 60W, 1 x 12", Pro-Tube, \$2099

The Twin, Combo, 100W, 2 x 12", Tube, \$2599

Dual Showman, Head, 100W, Tube, \$2299

Tweed Series

Blues Deville, Combo, 60W, 4 x 10", Tube, \$1899

Blues Deluxe, Combo, 60W, 2 x 12", Tube, \$1799

Blues Deluxe, Combo, 40W, 1 x 12", Tube., \$1299

Pro Junior, Combo, 15W, 1 x 10", Tube, \$799

Hybrid Series, Valve & Solid State

Performer 1000, Combo, 100W, 1 x 12", Hybrid, \$1399

Performer 650, Combo, 70W, 1 x 12", Hybrid, \$1199

Performer 1000, Head, 100W, Hybrid, \$1199

Champ 25SE, Combo, 25W, 1 x 12", Hybrid, \$999

Champ 25, Combo, 25W, 1 x 12", Hybrid, \$799

Solid State, Classic Series

Bronco, Combo, 15W, 1 x 8", Tweed, \$499

Ultra Chorus, Combo, 2 x 65W, 2 x 12", Chorus, \$1699

Princeton Chorus, Combo, 2 x 25W, 2 x 10", Chorus, \$1099

State 112SE, Combo, 160W, 1 x 12", Classic, \$1299

Deluxe 112, Combo, 65W, 1 x 12", Classic, \$999

Princeton 112, Combo, 35W, 1 x 12", Classic, \$699

Champion 110, Combo, 25W, 1 x 10", Classic, \$599

Bullet, Combo, 15W, 1 x 8" Classic, \$299

Bullet Reverb., Combo, 15W, 1 x 8", Reverb., \$399

M80 Chorus

M80 Chorus, Combo, 2 x 65W, 2 x 12", Chorus, \$1499

(continued over)

ments. By selecting a kit and switching tracks you can play the different sounds. There will always be a drumset on the drum track, whereas the other tracks (1-3) may contain any number of combinations of guitar, piano etc. etc..

As you'd expect the list of preset kits encompasses dance, country, rock, funk, pop, acoustic, jazz and so on. The 'Live' and '70's' were particularly fun preset kits but what's even more fun is that the preset kits come with preset patterns. Those who really only use the preset patterns in such machines will have a field day as there are 200 of them, you've been well looked after.

Further to the 200 preset patterns are another 200 empty user patterns. The sequencing base in pattern construction is the increasingly popular four track approach (now popular in MIDI sequencing, that is), this approach has set alot of people more at ease with sequencing and is particularly appropriate with this unit.

All note entry performed from

the front panel is via the keypads, in the case of drumsets the alignment of notes does not pertain to a musical scale, as there are different scale alignments, instead it is the common Boss drum map. Writing to the DR-5 involves standard realtime or step methods, played back to a maximum polyphony of 19 notes, brought up to date with the inclusion of 'chord' and 'pitch in' data entry.

When playing, notes can be made staccato (short) or tenuto (long or full value) by holding down the desired button upon sounding the note. Chord entry is made easy by having the user hold down a keypad from the bottom three rows which will represent the root note of the chord. While holding the keypad you choose what type of chord you'd prefer, there are 18 factory chord types yet this doesn't account for any variation chords (inversions) or user chords (your own chords that you've edited and assigned.)

The 'pitch in' function will be new to some though essentially it

allows notes to be played on a guitar, that is input into the DR-5, that will in turn be tracked causing the internal sounds to play. The drawback is that the trackability is only average and realistically you'd have to play then mute every note to get any accuracy, surely this is a promise of better things to come for these designs.

The operating system of the Dr. Rhythm Section has some room for improvement as well, for it is a little messy. The functions are all there, copy tracks, delete tracks, edit tracks, mute tracks, shift notes, transpose, apply swing, repeat, accent, the list goes on and on. The annoyance is in its labour intensity. The DR-5 is by no means difficult to use or anything like that, it's just not as direct an approach as we'd like to see in 1994.

So what of the Boss DR-5 Dr. Rhythm Section? As a design of ingenuity and foresight it's a giant step in the right direction and well worth further exploration. Priced around \$995, from Roland.

Buyers Guide Guitar Amps (cont)

Fender (cont)

M80 Chorus Head, Head, 2 x 65W, Chorus, \$1399

M80, Combo, 90W, 1 x 12", Reverb, \$999

JAM, Combo, 25W, 1 x 12", Rev./Chrs., \$649

HOT, Combo, 25W, 1 x 10", Reverb., \$499

RAD, Combo, 20W, 1 x 8", Crunch, \$399

Squier 15, Combo, 15W, 1 x 8", Gain, \$199

Speaker Enclosures

021-1620 Slant, Spk. Encl., 300W, 4 x 12", Eminence, \$1199

021-1621 Stght., Spk. Encl., 300W, 4 x 12", Eminence, \$1199

021-1660 GE412, Spk. Encl., 300W, 4 x 12", Eminence, \$1199

021-1662 GE112, Spk. Encl., 100W, 1 x 12", Eminence, \$599

021-1609 H.M., Spk. Encl., 100W, 1 x 12", Eminence, \$549

021-1618 H.M. Slant, Spk. Encl. 300W, 4 x 12", Eminence, \$1199

021-1619 H.M. Straight, Spk. Encl. 300W, 4 x 12", Eminence, \$1199

022-1663 V-30's, Spk. Encl., 120W, 4 x 12", Celestion, \$1600

Gallien Krueger, from Electric Factory, (03) 480 5988

GKBACK-100, Combo, 100W, 1 x 12", Celestion Speaker, \$1599

(continued)

"FEAR NOT"



The DC 24 Dynamic Controller is a unique, multi-function processor that provides continuous protection to your expensive sound system from unforeseen dynamic mishaps. Such as the sudden explosion when a microphone is inadvertently unplugged or dropped. Or a howl of feedback that shatters eardrums, speakers and the flow of the message.

From whispered prayer to shouts of praise, the DC 24 keeps it all at comfortable listening levels, automatically. It's really several different products built into one, to provide you with the most powerful yet cost-effective performance capability.

The DC 24 Dynamic Controller: a valuable ingredient for consistently professional sound system performance.

JANDS Jands Electronics Pty Ltd ACN 001 187 837
578 Princes Highway, St Peters, NSW 2044. Phone: (02) 516 3622, Fax: (02) 517 1045



Write in Reader Service number: 117

BAND TALK Defryme



Musical Description:

You decide, we just play it.

Members: Quinn Gardener-Kane (Vox), Michael Richardson (Bass), Glenn Millen (Keys), Rob Dexter (Guit), Grant Miller (Drums).

Management: Mark McGahan, Go Off Entertainment, (03) 646-8266.

Agent: Premier Artists, Simon Smith.

Recording Deal: BMG.

Publishing: Chris Gilbey.

Fanclub: In Planning!

Sound Engineer:

Gary 'Rocket' Fox, Jamie 'Jimbo' Evans.

Crew: Andrew Rourke (LX), Sam Pulley (Stage).

Tour Moment: Travelling to Austin & LA, 1st time.

Interesting Gig: Jim Rose

Side Show Circus at the Palace in Melbourne.

Best Gig: Springfields.

Worst Gig: Baxter Tavern, play there and find out for yourself. (Ominous. -Ed)

Bass rig: Trace Elliot 350SMX amp, 410 quad

with horn and single 15", 4 string Music Man String Ray, Boss CS3 Comp.

Guitar Gear: Hohner Jack guitars, Abbey Quad Boxes, Abbey Prototype head or Marshall JCM900.

Drums: Pearl Pocarro Rack, Yamaha rims, Sonor shells, Pearl fittings, Ambassador heads.

Keyboards: Kurzweil 2000S Keyboard with 10mb RAM and SMP-K sampling option, Roland SH101, Abbey 700w amp, Yamaha 15" & horn wedges.

Prof. Mic: Crown CM310.

Favourite Music Stores:

Abbey Sound & Stage, and: The Bassplayer (Melb). Great guys, Great service, Good coffee!

Crew Names: 'Scabba' Reebok.

Production: Garry Fox, good rigs, good times!

Tips: Roadcase everything, don't use Re-Set Power Boards anywhere! (Circuit breaker hassles! -Ed)

Buyers Guide Guitar Amps (cont)

MHB, from MHB Music Systems, (08) 352 3685

VTA 1505, Head, 150W (Valve), 3 Ch. Switchable, \$1455

GR60, Combo, 60W, 1 x 12", Reverb., \$590

GR100, Combo, 100W, 4 x 10", Reverb/Distortion, \$990

Peavey, from Australis Music Group, (02) 938 3466

Rage 158, Combo, 15W, 1 x 8", Headphone Jack, \$249

Blazer 158, Combo, 15W, 1 x 8", Reverb., \$379

Audition 110, Combo, 25W, 1 x 10", Twin Channel, \$495

Envoy 110, Combo, 35W, 1 x 10", Thrash Control, \$629

Studio Pro 110, Combo, 65W, 1 x 10", Ind. Channel EQ, \$729

Express 112, Combo, 65W, 1 x 12", Active Voicing, \$829

Bandit 112, Combo, 80W, 1 x 12" Sheffield, Dual Channel, \$1029

Special 112, Combo, 160W, 1 x 12" Scorpion, EQ Shift, \$1249

Renown 112, Combo, 160W, 1 x 12" Scorpion, Digital Effects, \$1695

Renown 212, Combo, 160W, 2 x 12" Scorpion, Digital Effects, \$1995

Classic 20, Vintage Combo, 15W, 1 x 10", Vintage Tube, \$749

Classic 30, Vintage Combo, 30W, 1 x 12", Reverb., \$1149

Classic 50/212, Vintage Combo, 50W, 2 x 12", Effects Loop, \$1949

Classic 50/410, Vintage Combo, 50W, 4 x 10", Effects Loop, \$2049

Blues Classic, Vintage Combo, 50W, 1 x 15", Reverb., \$1995

Classic 50 P.Pack, Vintage Head, 50W, None, Effects Loop, \$1695

Duel 212, Combo, 120W, 2 x 12", Tremolo, \$2295

Backstage Chorus 208, Stereo Combo, 2 x 25W, 2 x 8", Stereo Chorus, \$995

Studio Chorus 210, Stereo Combo, 2 x 35W, 2 x 10", Chorus/Reverb., \$1195

Classic Chorus 212, Stereo Combo, 2 x 75W, 2 x 12" Scorpion, Chorus/Reverb, \$1695

Stereo Chorus 212, Stereo Combo, 2 x 130W, 2 x 12" Scorpion, Digital Effects, \$2295

EVH 5150, Head, 120W, None, All Tube, \$2195

Supreme 160, Head, 160W, None, Solid State, \$1195

Classic 115E, Speaker, N/A, 1 x 15" Special Design, Tweed Covered, \$795

Classic 410E, Speaker, N/A, 4 x 10" Special Design, Tweed Covered, \$895

5150 Quad., Speaker, N/A, 4 x 12" EVH, Van Halen Model, \$1795

412 M/H12MS, Speaker, N/A, 4 x 12" Peavey, Mono or Stereo, \$1295

Rak, from Ivan Richards Audio, (043) 283 729

Bluesmaker, Head, 50W, All Valve, \$975

Bluesmaker, Combo, 50W, 1 x 12", All Valve, \$1275

Vintage Plus, Head, 50W, Valve Reverb., \$1175

Vintage Plus, Combo, 50W, 1 x 12", Valve Reverb., \$1475

Rocktek, from Central Musical Instruments, (03) 315 2244

RK-10, Combo, 10W, 1 x 6.5", Reliability, \$135

(continued)

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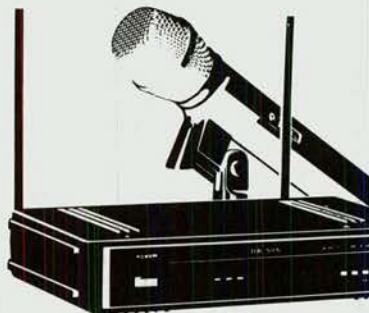
Fax 356 2762

S.A. - Ph 234 3444

Fax 234 9441

TAS - Ph 28 6373

Fax 78 1063



Circle 140 On Reader Service Card for more information

Buyers Guide Guitar Amps (cont)

RK-20, Combo, 20W, 1 x 8", 2 Ch. Controls, \$199
RK-20R, Combo, 20W, 1 x 8", Reverb., \$249
RK-20RC, Combo, 20W, 1 x 8", Reverb. & Chorus, \$289
RK-50R, Combo, 50W, 1 x 12", Reverb., \$515

Ross, from Central Musical Instruments, (03) 315 2244
RG-10, Combo, 10W, 1 x 8", Reliability, \$199
RGR-25, Combo, 25W, 1 x 10", Footsw. Reverb., \$379
RGT-30, Combo, 30W, 1 x 12", 2Ch. Chorus, \$459
RGC-60, Combo, 65W, 1 x 12", Reverb. & Chorus, \$599
Micro 22, Combo, 22W, 2 x 10", Mini-Stack, \$429

Samick, from Australasian Music Supplies P/L, (03) 872 4488
SM10, Combo, 10W, 1 x 8", Overdrive, \$189
SM25R, Combo, 25W, 1 x 10", Reverb., \$329
SM60R, Combo, 60W, 1 x 12", Reverb. & Chorus, \$625
T50R, Combo, 50W, 1 x 12", 2Ch., All Valve, \$899

Sovtek, from Electric Factory, (03) 480 5988
100COMBO, Combo, 100W, 1 x 12", Eminence Speakers, \$1299
50COMBO, Combo, 50W, 1 x 12", Eminence Speakers, \$1099
MIG100, Head, 100W, All Tube, \$999
MIG50, Head, 50W, All Tube, \$799
QUAD, Quad. Box, 300W, 4 x 12", Eminence Speakers, \$799
212, 2 x 12 Quad Cabinet, 150W, 2 x 12", Eminence Speakers, \$499

NOTE: Marshall & Vox amps distributed by Yamaha Music Australia, call (03) 699-2388. (No listing received, sorry readers!)

BUYERS GUIDE BASS AMPS

Abbey, from Abbey Sound P/L, (03) 786 4211
AQ10(4x10"), 400W, 4 x 10", Speakers, \$895

AMPEG, from Music Link Aust., (03) 429 9299

Bass Heads

SVT-11, Head, 300W, 6 Tubes, 6 Band EQ, \$3499
SVT-11 Pro, Head, 300W, 6 Tubes, 6 Band EQ, \$3899
SVT-111, Head, 50W, Tube Pre-Amp, 6 Band EQ, \$1999
SVT-111 Pro, Head, 450W, Tube Pre-Amp, 6 Band EQ, \$2199
SVT-400TH, Head, 400W (200 per side), Stereo, Biampable, 2 EQ's, \$2499
Bass Pre-Amps
SVT11P85, Pre-Amp, Same Pre Amp As SVT-11, \$895

Bass Power Amps

SVT-300, Power Amp, 350W, 6 x GE6550A Power Tubes, \$2999

Bass Enclosures

SVT-810HE, 8 x 10" Enclosure, 350W, 4 x 10", Marine Ply, \$2499
SVT-410HE, 4 x 10" Enclosure, 200W, 4 x 10" + Tweeter, Marine Ply, \$1399
SVT-210HE, 2 x 10" Enclosure, 200W, 2 x 10" + Tweeter, Marine Ply, \$1049
SVT-1510HE, 1 x 10" 1 x 15" Encl., 200W., 4 x 10" + Tweeter, Marine Ply, \$1399
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Crate, from Music Link Australia, (03) 429 9299

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BX-15, Practice Combo, 12+W, 1 x 8" Crate, 4 Band EQ, APM Limiter, \$379
BX-80, Combo, 80W, 1 x 15" Crate H/Duty Bass Driver, Pre-Shape Control, APM Limiter, \$1099
BX-200, Head, 151/200W, Pre-Shape Control, APM Limiter, \$1249
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BT-350, Head, 220/350W, Valve Pre-Amp, 6 Band EQ, Chorus, \$1899
Concert Series Bass Enclosures
BE-410H, 4 x 10 Enclosure, 200W, 4 x 10", HF Horn, Stackable, Metal Grille, \$1299
BE-15, 1 x 15 Enclosure, 200W, 1 x 15" H/Duty, As Above, \$899
BE-215, 2 x 15 Enclosures, 200W, 2 x 15", As Above, \$1199

Eminar, from Eminar Amplifiers, (03) 465 7144,

EB400, Rack Mount, Head, 400W, Switchable Rotary & Graph Active EQ's, \$1199
EB250, Carpeted, Head, 400W, Switchable Rotary & Graph Active EQ's, \$999

Fender, from Fender Australia P/L, (02) 666 5077

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Rumble Bass Head, Head, 300W, All Tube, \$5700
Rumble Bass 410, Spk. Encl., 600W, 4 x 10", Kickbutt, \$1600
Rumble Bass 410S, Spk. Encl., 600W, 4 x 10", Sub Bin, \$1500
Solid State Amplification
BXR Dual 400, Head, 400W, 11 Band EQ, \$1999
BXR 300C, Combo, 300W, 1 x 15", 3 Band EQ, \$1699
BXR 300R, Head, 300W, 3 Band EQ, \$1299
BXR 100, Combo, 100W, 1 x 15", 7 Band EQ, \$1099
BXR 60, Combo, 60W, 1 x 12", 4 Band EQ, \$899
BXR15, Combo, 15W, 1 x 8", Beauty, \$449
M80, Combo, 160W, 1 x 15", Chorus, \$1299
M80H, Head, 160W, Chorus, \$1099
RAD, Combo, 25W, 1 x 10", Cheap, \$549
BXR Spectrum, Spk. Encl. 250W, 1 x 18" & 2 x 10", \$1299
BXR410, Spk. Encl., 300W, 4 x 10" Eminence \$1099
BXR115, Spk. Encl., 250W, 1 x 15", Eminence, \$899
BXR215, Spk. Encl., 400W, 2 x 15", Eminence, \$1299
HM410B, Spk. Encl., 300W, 4 x 10", Eminence, \$1099
HM215B, Spk. Encl., 400W, 2 x 15", Eminence, \$1099

Gaillen Krueger, from Electric Factory, (03) 480 5988

GK2000RB, Head, 2000W, \$3799
GK400RB, Head, 400W, Bass EQ System, \$1399
GK800RB, Head, 800W, Bass EQ System, \$2199

Hartke, from Electric Factory, (03) 480 5988
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Matrix 6, Yamaha TX802,

Matrix 6, Yamaha TX802,

TX 812, Roland D110,

Sound Brush, TR909,

Casio F21 Sampler.

Fav. Music Store: Brashes,

Hutchings Keyboards.

Fav. PA/Prod. Co: Troy

Balance Corporation.

Crew: Cameron Miller,

Fincher Trist.

Gear Tips: 1. Take a

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spare! 3. Check before you

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General tips: Keep a sense

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Pre Amp, \$1599

H70003H, Head, 350 + 350W, Solid State &

Tube Pre Amp, \$2599

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minium Drivers, \$2999

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VP3, Valve Pre Amp, 1RU Valve, \$995

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\$1855

MHB, from MHB Music Systems,

(08) 352 6885

BA350GB, 3 Piece, 350W, 8 x 10" in 2 boxes,

Comp.: 2Ch., \$2500

BA175G, 2 Piece, 175W, 4 x 10", 2 Ch.

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Graphic, \$925

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Grand Prix, Pre Amp, 5W, Tonal Purity, \$1495

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Working Man's Bass Amp, Combo, 100W, 1

x 12" + Horn, Mini, \$1195

Hank Jr., Cabinet, 350W, 4 x 8" + Horn,

\$1495

Bass Wedge, Cabinet, 150W, 2 x 10" + Horn,

Bass Player Wedge, \$995

Peavey, from Australis Music Group,

(02) 938 3466

Microbass, Combo, 20W, 1 x 8", DDT Com-

pression, \$429

Minx 110, Combo, 35W, 1 x 10", Tuned Cabi-

net, \$595

Basic 60, Combo, 50W, 1 x 12", DDT Com-

pression, \$849

TKO115, Combo, 80W, 1 x 15" Scorpion, 7

Band Graphic, \$1049

TKO 115 BW, Combo, 80W, 1 x 15" Black

W dow, 7 Band Graphic, \$1249

TNT 115, Combo, 150W, 1 x 15" Scorpion,

Crossover, \$1495

TNT 115 BW, Combo, 150W, 1 x 15" Black

W dow, Crossover, \$1695

COMBO 115, Combo, 30CW, 1 x 15" Black

W dow, Comp/Limiter, \$1895

COMBO 210 TX, Combo, 300W, 2 x 10" &

Horn, Ext. Spkr. Jack, \$1895

MARK III XP, Head, 150W, None, Graphic EQ,

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MARK VI XP, Head, 400W, None, Crossover,

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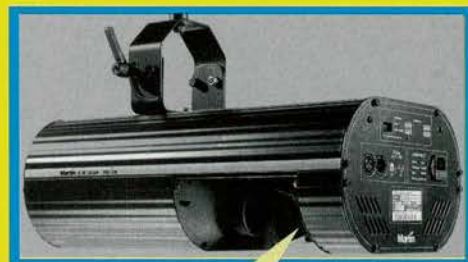
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210 TX, Bass Bin, 350W, 2 x 10" + Horn, Kevlar Reinforced, \$995
410 TX, Bass Bin, 700W, 4 x 10" + Horn, Kevlar Reinforced, \$1349
810 TX, Bass Bin, 850W, 8 x 10" + Horn, Kevlar Reinforced, \$2195
1516, Bass Bin, 600W, 1 x 15" + 2 x 8", Kevlar Reinforced, \$1295
1820, Bass Bin, 700W, 1 x 18" + 2 x 10", Kevlar Reinforced, \$1695

Rocktek, from Central Musical Instruments, (03) 315 2244
RK-20B, Combo, 20W, 1 x 6", 4 Band EQ, \$239
RK-30B, Combo, 30W, 1 x 10", 4 Band EQ, \$289

Ross, from Central Musical Instruments, (03) 315 2244
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Samick, from Australasian Music Supplies P/L, (03) 872 4488
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SM400, Head, 500W, Tube Re Amp, \$2795
Studio 220, Head, 250W, Tube Re Amp, \$949
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Baby Blue, 160W, 2 x 8" + 1 x 5", XLR Pad. & Gnd. Lift, \$2595
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Goliath Jr., Cabinet, 350W, 2 x 10" + Horn, It's A Son, \$1495
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Electric Blue, Head, 160W, Exceptional Tone, \$1495
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Basic 350, Head, 350W, Simplicity, \$1975.

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Crate, from Music Link Aust., (03) 429 9299

Keyboard Amps

KX-80, Combo, 80W, 1 x 15" Crate, Horn/Tweeter, 3 Ch., Gain, Reverb., \$1359
KX-160, Combo, 160/220W, 1 x 15" Crate, Foster Tweeter, 4 Ch., Gain Reverb., \$1999

Fender, by Fender Australia P/L, (02) 666 5077

Keyboard 100, Combo, 100W, 1 x 15", 3 Ch., \$999

MHB, from MHB Music Systems, (08) 352 3685

K60, Combo, 60W, 1 x 12" Piezo, Single Diamond, \$560

K100, Combo, 100W, 4 x 8" + 2 x Piezo, 3 Keyboard/Mic. \$985

Peavey, from Australis Music Group, (02) 938 3466

KB 15, Combo, 15W, 1 x 8", Record Out Jack, \$395

KB 60, Combo, 50W, 1 x 12" & Horn, Effects Loop, \$949

KB 100, Combo, 75W, 1 x 15" & Horn, 3 Ch., \$1149

KB 300, Combo, 150W, 1 x 15" & Horn, 3 Ch., \$1595

KB 300 BW, Combo, 150W, 1 x 15" Black Widow, 3 Ch., \$1795

Ross, from Central Musical Instruments, (03) 315 2244

RK-15, Combo, 15W, 1 x 10", 2 Inputs, \$229

Scorpion, from Emar Amplifiers, (03) 465 7144

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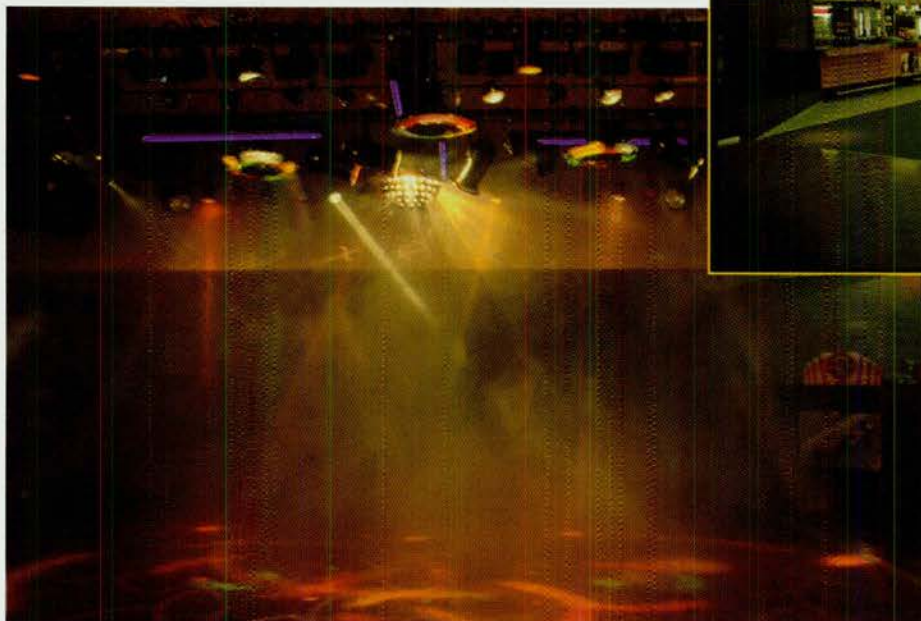
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NITECLUB Profile



Clean room design at Lakeside

THE LAKESIDE ROOM

The "Lakeside" Room opened in July 93 after cries for a late night venue were heard by Ross Smith, owner of the Kallangur Hotel. Half an hour from Brisbane City and catering for greater Brisbane urban sprawl, success was almost guaranteed due to a lack of this type of venue in the area. The "Lakeside" is fast becoming one of north Brisbane's premier night spots. A feature of the venue is its versatility in allowing the room to be used for discos, theme nights (eg. football and movies) and as a large function room. The room was designed and decorated to a theme which has successfully attracted the nearby Lakeside Motor Racing crowd. The "Lakeside" Room is situated in the Kallangur Hotel, Anzac Ave., Kallangur.

Venue Name: The "Lakeside" Room, Kallangur/Brisbane

Venue Owner: Ross Smith

Venue Manager: Wayne Albertson
Venue Booker (If Live Entertainment): Wayne Albertson

Lighting/ Sound Design By: Mark Ryder/Creative Lighting

Lighting Operator:

Anthony Hogar

Audio Operator: Acting D.J.

Video/Other:

Mark Ryder/Creative Lighting

Video Operator: Acting D.J.

Decor/Interior Design: Ross Smith

Typical Door Charge: \$4.00

Theme Nights: Varied

Entertainment: D.J.'s/Live Acts

DANCE FLOOR LIGHTING & CONTROL

1 x 6 x 4 mtr. Truss
4 x Abstract Wildstar
16 x Abstract Scatterspot Colour
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4 x Geni Disco Strobe
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8 x Infinity Scanners
2 x Abstract Hypermoon
8 x Infinity Par 56 Cans
1 x Yes Y3 Fogger
2 x Infinity 6-Way Helicopter
2 x Infinity 8-Way Helicopter
4 x 36W BLB Battens
23 x Low Voltage Room & Bar Lighting
1 x Zero 88 Mercury 4 Channel Controller
4 x Sigma Switch Packs

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1 x Dynalite Studio 4 Controller

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2 x Technics SL1200 Turntables
1 x Numark 1175 Stereo Mixer
1 x Electrovoice PL88 Microphone
1 x Denon 2000 Dual Pro CD Player
2 x Electrovoice 7600 Power Amps
4 x Electrovoice S1500 Speakers
2 x Electrovoice S181 Bass Bins
2 x Peavy RTD 31 Equaliser

1 x AFX EC1 Crossover

1 x Yamaha 202C Comp/Limiter

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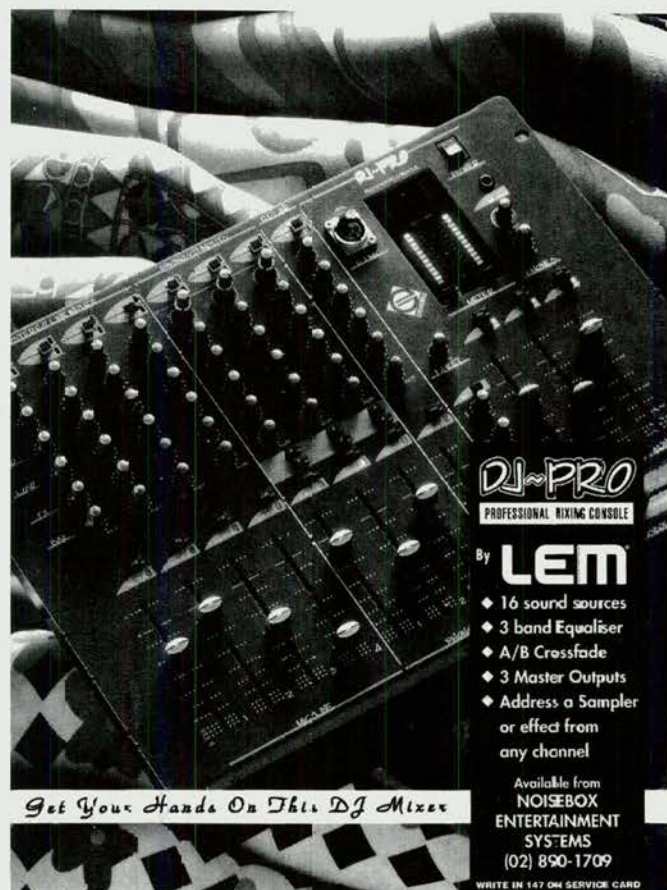
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THE PA PAGE

CHECKING USED EQUIPMENT

Multicores & Cables

Complete checking should always be done on these **BEFORE** you buy- and that means **EVERY** single line on every single send. As a general rule, the condition of the cables can be judged by external appearance. If there is evidence of twists, or crushed sections where vehicles have run over it, leave well alone! Be wary of the many different wiring standards in use, especially for unbalanced returns. Check the cable clamp where the 'core enters the stage box. If it's loose then there's a sure fire bet that half the connections inside have been twisted and broken.

Check prices carefully - it might just be cheaper (or at least better) to buy new rather than second hand, especially with smaller cables such as mic cables. If you can "roll your own" then consider using shielded pair data cable as a multicore (can be obtained from MM Cables through most electrical wholesalers, known as the "B20xxESCS" series, where "xx" is the number of balanced pairs). This cable is much cheaper than the regular variety, and despite it's foil shield construction (in lieu of braided copper on normal multicores) it performs with excellence. The author has some of these cables which have been in constant road use for 10 years without failure. (*News to me. -Ed*)

Effects processors and Equalisers

The price difference between "new" and "second hand" processors is actually quite narrow. In many cases it's better to buy new - especially with Graphic Equalisers. The introduction of the new "Alesis" monolithic designs has cut the market of equalisers - such that new units can be found for around \$400, which is similar to the price of second hand ones. Ultimately this will push down the second hand price to around \$250.

Likewise Compressors and Gates have come down in price, and it is often better to buy new. Reverbs and delays however can still be picked up "used" for around \$300 less than their new counterparts - and in good condition.

The only thing to listen for with effects and EQ units is power supply noise and faults. Gently tap the top of the unit while listening. Any crackling is an indication of dry joints in the power supply caused by years of use in a hot, enclosed rack. These can be repaired easily by a technician. Any hums and other noises likewise are usually due to power supply faults.

Paul Matthews, PA Matthews Audio Co.

SPEAKER SYSTEMS THE 'LOOK'

These days quality speaker cabinets are generally constructed from plywood. Avoid chipboard. Even when carpeted to conceal the crime, a chipboard box will deteriorate alarmingly in a damp environment (most garages). Panels will swell and flex and fall apart.

There is a disturbing trend among some manufacturers to use customwood; another type of compressed sawdust used extensively by home renovators for kitchens and bathrooms because of its smooth finish and high moisture resistance. This makes it difficult for water based glues to adhere during construction, so the emphasis is placed on gyprock style self tapping screws to hold panels together. Opt for plywood.

Check that the cabinet is adequately braced. The cabinet is a link in an energy chain. You don't want energy wasted in vibrating panels. The box should be lined with acoustic "wool" or "kapok" in order to absorb mid-range rings. The more mid-range rings or "standing waves" the more kapok should be used. Many people argue that this is a waste of time in bass bins although most manufacturers install it as standard. Fibreglass is not a good idea. Insidious stuff. Falls apart and fibres can actually get "pumped" into a speaker's voice coil through its vent(s).

Any loose joins should be rejoined. Prise the join apart enough to force a glue like Aquadhere into it. For the strongest results use gyprock type self tapping screws to draw and hold panels together.

An alternative to recarpeting is the good old paint brush. After ripping off the carpet remnants, sand down the glue remnants and fill any holes or gouges with a filler like Multibond or Polyfiller. These products can stimulate business. Even if your phone hasn't rung in hours, you only have to mix up a batch with a hardening time of 5 minutes and the phone rings. Never paint over connectors. It doesn't take much paint on the pins to cause a dodgy connection.

Standard paints are either acrylic (water based) or turps based as in most enamel types. Water based is easier to work with. It goes on quicker, requires only a light sand for repainting, and both you and the brush wash clean in water. Use low sheen/satin.

Non-standard paints include 2 pack industrial grades or products like "Rockhard". These thick paints are best applied with a brush and then gone over with a textured roller, available from your local hardware. This gives a finish similar to the vinyl on Peavey boxes or many guitar amps. Although a 20 litre tin at about \$250 may sound pricey, it works out to \$10 a box.

"Who cares what it looks like as long as it sounds good?" Well, I now know that people always prefer using sound equipment with "the look."

Michael Orland, The Public Address Company.

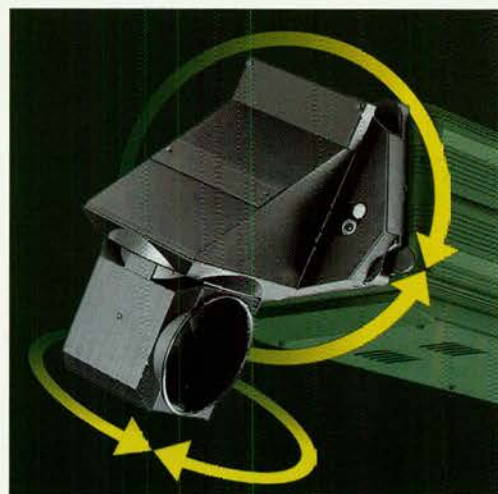
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- two gobo wheels give a total of 36 image combinations with additional +/- 3° positions for quick, accurate moiré effect creation; all gobo's and effects are rotatable in both directions at independent variable speeds and are positionable to give accurate, repeatable image line up facilities; rolling gobo effects are available in either direction or in combination to give new contra-rolling effect
- additional effects wheel with 3 optically optimised image multiplying prisms (3, 4 & 6 facet) and seamless quad and bicolour for internal colour rotation
- colour wheel featuring unique seamless quad, tri and bi colour possibilities together with variable speed rotocolour; full cyan, magenta, yellow colour mixing
- all systems can be used in combination
- function channel for remote lamp operation and power up/down
- all functions available from standard DMX 512 control via 3 or 5 pin cannon connectors
- Back panel LCD display for menu driven digital address setting, DMX reception indication and analysis, operation mode options, lamp and unit life display and unit test facilities
- power factor corrected as standard
- discrete elegant styling with user adjustable handles for easy rigging
- ultra powerful HTI 2500 W/SE lamp
- optimised optical systems give a light output that is at least double that of any other currently available articulate projector



The real revolution in light.

NAT was conceived as a complete range of machines. Built without compromises, they not only out perform the competition in all respects, but also represent absolutely, the state of the lighting art.

Once again coemar leads the way...

The flagship of the range is the acclaimed NAT TM2500, which on it's first major showing at the LDI exhibition in Orlando, won the prestigious "Best New Product in 1993" award.



cda Pty Ltd
36 a clements avenue
bundoora victoria
ph (03) 4678666
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SHOW TECHNOLOGY AUSTRALIA PTY LTD

13 - 15 Bridge Street - Rydalmere NSW 2116

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Head Office:

CLAY PAKY SPA - Via Giovanni Pascoli, 1

24066 PEDRENGO (Bergamo) Italy

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