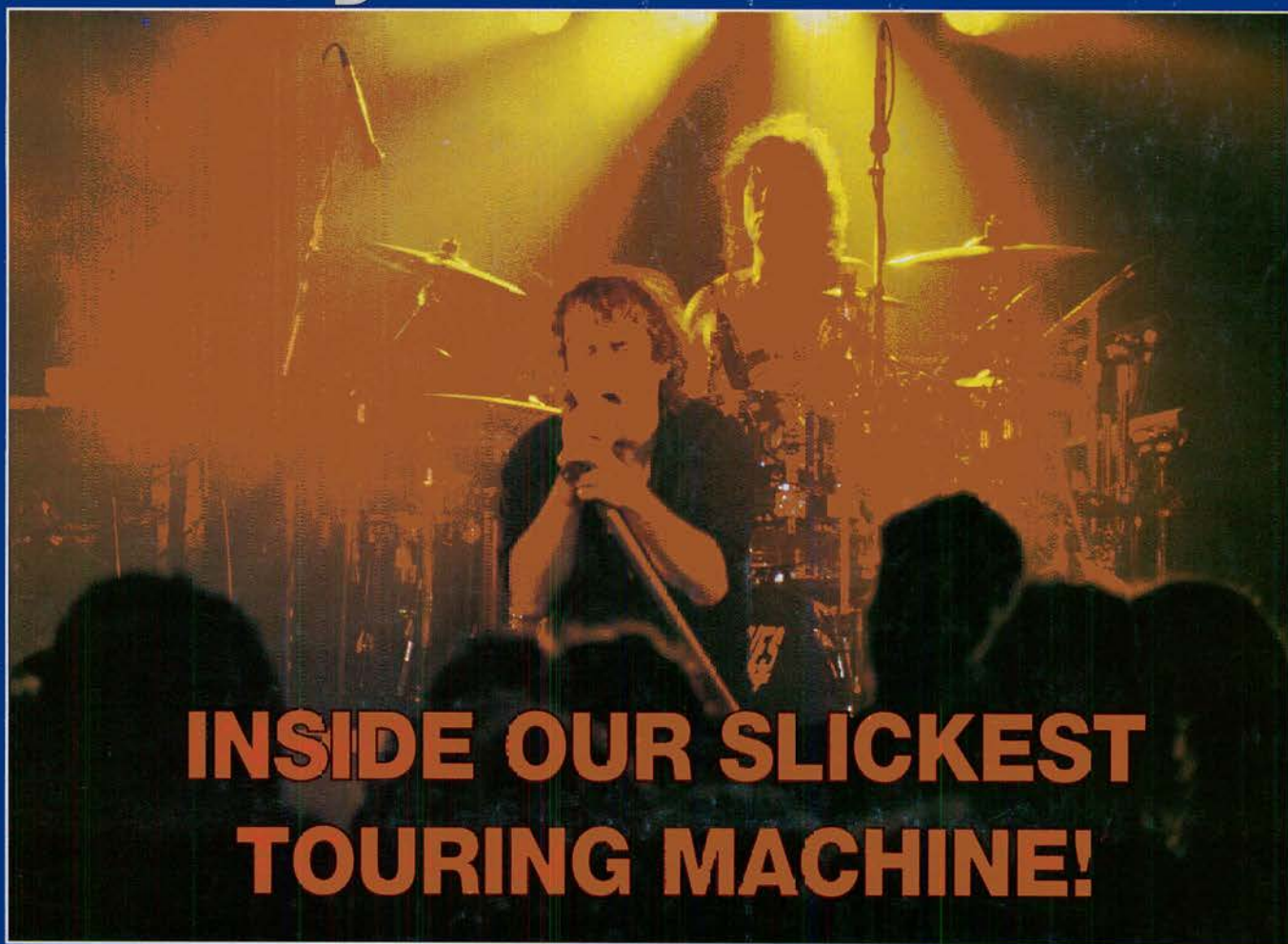


# Connections

Australia's SOUND, LIGHTING, A-V & STUDIO Magazine

## Jimmy Barnes On Tour



**INSIDE OUR SLICKEST  
TOURING MACHINE!**

Lighting 'Into The Woods'

### **RIPOFF?**

STUDIO SCHOOLS  
REJECT CLAIM

### **USER REVIEWS:**

- 4 Effectors
- PA Processor

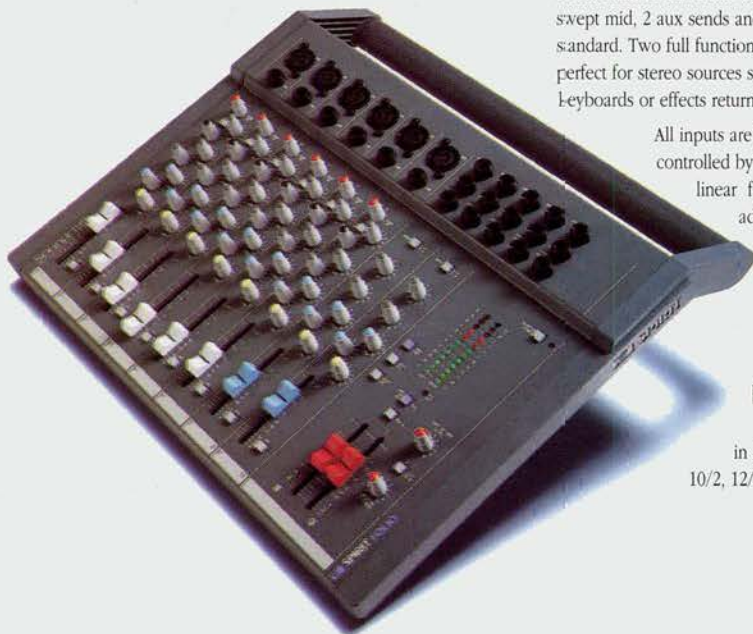


# FreeSpirit



**H**ere it is. The mix set free. Spirit Folio may be small, and light enough to carry with ease, but it's no lightweight when it comes to big professional features - it's simply packed with them. And it gives you quality that's even better than DAT.

Hardly surprising: Spirit Folio is made by Soundcraft, one of the biggest and most respected names in professional mixing.



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#### Free Application Guide

Simply complete and return the coupon to the address below to obtain your free copy of this instructive booklet written by pro-audio journalist Paul White. It shows you step by step how to get the best from your mixer in a variety of situations.

Name

Address

What instrument do you play?

What magazines do you read?

What equipment do you use?

How would you use Folio?

Send above coupon to: **Jands, Performance Range Division**, PO Box 171, St. Peters NSW 2044, or FAX (02) 517-1045. For dealer locality info phone (02) 516-3622

  
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**DIGITAL**

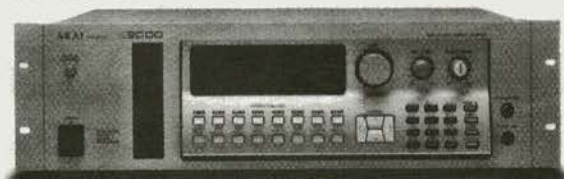
# SAMPLERS...

## S2800



- 32 voice ● 16-bit stereo A/D, 64x oversampling ● 18 bit D/A, 8 x oversampling ● 2MB RAM, exp. to 16 MB ● DSP (chorus/flange, delay, pitch shifting) ● APM (Assignable Program Modulation) ● multi outs ● resonant filters

## S3000



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# Connections

APRIL 1993. Issue 3

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### Connections Magazine

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● An unholy row is underway in the heady world of music industry publishing - with **Phil Tripp** lining up against a challenger, Noel Crabbe. Tripp is, of course, long time publisher of the Australasian Music Industry Directory, known as the 'yellow pages' of the music business, while Crabbe is the publisher of Sydney's 'On The Street'. Crabbe recently announced his own directory - fashioned 'Australian Music Business Index', to appear FOUR times yearly against Tripp's two - and ran straight into the first salvo from Tripp. The Department of Consumer Affairs upheld a complaint from Tripp that Crabbe's chosen directory name was too close to his own, so the Australian Music Business Index will now assume a different name when it appears sometime during this issue cycle. Crabbe's advertising rates are considerably less than Tripp's - this could get nasty, folks! Tripp said in Drum Media: "Industry Professionals don't want to be bothered with endless phone calls, faxes and mail from teenyboppers who found the directory between Smash Hits and

Hot Metal in the newsagents. Would you like someone coming to your door for James Reyne's autograph because they found your management address at the newsagent?" Crabbe plans newsagency distribution as well as 'direct distribution to the industry'. Tripp has counterattacked with a proposed Australian Music Artists Directory - a companion volume to his Australasian Music Industry Directory. It is a music business talent and booking bible, whereby bands and artists send in 100 words about themselves with a picture. Should make interesting reading. Watch this space!

● **BAVA'S Music**, a retailer based in Sydney's West, astounded the music trade on Sunday 28th March with a tradeshow held at Parramatta across an afternoon. When 11 distributors, including Roland, Yamaha, MusicLink and The Electric Factory faced the doors being opened, they were virtually besieged by eager punters! Not only were the musical masses there in force, but they also PAID to get in! Travers Faulkner of Tascam was gobstruck when we arrived at 1pm,

having sold three of the five multitrack machines on display! "It was worth getting up at 6am in Melbourne to fly here - I'm impressed!" he said. Nick Bava tapped a fresh vein, with the thirst for computer music knowledge obviously extremely strong. Roland had active demonstrations of some of their new music technology, and frankly it was extremely interesting. **More on this whole topic next issue, where we introduce a new MUSIC TECHNOLOGY section!**

● **The Australian DJ Supply Co** is a newly formed venture for Megatone Enterprises, and it has 8 new motorised lighting effects on release this month. For a detailed pricelist, call them on (02) 564-2277.

● At presstime we caught up with expatriate Aussie Audio Legend, **Howard Page**, at the tail end of the Paul McCartney Tour. Howard gave us a good spray over the editor's views about importing roadcrew with International Tours - and also talked about career paths for Aussie crew overseas. The full Howard Page interview appears next month.

● **SIB-93** - Just concluded in Rimini,

Italy, has once again proved to be a huge success for the Italian and International Entertainment Trade community. Seven connected pavilions forming a total area of 35,000 square meters were filled to capacity with displays from every aspect of the industry - from costume design to truss manufacturers - the most prominent group being professional and disco lighting and effects manufacturers. The show was viewed by approximately 30,000 people over four days, from all corners of the world. Aussies on hand included Peter Kemp (Coemar DeSisti), Rod Salmon (LAVA), Con Bivianni (Universal), and Jonathan Ciddor & Paul Owens (Lightmoves). Connections' Caroline Grafton was on hand to view this major event, and will present the Rimini Roundup next month.

**1,672 Subscribers - (at March 30) THANK YOU!**  
**10,000 copies distributed,**  
**650 outlets across the country. Next issue: MAY**

## Continuing the good news

**Fresnel 2000/25** - Two years ago we introduced our Selecon Fresnel 1200 with a 175mm (7 inch) lens. It immediately won industry plaudits due to the additional light output and quality of the beam compared to 150mm (6 inch) lens units. At this time we were requested to follow the same approach for a 2.0 Kw Fresnel (remember the 243) so we have!

The new Selecon Fresnel 2000/25 has a 250mm (10 inch) lens in a body no larger than other 8 inch Fresnel and lighter (at 8.7Kgs.) than most. Light output is of course considerable greater than 8 inch 2 Kw Fresnels and compares more than favourably with some 2.5 Kw Fresnels. For example the spot focus of 7° provides 419, 4000 cd, the flood position of 60° 37,700 cd.

Samples so you can check the beam quality etc. for yourself are available from your Selecon distributor. And yes...a 2.5 Kw model will be available shortly.

**Performer 1200 MSR Followspot** - A purpose designed (from the stand up) followspot that both meets the performance and budget needs of most. Our very effective axial optical system delivers 1,000 lux at 57 metres while the operational features include everything you expect and a little more

eg. continuous zoom operation, mechanical dowser, 1/2 power switch, cutter; iris, gobo slot, 6 colour changer etc.

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**SELECON**

## ACME BUST BOOTLEGGERS

*McCartney Melee as T-shirt Pirates flee Street Justice.*

As Paul McCartney was singing *Band on the run* on stage, Tuesday night, illicit t-shirt vendors outside the Sydney Entertainment Centre were on the run from a new type of Federal Court order which is a legal landmark in the fight against merchandise pirates - a battle in which ACME Merchandising had invested over \$100,000 in the past year to protect their designs and copyrights in Australasia.

By serving legal papers on street sellers outside the Entertainment Centre, ACME Merchandising and their lawyers Tress, Cocks and Maddox (TCM) executed the first ever order in Australia known as a *John Doe Order* addressed to known and unknown bootleggers of t-shirts and other merchandise at the Sydney Paul McCartney concerts. It's been successfully used to fight bootleggers in the US, Canada, UK and Northern Ireland.

At 4:00pm, Tuesday March 16th, in the Federal Court, his honour, Mr

Justice Whitlam, granted ACME the right to serve orders for handing over any and all unauthorised Paul McCartney merchandise. Within two hours, TCM solicitor Alistair Little had copied nine sets of the 70 plus page orders which were served through the evening on the street.

Two of the several hawkers served under the watchful eyes of police observers and a Hinch news crew proved to have been bootleggers at numerous other venues around Australia. The illegal vendors were astonished by the speed and force of the orders being served. Crowds gathered and cheered as the news cameras and photographers recorded the confrontations.

Some simply ran and left bags with hundreds of t-shirts behind. Others tried to use their street legal smarts to argue their cases on the corners. Only a few tried to bully their way out, but all may shortly see their day in court for failure to comply with the court order.



## LX Golden Scan '3' debuts

*24 colours, 100% dimming, 30% more light*

Clay Paky have revised the Golden Scan, itself a market leader since release in 1988. The new version still utilises the HMI 575 or 1200 lamp, but optical improvements produce up to 30% more light, according to the Italian manufacturer.

Significantly, dimmer control allowing 0% to 100% is a feature, and the colour choice is boosted with 24 single colours and 24 combinations of bi-colours.

Now a 'frost' effect is included, to pseudo generate a colour wash, rotating gobo's is another first - and patterns generated from the gobo

wheel can be split with a prism.

The firm states that significant revisions have been made to the electronics, "including an enhanced resolution of microstep mirror movement, even at ultra-low speeds."

A variable speed iris and a strobe with frequency adjustment from 1 to 7 flashes per second completes the picture.

Clay Paky say the Golden Scan 3 still only needs 6 control channels. More details from importers LAVA: (02) 816-4444, (03) 819-6916.

CIRCLE 106 ON SERVICE CARD

## FIRST LOOK - EXCLUSIVE!

### Fostex ADAT compatible



The RD-8 records SMPTE and has on-board synchro also. Debut date is thought to be mid-winter for this digital 8 track, VHS tape using machine.

## THEATRE BRIEFS

◆ The WA State Theatre Company is no more, after the State Minister pulled the plug in March. He said it's position was 'ropeless'.

◆ Touring to a weird schedule is the Trestle Theatre Company, who present 'State of Bewilderment' in March. From Sydney the company work Albany Town Hall on 5-6 March, then Bunbury, Perth - and the Gold Coast, before returning to Sydney.

◆ The Goldfields Art Centre in Kalgoorlie have chosen Stagecraft to supply them with \$40,000 worth of Selecon luminaires. (Lights to you.)

◆ Sydney's Capitol Theatre is worse off after recent rain leaked through


the roof, collapsing plaster statues and further damaging the building which is being neglected while Sydney Council and Ipoh Gardens haggle over restoration terms. A report recently stated the council had lost faith and was ready to borrow to restore the place. The same week a huge deficit in Council's budget was announced, dashing the loan concept. A total farce continues.

◆ John Rayment has introduced a new design element to Sydney Dance Co's production of Beauty & The Beast at the new Metro Theatre. Low stage height led to use of 12v Selecon MR16 based 'Accent' profiles - 290mm long.

# AUDIO

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CIRCLE 127 ON READER SERVICE CARD

## EVENTS

### **LX** Showlight '93 for AIMS *Lighting Industry to have 'show within show'*

When AIMS 93 opens for four days in September, the lighting industry will be there too. Organisers of Australia's International Music Show expect better than 10,000 visitors across a combination of trade and public sessions.

This year marks the recognition that the lighting industry doesn't have a formal forum in which to display its wares, so AIMS '93 will fill the void with Showlight 93.

Organiser Rob Walker, of the Victorian Rock Foundation, said he was prepared to be flexible with space allocation, in accordance with industry feedback. Present floor plans offer 2 halls at Sydneys Darling Harbour Exhibition Centre for the show, which will be widely advertised - including a television campaign.

**For more details contact Rob Walker at the VRF:** (03) 696-2022, or Fax: (03) 696-2879.

### *AES & Singapore show shape up*

First tradeshow of the season is the Pro Audio & Lighting show scheduled for July 7 - 9 in Singapore, already looking like attracting more visitors from down under than last year. Time to book your tour package if you plan to go. **A hint from our Singapore correspondent Ray Bond: ask your travel agent for a quote on Gulf Air, who apparently are doing deals at the moment.**

◆ Likewise the AES Show, scheduled for Melbourne's World Congress Centre, August 24 - 26. Already 40 exhibitors are on board, with the show looking like the largest yet for our region. Papers and Workshops will have a more practical emphasis this year, and great accommodation and packages are available. Contact organisers: VRF, (03) 696-2022 or fax (03) 696-2879.

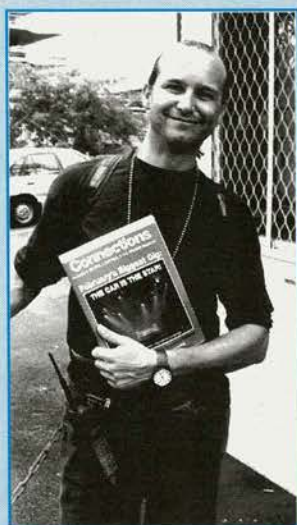
### Lighting Open Day

**LIGHTMOVES** in Sydney announce an Open Day (and night), Wed. 28th April, from 2pm - 9pm. On show: latest developments in lighting from people like Theatrelight (control systems), Teatro (luminaires),

Dynalite (dimmers), Abstract, LeMaitre & more. Celco's Navigator desk will run moving lights from Clay Paky & Martin. **Venue:** 631 Parramatta Rd, Leichhardt NSW. Call **Jonathan Ciddor:** (02) 560-0000

### ON THE JOB. #03 in a series

Discerning Connections Reader Aaron Chugg is these days more often than not a tour manager - overseas with the Screaming Jets as you read this. In bygone times Aaron, cousin of Frontier's Michael Chugg was once a bass player, but that's best forgotten, as are his Canberra origins. Aaron spent most of last year in the USA, where amongst others he tour managed the Moodie Blues. Hardest part of the gig was keeping them in the right mood, which meant selecting the correct restaurant. Always versatile, Chugg usually mixes FOH for his clients.



### Neil Smith opens city shop

*Rock & Roll Music opens new PA outlet in Sydney*



*Daniel Trevor & Neil Smith (R), new shop in Camperdown*



**Sydney** now has an addition to its professional outlets with a new shop launched by Neil Smith, original founder of Smithy's. The shop specialises in new and used sound, consignment, and lighting equipment, with the added attraction of driveway hire from the premises.

Cannon Sound, operated by Danny Trevor, is now offering driveway hire from a side-dock behind Rock & Roll Music's new premises. Cannon have over 20 small PA systems from basic vocal PA's to full band systems with separate foldback

mixers. They now offer all driveway hire attractions.

Rock & Roll Music is well established in Sydney already, via an existing outlet at Manly in Sydney's North. This continues, the new shop brings specialist supply into town, with full range dealership of Yamaha and Jands product.

Cannon Sound also hire party systems & backline.

**Contacts:** Cannon Sound (02) 550-6949, Rock & Roll Music (02) 550-3828, or (008) 804-994. 96 Pymont Bridge Rd, Camperdown.

## PA

## PRODUCTS

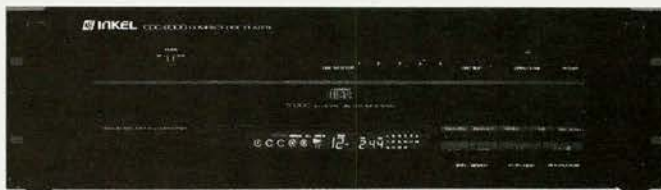


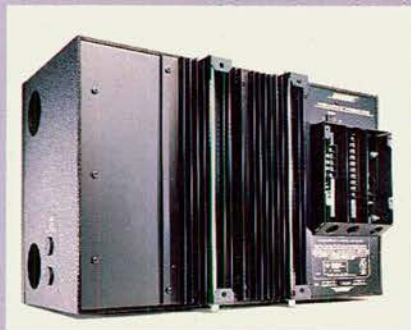
▲ **RANE** have two useful additions to the FLEX series of modular 'PA Tools' - the remote VCA Limiter (FVL-22, above) is a two channel device that allows remote gain control, with integral system limiters too. You establish your two remote controls where you want them, and leave the FLEX module down with the rest of the system.

The 'Balance Buddy' is a 4 channel passive interface with transformer isolation and level matching for unbalanced-to-balanced gear. Call **Jands** for info, (02) 516-3622.

▼ **INKEL** have the CDC-9300 rack mount multi-CD player, which they say is the only device of its type available for rack mounting.

Just 3 rack units tall, the CDC-9300 accepts five CD's - four of which can be changed while the fifth is playing. Continuous and repeat play are possible, also you can program up to 32 tracks. Did you know a CD has a theoretical maximum playing time of 74 minutes? Lessee now, 5 x 74 = duh ... 370 minutes, or 6.16 hours! Just in case you wondered! Call **Magna Systems**, (02) 417-1111.





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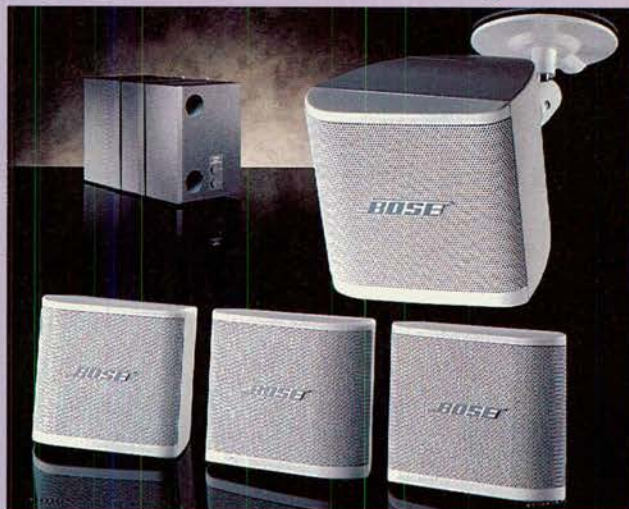
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## PCM on the planet

Perth Japanese owned studio goes 48 track Digital



**BANDS** like out of town recording facilities: the pressure's off and the relaxed approach to

arduously long day & night sessions shows in the albums.

But when a Japanese recording outfit decides to buy a studio in Perth, people in the biz notice!

Planet Sound Studios were around for ten years when A-Z started recording there, eventually doing 18 albums - then buying the company! Engineer John Villani says that while Japanese studios are brilliant, but unless a Westerner does the mix, it has a 'sameness'.

A-Z then took the decision to buy Sony's DASH 48 channel PCM-3348 digital recorder - liking the way it 'runs' - and things like digital dumping, and being able to shift tracks in the digital domain.

The PCM 3348 incorporates time



code (SMPTE/EBU) so film people like it. According to Planet, business is great!

## Def Drawmer

The 1960 model vacuum tube compressor from Drawmer has converted Def Leppard, according to soundman Robert Schovill. Aside from the example used at FOH, bass player Rick Savage also uses one - for warmer, more alive sounds. Both channels comprise a tube compressor and pre-amp, feeding an electronically balanced output stage for +26dBm output.

The Drawmer 1960 has plenty of features, to find out more: phone Amber Technology: (02) 975-1211.



## INNOVATIONS

### Aussie XLR reborn for export

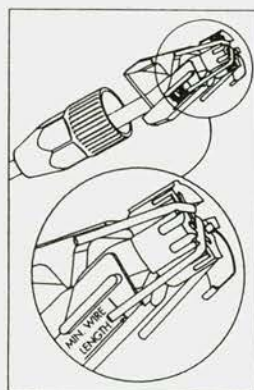
New Alcatel 'Canon' is a SOLDERLESS time saver

The new AC Audio Connector from Alcatel uses a device called an 'Insulation Displacement Contact' (IDC) rather than solder - and it works! The new process eliminates soldering and results in substantial time savings in wiring these 3 pin XLR style connectors.

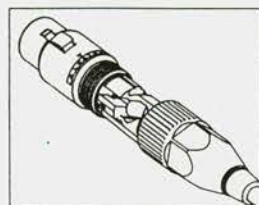
Provided you use decent shielded cable no larger than 6mm in diameter, the AC is for you - and if you do need a thicker cable you can opt for a conventional, solder terminated version as well. This would be typical where speaker cable connection is required, but in this case the trend is towards the Neutrik Speakon.

The male connector - AC3MI to you - comes with a BLUE internal 'jaws' assembly, while the female - AC3FI - has a PINK one. The 'JAWS' is the heart of this product, it holds and supports the outer jacket and the individual conductors firmly inside the connector shell.

Connections have wired the new connector, and can report the process is fast and simple. You only strip the outer layer of your cable, exposing the shield. There is no need to strip the internal conductors, these are simply folded back into their guidetracks. The earth shield is twisted and clipped into place. Then you insert the 'JAWS' cable clamp into the shell - and tighten the cable



Easier than it looks!



clamp. This needs to be tight - a tool is available that will tighten this in one action, for assembly line situations. Otherwise a small shifter is recommended.

Your AC connector is thus wired, and may be field re-wired at any time, without a soldering iron! 85% of the AC range will be exported, say Alcatel.

Call them: (03) 555-1566.

CIRCLE 109 ON SERVICE CARD

## Stage Pyrotechnics Course

**LIGHTMOVES** in Sydney will again stage their Pyrotechnics Training Course, run by Keiran Usher - a freelance pyrotechnician. The next course is on Monday 19th April, and is limited to 25 people.

Lightmoves' Jonathan Ciddorsaid safety is paramount, thus the number limitation. Lightmoves are distributors for LeMaitre, who make

a range of cartridge type bangs, pops, fizzles, flashes and all such things of a firework nature. At these training courses you get 'the drill' on legal aspects of using these effects, and in this day and age knowledge is important. For Sydney bookings, call Christine Ellis on (02) 560-0000. Other courses in other states due soon. Call 008-807-805 for details.

## HOW

The RIGHT way to focus

Focussing is the most important part of the whole lighting operation. If you stand with your back to the light that you are focussing, (1) you'll avoid being blinded, (2) You'll be able to see what the actor's light is doing to the scenery.

If you're shorter than the actors, put your hand over your head and look for its shadow.



FROM 'THE STRANDBOOK', Courtesy Bytecraft.

## Counterfeit Motorola Claim

A Sydney electronics technician claims Motorola MJ15003 and MJ15004 power transistors have been counterfeited and dumped on a variety of resellers and retailers.

The genuine article has a breakdown voltage over 250v, while the fake can't handle 100v. Our operative suggests buying only from authorised Motorola outlets.

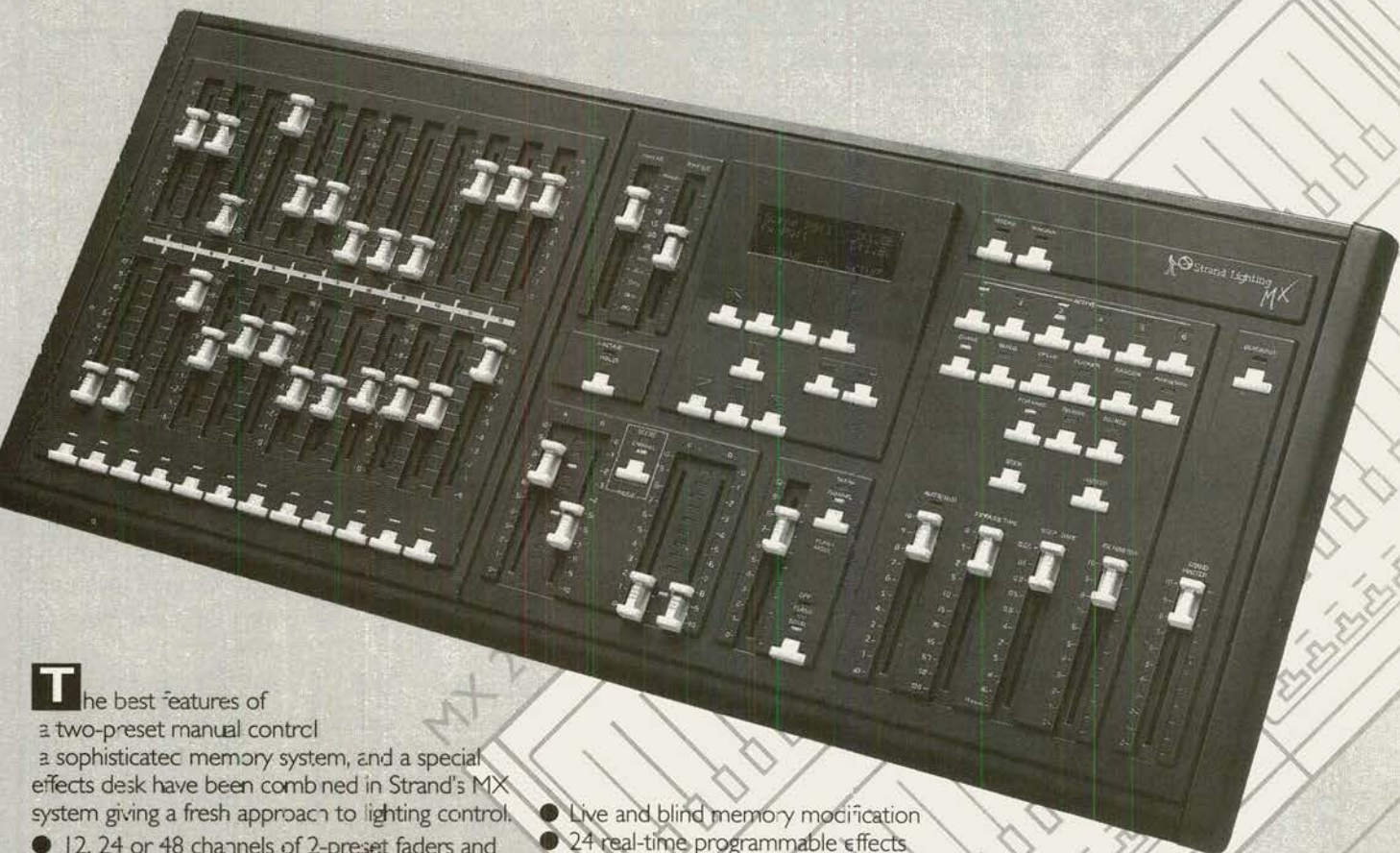


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# MX



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# KLARK TEKNIK

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# AUX 2

**Famous.** The ears pricked up while listening to Sydney's top rating breakfast DJ, Doug Mulray. Promotor Paul Dainty was on the line raving about Paul McCartney, and in particular the new sound system. "Eric got a new one then?" Dougie asked, referring of course to Jands' Eric Robinson. Dainty demurred of course- the PA was imported for the tour from Showco.

Tom Jones, when asked what happened to all the panties turfed up onto the stage, said: 'I think the band eat them!' We knew this.

**Brisbane's Musicians Pro Shop** has a new MIDI/Hi Tech expert, Russell 'Humphrie Bear' Stork.

Australian Monitor have a new General Manager, David Hay.

**Australis, the Akai & Peavey importers, have promoted Danny Dun to Digital Manager. He is in Japan as we go to press.**

Some time Divinyls manager Andrew McMannus was in the news in March, having apparently taken his (former?) solicitor to court. It seems the hapless legal person was allegedly naughty, and supposedly didn't properly defend McMannus (or failed to act on instructions) against an action that eventually resulted in a bankruptcy motion. The saga began with a failed restaur-

rant venture, where a major audio firm sued for work unpaid of about \$9,000 plus costs. The matter blew into a settlement of \$13,000 outside the court, with the solicitor now being pursued for at least this much.

**Andy Laidler, a Jands PA Engineer, revisited the scene of much angst in March. Last time he was at Grafton Services Club his Maglite had an accident, when a pissed punter fell onto it. The scene was just after a Diesel show, and followed an ugly incident outside the dressing room involving several of the aforementioned drinkers, and several less crew. The gig with Barnes in March proved calm, without re-visitation from the punter/s concerned. Andy's Maglite was relieved! He's got a big one.....**

Bob Johnson in Mt. Gambier, with Duncan McHale of Quintrix, have compiled this (useful?) list of names for their next band. (*Heard this at kindy.* -Ed) Sax: Slips Alickin, Trumpet: Willie Makeit, Trombone: Ben Slide, Piano: The Loneliest Girl In The World, Guitar: Ben Chords, Bass: Buster Gut, Drummer: Half A. Beatlate, Promotor: Willie Pay, Girlfriend: Bettie Wont, Roadie: Humphrie Cases. Must have been a good flagon, guys. Bob is, apparently, thinking of departing Mt. Gambier, Might have something to do with his joke prowess, perhaps?

**SEND GOSSIP.** Confidences respected.  
Fax to (02) 876-5715, or call (02) 876-2612.

## Tradeshaw Dates

NSCA, Orlando, APRIL 2 - 4. CO  
NAB, Las Vegas, APRIL 19 - 22. IT  
APRS, London, JUNE 23, 25. PA

**Pro Audio & Lighting, Singapore, JULY 7 - 9**  
Summer NAMM, Nashville, July 17 - 18. MI  
**AES, Melbourne, AUGUST 24 - 26. PA**

**Australian International Music Show, Sydney, SEPTEMBER 9 - 12. MI**  
PLASA, London, SEPTEMBER 12 - 15. LX, PA  
AES, New York, OCTOBER 7 - 10. PA  
SMPTE, Los Angeles, OCT 30 - NOV 2. IT  
LDI '93, Orlando, NOVEMBER 13 - 15. LX  
COMDEX, Las Vegas, NOVEMBER 15 - 19.  
NAMM, Anaheim L.A., JANUARY 21 - 24 1994

**Descriptions used: (E. & O.E.)**

**CO:** Contracting. **IT:** Information Technology.

**MI:** Music Industry. **LX:** Lighting. **TH:** Theatre. **PA:** Professional Audio.

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CIRCLE 145 ON READER SERVICE CARD

## Fan Mail

I would just like to say how much I enjoy Connections. I'm currently doing a bit of home studio work in my home studio (24 channel desk, 8 track recorder, etc) and find the magazine great for keeping up with new products and helpful hints. It is a pity the subscription rate has risen from \$9.90 (for Channels) to \$29.50, but it is still the best value magazine of it's kind around.

I congratulate the magazine on its reader service card as well as the free listings for stolen goods. Both are very handy for a lot of people. The JBL Sound Reference Manual each issue is very useful.

The social pages seem like a waste of time to me, but perhaps you find them necessary.

Anyway, the new Connections is looking good. I look forward to my next issue!

S. Lewis, Mt. Waverley VIC.

## Facts set straight

### 1. Re: Golden Scan 3, and the secrecy of the LAVA advertisement:

For your information an advertisement for the Golden Scan 3 appeared in the following magazines: L & SI, February, and Disco Club Int, Feb 93. Both these magazines arrived in Australia before the supposed release date of March 1st, also I've been told the Golden Scan 3 was shown at the recent SIEL show.

So much for the supposed strict embargo on information and the product being cloaked in secrecy.

### 2. The Lightmoves Teatro advertisement in the last two issues states: "The Diluvio range is the only modular system of Floodlights available today".

This statement is untrue due to the following facts: Coemar offers the Sequenza range of floodlights, which are also modular - and in fact, this is the same fixture as the Diluvio. Something you may not be aware of, is that Coemar manufactures all of the Teatro range. Many of the fixtures in both ranges are identical. Also DeSisti manufacture a Groundrow range, Duccio, which can be hinged together to make up any number of a compartment fixture and a Cyclorama range - Giotto.

-Peter Kemp, Coemar DeSisti Australia, Vic.

## Neutral Fidelity

Thank you for your story about the ATC SCM-10 (March '93). I would however, like to make the following points regarding your comment that "if you build a speaker system that produced a dead flat sound it would sound horrid."

It is the aim of ATC to design loudspeakers that are as close as possible to achieving a neutral fidelity. That is, they will not have a particular characteristic or signature, but will conform to quite rigid engineering criteria defining performance.

This means that we require a flat amplitude response with broad and even dispersion with frequency so that both the direct and reverberant sounds are correct. By using soft, heavily damped diaphragms we achieve excellent control of time domain and intermodulation distortion thus ensuring rapid and even energy decay. Harmonic distortion is minimised by the use of a short coil in a long magnetic field and all ATC systems have drive units with large diameter voice coils operating in very large magnets to ensure sufficient dynamic range. Even the baby SCM10 is capable of producing 103dB continuously at 1M, which is the same as many large three way systems.

So when you get to the SCM100A it will go to 10dB louder continuously than any other direct radiation monitor system - and at a maximum continuous S.P.L. of 115dB at 1M is as loud as many horn loaded designs - but without the distortions.

A speaker system which conforms to the above criteria may be said to "produce a dead flat sound" but you can be assured that it will also allow you to hear precisely what you have put to tape with nothing added or taken away.

ATC is different from the rest because we base what we do on scientific fact and not hype or fashion.

-Billy Woodman, ATC Acoustic Engineers, U.K.

*I love you Billy, but like all manufacturers, you are a slave to specifications. I discovered years ago that flat sound = boring, and since then started to notice most speaker systems are way from flat, if for no other reason that that it's very hard to get flat response. I say the best way to buy is through listening, & am sure your monitors are great. But specifications! As you point out, 115dB at 1M is as loud as a PA. Now THAT confuses the punters! -JG*

## Contractors Skills

Julius Graftons comments on the contracting markets unwillingness to allocate adequate funds for sound system installations ("*Australia spends less on installs*", Feb. 93) highlight a problem that should concern all in the market. However, I don't believe that Julius' assessment that we "have a cultural problem...where we don't like spending money on technology" to be the real cause.

Our home entertainment market has many instances where consumer acceptance of new technology, usually at greater prices, has been quicker than other countries. Our VCR penetration per capita is one of the highest in the world as was our acceptance of Compact Disc when released in the early '80's.

I believe our problem with low prices commercial install's is a direct result of a complete lack of understanding of basic sales or marketing skills. Thus, whenever they encounter a competitive bid, they revert to price cutting as their only known technique to close the deal. Unfortunately, in many instances, the easiest way to reduce cost is to use inferior or unsuitable products that compromise performance or reliability.

A long-term result of this action is that the markets "perceived" value of a commercial sound system and its capabilities is far lower than it should be, and that contractors, who elect to design performance based systems are having to battle considerable price objections on most occasions.

Our contracting industry must acknowledge the need for sales and marketing expertise to go hand in hand with technical competency. They must learn the skills to justify their price and to sell themselves and their services rather than slashing the price at the first objection.

If we can achieve a higher standard of professionalism, it won't take long to re-educate our market.

-Peter James, Bose (Sales) W.A.



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# EDITORIAL

I've got mixed feelings about Editorials - sometimes they become really unreadable and boring. Tell me if this ever does, and I'll consign the concept to the patchbay of history.

## SEXISM

Well I had it coming to me. Poor Dolly Roadbox was only really trying to inject some fun into these pages, and now she is no more. Our Reader Survey last issue made mention of 'sexism' as an unwanted feature of the magazine - and in broad terms I couldn't agree more. Because it was all my idea, I protest that while we may have been slightly guilty of sex exploitation, where attractive male and female forms were exhibited for literary gain - we have never practised overt sexism. I think maybe the letter to Dolly last issue was beyond the pale.....

Sexism in my mind is where a gender is excluded from an occupation or task by a member of the opposite gender, like where a woman is told she can't work on a sound crew because she is a woman. This sort of sexism is rampant through the entertainment industry, but most true professionals are above it.

## TRENDS

Because this magazine is irrevocably linked to the fiscal wellbeing of the entertainment industry, it is great to see the economic recovery continuing unabated in our trade. Like it or not the return to a Labour government augers well for the performing arts, the sector of our market less happy are those engaged in the very difficult area of musical retail. They would have enjoyed a once only windfall of a cash refund for the sales tax component of their stock, had the GST been implemented.

Beyond that day, some 18 months away had the political pendulum swung in favour of it, lay the uncertainty of a new way of doing business. Now we can get on doing what we know best, without 'winners and losers'. Remember the recession of 1982- 1983? It hardly touched the entertainment industry, and this one wouldn't have either, except we were all so revved up and geared up due to the ridiculous excesses of the late 1980's.

I remember well, because I was on that crazy train to ruin too - and started to think it was normal practice to borrow another \$150,000 to expand the family business, without real thought of downturn. I recall the crazy days of having four bank managers call on us to try to woo us over to their particular bank - and the winner being the one who offered the largest loan facility!

Having survived, and noticing most other players from the era survived too, I think our trade can now average good with bad over a ten year period to see a truer picture of the size of the business downunder.

## PUBLISHING

Anyone thinking of starting a magazine catering to a tiny niche market (like ours) should be very careful with the numbers. As we go to press, our competition of sorts, Sonics, is rumoured to have halved it's frequency - down to 6 issues per year. While it's not sporting to talk about it here, it leaves me to wonder about the viability of a lot of magazines catering to different markets - because we here at Connections would like to assure you this magazine is NOT a river of gold. Rather it is a very delicate balance between loss, break even, and profit each issue - and the jury is out until at least the first year is over. The costs are just staggering - not the least the rude slug Australia Post extracts each month.

-Julius Grafton.

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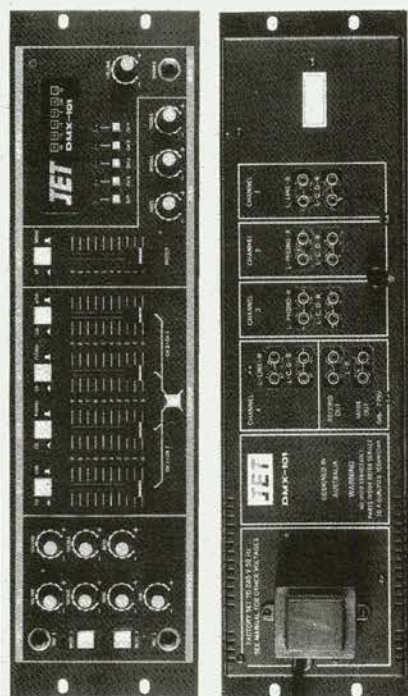
CIRCLE 113 ON READER SERVICECARD

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CIRCLE 132 ON SERVICE CARD

# Sweating



**If anyone has touring down to an art form, it's the Jimmy Barnes Organisation. Julius Grafton profiles a day on the road**

It's 10 minutes to showtime on a wet March night in Grafton, the town I claim my forebearers established beside the Clarence River in another time. Jimmy Barnes and his band are into the latter phase of warmups in a dressing room full of adornments and air thick with incense. Amongst the candles and beneath wall posters of Jimi Hendrix and The Rolling Stones, the touring stereo system belts out the FOH break tape, from a matrix feed out of the Yamaha PM-3000 house mixing console. I'm loading my camera when the very fierce and shaven looking Gary Petterson looms over me. Jimmy Barnes' fitness & security minder wants me out of there - but when he opens his mouth it's all goodwill and politeness, which is sometimes the way with these people who have 'the look' that terrifies babies - and journalists.

A month into this tour and the participants are all looking fresh, not at all suffering road fever, despite the previous gig being Adelaide, and just 48 hours earlier. This is due the plan hatched by tour manager 'Sneaky' Pete McFee, who has figured it costs X to hire & fuel 3 Tarrago's, but if you spend X and a little bit, you can afford to charter a 9 seat Piper Navajo and fly your crew to each gig. This is working really well in terms of delivering a refreshed crew to this northern NSW town, flying in from a Sydney layover. By contrast the support act's crew drove a van the 24 hour leg from Adelaide and arrived looking like dog meat.

This tour is a five week run with four major shows added in, each on a Saturday night. The plan with Jimmy Barnes is to work three days, have a day off, then work 2 days with a day off - so the scheduling allows that each Friday is a set-up day for a larger outdoors type show. The first of these was at the International Raceway in Wagga, followed by the football oval at Torquay (near Geelong), then Fisherman's Wharf on the Gold Coast for the Indy Car Race. The finale was the huge show at Eastern Creek Raceway, held on the same basic stage erection as the Guns & Roses Concert earlier this year.

How it all works is straightforward. Sneaky sat down in February and figured out what he needed for a run of pubs, clubs and outdoor concerts. Clearly the outdoor concerts would require supplementary production, so this could be trucked in for each of these shows and added onto the base touring rig. In previous years scheduling had been such that a tour might need to

# For Mr. BARNES

road  
story

truck a larger system everywhere to cater to a few larger shows, but this time out one 40' semi load was the logical limit for the base system.

At Crafton the semi was sitting ready outside the Services' club at lunch-time, driver 'Triple' Bob had made the trip over from the far South in legal time, with a sleep at Gilgandra. His 425hp Cat powered Ford LTL9000 belongs to John Cline, the Mr Big of the Entertainment trucking biz, with 15 other almost identical prime movers and 30 air-ride trailers. Cline is a subcontractor to Showfreight who have the contract for this tour. Understand the setup?

**2.00PM:** With a loadin scheduled for 2pm, eight loaders assemble while Triple Bob unlocks the pan. Sneaky and Co. are not in sight, but Bob's mobile phone brings the news the Charter has stopped in Coffs Harbour for Avgas, not available at Crafton Airport. The command is given for the lights to be unloaded only, and when you see the chaos of un-organised roadcases inside the gig it becomes apparent why. The eight (average) local loaders manage to almost impress me by not dropping almost anything except ... the packer covered in vomit. I suppose it's a natural instinct to let go instinctively when your nose latches onto that aroma just as your hand encounters that tell-tale sticky patch ....!

A nice lady emerges from the club and informs one of the loaders, Big Mick that 'the sandwiches and coffee are ready for you'. Fatal mistake.

**2.45PM:** Support act, Kings Of The Sun's crew arrive, stage technician Andy Jay taken control of the eight locals and gets the next third of the pan unloaded, which is an endless amount of stage gear. Triple Bob and I sit on the roll of stage carpet and talk road stories like a pair of old farts.

**3.10PM:** The Thrifty Coaster screams around the corner from the airstrip, 16k out of town, and the nine Barnes crew pile out. Sneaky races inside to the catering corner where he discovers lunch has been devoured by the locals, 24 mixed sandwiches are missing, leaving only a few sprigs of parsley. It's like a locust plague has swept all beneath it, leaving bare stalks in the hot sun! Sneaky informs the loaders they have eaten his lunch. They look innocently at each other, and at the roof. Sneaky sends out for six buckets of KFC, 2 tubs of gravy and fries.

**3.15PM:** Lighting Director, Designer and Operator (LD for short) Jeff Pavey has the back bars hung with 16 Raylights. Scrollers are added, cables are run. Back bars or trusses are always first, to make room for backline.

**3.25PM:** The food arrives, the loadin continues, with quaff and trough on the run. Over on the far side from the door, sound engineer Paul Sherrit directs four loaders and his system engineer Andy Laidler in stacking the JBL Modular P.A., a four way horn loaded system designed by Jands for tours like this. Craig Burridge supervises loaders in assembling his foldback area directly behind the growing PA stack.

**3.40PM:** Ross Ferguson -'Fergie', the drum tech, assembles the drum riser, while guitar tech Dave Edwards supervises assembly of the stage extension. Barnes' crew carry a pile of 8 x 3 risers of various heights, which in this case



Craig Burridge, Monitors



Paul Sherrit, Front Of House



'Triple' Bob, (so named "Because I used to stutter a lot!") outside, while the sandwich stealing local loaders contemplate 19 tonnes of gear on a hot day. Triple doesn't have to load, his gig is to drive and arrive. A true professional!

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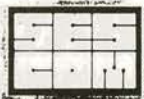


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Caroline Grafton goes behind the scenes to observe .....

# A Day In The Life Of Metropolis Studio's

**T**uesday morning, 8.00am, the night receptionist Nikki Gillman has clocked off and Katrina, the day receptionist, logs on ready for a day of hundreds of phone calls in and out of Metropolis. There isn't one gig at Metropolis that anyone could describe as 9 to 5. There is always something going down whether in one of the six studios, the OB Truck, distribution or special projects. If something needs doing you do it, and you don't quit the day until it's done.

Metropolis operates 24 hours a day, seven days a week, offering facilities to suit just about everyone's needs, from a first time demo at a reasonable overnight rate, to the creme de la creme of the advertising and music industries. The feel is intense, but friendly, and the loyalty of the staff, freelancers and even clientele is obvious.

Metropolis was originally part of the Armstrong Audio Visual group owned by Bill Armstrong, changing hands to Ernie Rose and Ian "Mack" McKenzie in 1987. These two guys love their work and share ideals that have made the partnership work. Neither one spends much time in the studios any more, both agree they have to give the young guys a go, and Ernie is enjoying spending more time with his family. But committed to quality they both are.

Kerri Minchin, Music Studio Manager since December 1992 has worked with Mack and Ernie for nine years in various capacities and started working at the Met in 1987. Extremely competent and attractive, Kerri is a fine example of the quality demanded at Metropolis. While I was at there, she took the traditional bookings, conversed with various reps and artists, made every engineer and producer (and journalist) feel like they had her undivided

attention, kept track of gear that might have to sub-hired for a particular client, and even had to sort out a situation of a drummer without a kit (maybe those jokes are true!!!). All with a smile, a hug and professionalism.

Kath Momsen, Voice Over Studio Manager, Talent and Casting Booker has been in the business for 14 years and with Metropolis for 10 of those. She really knows her stuff. So much so, that she even has other studios and ad agencies ringing for advice although they are not using the Metrop's facilities. An average day see's Kath handle over 120 phone calls, do

*Metropolis is not just a studio. Outside projects include designing Voice Communication equipment for Government, also design and studio construction in South East Asia.*

the talent and cast bookings, organise radio station dubs and book landlines, as Metropolis has the facility to link to other studios all over the country. This has a remarkable cost saving benefit for a lot of clients, as they don't have to fly various people round the country for a particular session. Kath has a dazzling smile, an infectious laugh and an amazing ability to organize a sometimes impossible situation. She also has the unenviable position of having a male counterpart in politics so with the current Federal Elections in full swing, she is nearing the point of exhaustion, but that smile still continually breaks through.

Metropolis is not just a studio. During the hard economic times of recent years diversity

has become a key word for all involved in the day to day running of this business. Outside projects include designing Voice Communication equipment for various Commonwealth departments, design and studio construction in South East Asia and installation of a variety of custom built equipment in Studios and other ventures.

Obviously, all this diversity can make for a pretty hectic day, but I personally didn't witness anyone lose the plot. Kerri assures me it does happen.

Anyway after all the introductions it's about 10.00am, Ron Tudor MBE and Mack's mentor has breezed through made a few pertinent comments about administration and esoterics and vanished before I had a chance to tackle him. For anyone who doesn't know, Ron is kind of the father of the Australian recording industry, and to have such a wealth of knowledge casually cruising through your studio and offering advice is a major compliment.

10.15 am: In the meantime, Karl Moeller has continued to file all the tape dubbings, all

Ron Tudor "Mentor"



Kerri Minchin

registered on a PC before being laid to rest. Karl has the responsibility of keeping track of thousands of items as well as assisting in the Machine Room.

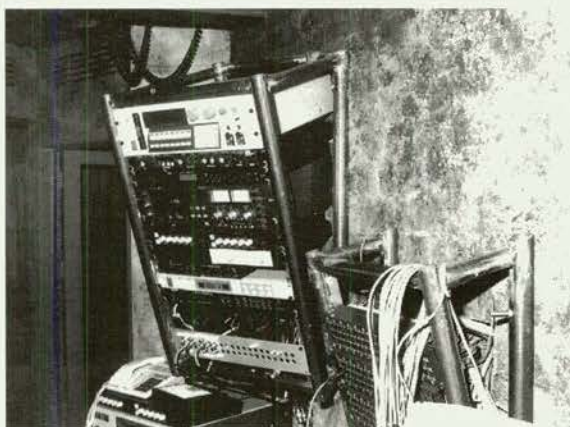
10.30 am: Greg O'Shea is performing a dual role working in the Machine Room and also appearing in Studio 1 to assist the assistant engineer for the day, Matt Thomas, in setting up for a session.

11.30 am: Studio 1 is still being set up for a session to track songs for an album, with Richard Pleasance, engineered by Doug Roberts. Matt has worked with Doug a fair bit so he's predicting what mics and effects will probably be required, as well as a few tricks of his own he's been wanting to try out. He tries to allow Doug as many options as possible.

.....Oops, a channels down on the SSL console and while Matts racking the PX, Mark Armstrong (in-house tech and general genius according to everyone at Metrop) calmly walks in, removes the offending module, solves the problem, screws the module back in and departs. In the studio Matt's madly gaffing two mics together for an effect he's been hoping to try, the acoustic screens are being rolled into various positions, the mysterious drumkit is

slowly coming together and miked up as well as the rest of the gear. Typically, a setup for an album session will take from 2-4 hours including miking and racking.

12.30 pm: Making my way to the Post Hole for a pretty amusing voice over session for a sports footwear store, I bumped into Sam See (Visard's MD and jingle writer extraordinaire) and various other people, all of whom look like they are at home laughing and acting generally like crazy people. In the Post Hole with engineer Rodney Lowe and the ad directors



In 'The Post Hole' - trendoid rack design!

and producers, the efficiency of the Fairlight proves itself yet again. The Post Hole is not cheap, \$250.00 per hour in fact, but with the speed and ease of the operation/operator it is pretty well permanently booked. According to the clients I talked to it's worth it. For a 30 sec ad with approximately 15 seconds of voice over it took about 15 takes and the Fairlight allows these to be cut together with a speed that is dazzling.

1.30 pm: Studio 5 is booked out to freelance producer/engineer Brian Lawrence for an advert voice over, assisted by freelancer Ceri

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## A Day At Metropolis

(continued)

(pronounced Kerry) Davies. This is bread and butter work for Lawrence, who has quite a remarkable track record in AV crescendoed with the World Expo in Spain 1992, designing and building, with Mack writing the software, a unique Multi-Channel Surround Sound AV System. Ceri equally has earned the respect of everyone at Metrop, taking whatever work she can get and doing her gig well. She also sent herself to the States to do work experience for Lucas Films at Skywalker Ranch, working on



Ceri Davies, freelancer at work

The Simpsons and the latest Muppet movie, finding for herself an education at her own expense. A lot of guts and I wish her all the best with her chosen career.

2.00 pm: Mack and Ernie drag me out the front door to meet Michael Wickow, a freelancer who operates the Metropolis OB Studio and acts as Systems Engineer when required. We are off to the MCG for a pre-production meeting with Howard Page and the Paul McCartney Crew. Michael will be supervising the OB recording for the Oz leg at Parramatta Stadium in Sydney. There are 72 channels being used live, and only 48 channels on board the OB, so the decision is made to get the new PM4000 console from Yamaha to handle the extra inputs (weighing 3/4 of a ton, this also means they will need 8 guys to get it in the mobile). Michael and Ernie have worked together for many years and have an affiliation for how the job should be done. Easy it won't be, as McCartney changes performance format at regular intervals throughout the show, but these guys are doing their homework, so I at least have no doubts.

4.00 pm: Back at the Metrop, Freelance Engineer/Producer Tony Cohen is operating in

Studio 3. Tony's working on the final day of mixing for The Cruel Sea, the budget's spent and it's GOT to be finished. It will have taken 9 days in total for the mixing. Yes, there is a little tension under the disguise of incense but the upbibe Tony, foot tapping the whole time, is struggling to completion. Some band members are sitting in and there are a few visitors and I've got no idea how he holds his concentration. He has a few problems with some outboard gear but exchanging leads solves that



Ian "Mack" McKenzie, Kerri Minchin & Ernie Rose

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Katrina the receptionist



Kath Momson



Matt Thomas & Karl Moeller



Mark Armstrong (left) and Ernie Rose in the service area.

situation. It's sounding good.

5.00 pm: And I've got to get to the airport. Shake hands, a few hugs, many thanks and shouts of goodbye and I'm gone.

Writing this 12 hours later, I kinda' miss it. No-one could possibly cover every aspect of all seven studios in one day but I hope I've given the reader a small insight into this remarkable facility.

### Metropolis Audio

180 Bank Street, South Melbourne Victoria.  
Ph:(03) 696-2111, Fax: (03) 696-2895

# MET GEAR

### Studio One

24/48 Track (by arrangement)  
**Console**- SSL 6000E Series (40 in 32 out) **Tape Machines**-Choice of Sony PCM 3324 digital, Sony MCI JH24, and others. **Monitoring**- Sierra-Eastlake design with JBL components, Auratone, Yamaha NS 10, Tannoy **Instruments**- Yamaha 9ft Grand Piano, drums. **Other Features**- Multi Machine Audio/Video Synchroniser, Dolby on request.

### Studio Two

24/48 Track (by arrangement)  
**Console**- Harrison 3232 with Automation **Tape Machines**-Choice of Sony PCM 3324 digital, Sony MCI JH24, and others. **Monitoring**- Sierra-Eastlake design with JBL components, Auratone, Yamaha NS 10, Tannoy **Instruments**- Steinway 6ft Grand Piano, drums. **Other Features**- Multi Machine Audio/Video Synchroniser, Dolby on request.

### Studio Three

24/48 Track (by arrangement)  
**Console**- SSL 6000E Series (48 in 32 cut) **Studio Size**- Overdub Booth **Tape Machines**-Choice of Sony PCM 3324 digital, Sony MCI JH24 & others. **Monitoring**- System A (Medium Level Full Spectrum) Tri-amplified, time aligned and phase coherent monitoring. System B (Hi Level Full Spectrum) bi-amplified, time aligned and phase coherent monitoring using JBL Bi radial flares. Near field monitoring: Yamaha NS10 **Instruments**- Yamaha 9ft Grand Piano. Percussion Kit, **Other Features**- Multi Machine Audio/Video Synchroniser, Dolby on request.

### Studio Four

Voice Production/Sweetening Studio 24 Track  
**Console**- Neotek Elan, 24 Mono/8 Stereo inputs **Tape Machines**-Choice of Otari MTR 90, Sony MCI JH24, Sony APR 5003 1/4" CTTC 2 Track, **Monitoring**-Auratone, Yamaha NS10, Tannoy **Other Features**- Multi Machine Audio/Video Synchroniser, Sony Profeel monitor, Facility to have 1" Sony 2000, Sony D2 & SP Beta online.

### Studio Five

Voice Production/Sweetening Studio 24 Track  
**Console**- 3224 Harrison **Tape Machines**-Choice of Otari MTR 90, Sony MCI JH24, Sony APR 5003 1/4" CTTC 2 Track, **Monitoring**-Auratone, Yamaha NS10, Tannoy **Other Features**- Multi Machine Audio/Video Synchroniser, Sony Profeel monitor.

### The Post Hole

**Digital Workstation**- Fairlight III MFX  
**Console**- Series 40 Soundworkshop with Automation **Studio Size**- Voice over booth **Tape Machines**- ATR 100, Sony 5003 CTTC 2 Track **Monitoring**-JBL 4206 **Other Features**- Vidicon TSCI video projection, Sony 9800 Hi-band SP U-matic, Sony PVM 2130QM Monitors.

### SFX Suite

**Console**- Yamaha FM2408 (24 in to 8 out) **Studio Size**- Voice over booth. **Tape Machines**-ATR 100, Sony 5003 1/4" CTTC 2 Track **Monitoring**- Yamaha NS 40 **Comments**- Extensive selection of music and FX from all over the world from CDs including KPM, Bruton, Castle, Cavendish, Music House, ATMOS to name a few, 1/4" and records, many locally recorded sounds on 1/4".

### O/B Van

24/48 Track (by arrangement)  
**Console**- Yamaha PM3000 - 40 input console  
**Tape Machines**- Choice of Sony PCM 3324 digital, Sony PCM 3348 digital and others. **Monitoring**- Yamaha MS40 M (Main), Auratone 5C (Secondary), 4 x Sony XS-1 (Talkback and Solo)  
**Video Monitoring**- Panasonic BT-D2000, Barco CM33, National B&W WV-5203 (3). **Other**- Sony TV Tuner VTX100EC, Yamaha AM/FM Tuner, 2 Way Radio System, Hardwire phones. **Audio/Video Connections**- 120 x Audio Inputs via 6 x 20 way Burndy's, 14 BNC Video lines, 48 Aux M/F cannon connectors. **Vehicle**- Isuzu JCR 500, turbo charged, weight 12,000k, Length 28.8ft, Height 12.4ft, Width 7.5ft **General**- The van has an onboard overdub booth for voice overs and for overdubbing multi-track on location.

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# MUNCHY

Bytes . . . .

Well! After praising the first mag, we came back down to earth as Julius got his revenge by missing the Munchy Bytes logo from the top of this column in the March edition. (Sorry! -Ed)

Following on from the installation of Bytecraft's State flying system at the Opera de Lyon as reported last month, this project has now entered the operator training stage and our man on the spot, Patrick Bravard, is ringing home every day just to keep his English up to scratch (if it ever was). Many of you will know Patrick as our AVAB expert (no pun intended) but he is also our European Sales Manager looking after our customers from the UK to Greece.

The Canberra Theatre has just taken delivery of their new Gemini 2+ from the Strand stable of lighting control desks. Alex Sieberas, Head Electrician for the Theatre, now has more memory than he can poke a stick at and, with an operating philosophy similar to the Galaxy in his main theatre, the Gemini was Alex's logical choice. He also has retained continuity in riggers control using the now famous (see Francis Reid's latest book) Bytecraft Felix.

The Felix riggers control can be configured for use with both Strand and AVAB control systems and can also be used directly with Bytecraft's I.D.S range of dimmers providing immediate channel control independent of other elements of the control system.

With Strand Lighting moving from strength to strength and re-establishing itself as the best and largest range of lighting equipment available in Australia, Bytecraft has been able to offer special pricing for the month of April on the Strand range of MX desks. The MX is ideal for small to medium applications, combining the advantages of manual and memory operation, broad dimmer compatibility through a variety of analogue and digital outputs and, at the special April prices, offering the best value, possibly anywhere in the world, all you have to do is find the ad on Page 11 and ring Bytecraft to find your nearest reseller.

The upgrade to Chris Luscombe's Bytecraft Atriplex installation is near complete. Featuring Bytecraft I.D.S Professional Series dimmers, Chris proudly has one of the best dimmer rooms in the country. Over the coming months, we'll try to bring you a few inside pics from some of our great venues.

We promised that we would give you all the good oil on this year's Siel exhibition in France. Unfortunately, space and time has got the better of us this month but stay tuned, watch this space.

**BYTECRAFT** are the Strand agents for Australia, and also manufacture lighting control equipment. Call them: 03- 580-7690

# HIRE BIZ BUZZ

## Spending, spending....

The nations hire firms continue to re-equip, with Midas XL-3 consoles apparently the flavour of the month. Aside from **Jands Production Services** adding a second of these versatile 40 channel consoles, **Troy Balance** and **Sound On Stage** are both thought to be ready to buy - once each disposes of a PM-3000. The used PM 3000 market is heavy going at present, \$35,000 is the going price for a 40 channel example in good condition, this is comparable with the US \$22,000 average currently being obtained.

## Spending, spending # 2

Aside from the second XL3, Jands Production Services added a PM-4000 (their second), several MC-II foldback desks, and a Soundcraft Venue console in this survey period. A system driven by a Yamaha D2040 digital PA processor was also spotted at a George Benson show at Sydney's Hilton Hotel.

## Perth Prison Bog

**Mitey Lighting's** Bob Longwood was down South doing the W.A. Ballet at Yallingup, when a late call came through for a gig at Fremantle Prison. The Mitey Mobile Stage and 100 lights were duly despatched, crew were very hard to find as Bindoon and several tours being on at the same time.

Out at the rest home, the truck needed to be ramped over a small wall, which of course broke, then driven over a grassed area to be positioned. Of course it got bogged. The tractor called to get the truck out got bogged too. An 8 tonne crane was called to extract the truck, it couldn't. A second crane was called, which subsequently fell into an old well. (Bob is obviously making all this up. -Ed) **BUT THE GIG HAPPENED!**

## New Mitey Address

**Mitey Lighting's** is now at 184 Roe Street Perth, new phone: (09) 227-9009, new FAX: (09) 227-1902.

## McCartney Departs

After two outdoor shows at Sydney's Parramatta Stadium, where E.P.A. restrictions forced the volume down to ridiculous levels, the sellout tour departed Australia on three Chartered Boeings for Auckland, where 80,000 punters were expected for the largest outdoor show of the run. From there, the massive Showco Prism® PA, lighting rig and all the other stuff (22 truck loads) were shipped to Hawaii. The 'Universal' (as it is known) - being the FOH mixer, effects, monitor rig and backline) flew there. The tour resumed in Hawaii, thence air lifted across to the USA, a five hour flight. We interviewed Howard 'The Legend' Page from Showco for next months issue.

## AROUND THE PLACE:

**SYDNEY: Arena Technical Services** have had the extremes of the business this month, with the Paul McCartney Tour, including New Zealand requiring lots of truss, followspots and more, with Squirt on the road. Then they also had the Senior Citizens Week gig, between March 21 and 28, where only senior crew were utilised for sound, lighting and video. No pyro though!

**CAIRNS: Fernandez Music** are out testing the theories expounded in last months' Sound Etc. column, where our resident acousticians, David Connor and Glenn Leembruggen put the question: Does Loud Music Damage Your Ears? Doug Johnstone (LD) and Phil Cadera (monitors) immediately went out with CHOIRBOYS to find out! Doug also suffered (sorry, wrong word, start again ... -Ed) Doug also SNEAKED IN a Youth Alive rally in Cairns before leaving. The touring rig has Soundcraft Spirit 24ch consoles, SR-3000 amps and Jands LX control.

Mark Williams will do 8 shows of the N.Q. version of 'Joseph & His etc etc coat' at Innisfail, the first outing for the new Peavey DPC amplifiers, with a selection of wireless through a Peavey MS 2421 console and HD1 PA system.

Then he's off to Kurramine Beach (no waves there) for an entertaining night with the 'Snake Gully Ensemble'.

**BRISBANE:** Laser Light & Sound have had production out with Ganggajang, Screaming Jets and Things of Stone & Wood - with a TAC 32ch console, System 1400 & 1200 speakers, Yamaha monitor desk, Soundpower active foldback and a complete lighting rig.

The Laser guys have also had a theatre production out this month, with a Meyer PA, Soundpower monitors and four Coemar Samurai 1200MSR moving lights. The hire team at Laser await your call - Craig Upton and Zac Harrison, (07) 846-3500, Fax (07) 846-3957.

**BLUE MOUNTAINS NSW:** Give **KA Productions** a try for small to middling PA & LX gigs. Call (063) 55-2282.

The P.A. People  
Number 1 for

JBL

# HIRE BIZ BUZZ

**BRISBANE: East Coast Lighting** had the Indy Ball with Tom Jones and his knicker eating band, where 174 Pars, 9 Selecon 1.2k zooms, 8 duets and 44 ACL's were used at Jupiters Casino. Crew-Dyke Dunning, Greg Hughes & James Kenney. 2 Arts Council Tours, with Jeff Street, Steve Brown & Grant Helg crewing, and a Bowater Conference at Hyatt Coolum (David Pfeiffer crewing) made up the month. New Selecon Performer 1200MSR followspots, and a Jands Event Plus 60ch console have been added. Call Kerrod Heiniger, (07) 252-9583.

**PERTH: Audex Concert Sound** also had Tom & The Knicker Eaters at Leeuwin Estate Winery. John St. Peeters was on too, it must have been inspiring. The marquee was 100m long, and a BIG dinner followed the show. Richard Foster, Keith (Boss) Crammond, Lionel Hoskins, Todd Pearce and Steve Brain quaffed and troughed, then loaded out the 40 TMS '3's. Audex also did the infamous Bindoon Rock Festival, with 15,000 punters, Screaming Jets, Rosie Tatts and .. Slade. Funny, must be revival month. 120 tonnes of beer were sold, that's important. Tatts - great!

**SYDNEY: PA People** did the Canberra Festival, where they were the sole sound & lighting contractor, it says here. 5 outdoor concerts, plus a food and wine frolic. Don't worry about the concerts, lead me to the frolic ...! Lights: Steve Leiter, Greg Yates, Greg (a father soon!) Kean, Terry Callagen. Sound: Chris (Boss) Dodds, Ken Dodds, Chris Pyne, George (Gorgeous) Gorga, Tony Moffat, Patrick Cronin, Andrew Winslade, Nick Eltis, Brett Galbraith, Stuart Anderson, Dave Tupper, Gary Ryan, and UNLIMITED CREWING.

PA People also had the NSW Rugby League Launch, and a Golf O.B. for Network TEN in March.

**MELBOURNE: NOVA** still have Hoodoo Curu's on the road, Greg 'Grunta' Gaunt is now audio rigger. Call Peter McCarthy (03) 555-4766

**ROCKHAMPTON: Stage & Audio** have had all manner of different shows recently, with the Blackall Country Music festival and the Bundaberg Country Music festival being two. A function known as the 'Sound Engineers Retirement Party' was system engineered by John J. Swiney, but all attending claimed they couldn't hear properly anyway. The Gladstone Harbour Festival, University Pool Party, some Theatre and a pile of touring acts made up the period. JHason & Tim Bochholz, Malcom Grant and Keith Walters worked.

**SYDNEY: A1 Audio** have the Royal Easter Show in Sydney by the proverbials, with a PA in the Colgate Theatre for the tenth year running, and a run of Hordern Pavilion shows with 24 Turbo TMS-3's, subs, Soundcraft Series Four 40ch consoles, monitors and all the bells and whistles. Call Chris Kennedy, (02) 899-9655.

**SYDNEY: Megatone** provided gear and crew for the Midnight Shift during the Gay & Lesbian Mardi Gras. LD Bill Jansen put together a system that was erected on the awning outside. 8 Roboscan PRO 218's, 2 Quattro HPM 1575, 4 Geni Megastobes and lots of fixtures from the Australian DJ Supply Co were used, along with a laser system from Black Express, and a giant searchlight from BYTECRAFT.

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# THEATRE CREW PRODUCTION GUIDE

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## NSW

**Punch me in The Stomach**, Belvoir Street (Upstairs), *Grant Davis(LD), Loretta(SM,LBO,SO)*.

**Extraordinary Encounters ....**, Belvoir Street (Downstairs), *Brian McCarty(LD,LBO,SO)*.

**Blossoms and Wrinkles/One Extra**, Belvoir Street Theare(Upstairs), *Rory Dempster(LD), Annette Dale(LBO,SM), Mic Conway(SD), Lee Williams(SO)*.

**Dead Set**, Belvoir Street (Downstairs), *Brian McCarty(LD,LBO,SO)*.

**Radiance**, Belvoir Street (Upstairs), *Fiona Johnstone(LD), Loretta Busby(SM,LB,SO)*.

**Gilgul/Company B**, Belvoir Street (Upstairs), *Robert Lehrer(LD), Barry Kosky(SD), Peter Corrigan(SSD), Loretta Busby(LBO,SO,SM)*.

**Gunjies**, Belvoir Street (Upstairs), *Mark Howett(LD), Monique Howett(LBO), Monique Howett(SD), Mark Mitchell(C), Fiona Johnston(C), Barbara Williams(C)*.

**The Old Boy**, Ensemble, *Shane Stevens(LD), Kym Newell(LBO), Judith Hoddinitt(PD), Andrew Simpson(SM), Michael Salmon*.

**The Adman**, Ensemble, *Tony Youlden(LD), Alex Holler(LBO), Ken Wilby(PD, SSD), Karen Rodgers(SM), Michael Salmon*.

**Sky/The Double bass**, Glen Street Theatre, *Peter Holden(LD), David Eedle(LBO), Richard Montgomery(LBO)*.

**Lend Me a Tenor**, Glen Street Theatre, *Mark Howett(LD), Richard Montgomery(LBO), Annette Alderson(SM), Graham Maclean(PD)*.

**Talley's Folly**, Glen Street Theatre, *Karen Norris(LD)*.

**The New Rocky Horror Show**, *Her Majesty's Theatre, David Murray(LD), Peter Ratcliffe(SD), Rob Bourmanis(C)*.

**You can't take it with you**, Kent St Theatre, *Pamela Whalan(PD), Peter Nowens(SSD), Garin Clark(SM)*.

**Isn't it romantic**, Kent St Theatre, *Michael Schell(LD), Dianne Kennedy(LBO), Neil Kennedy(SD), Wendy Hill(PD), Sarah Butler(SSD), John Foster(SM)*.

**The Perfectionist**, Marian Street Theatre, *Malcom White(LD, LD & LBO)*.

**Beauty & The Beast/Sydney Dance Co.**, The Metro Theatre, *John Rayment(LD), Don Gunn(LBO), CODA-Philip Murphy(SD), Leigh Williams(SO), Kristian Fredrikson(PD),*

*SSD), Melinda Fendrow(SM), Mathew Serenty(C), Ian Ferguson(C)*

**A flea in her ear/NIDA Theatre Co.**, NIDA, *Tony Youlden(LD), Gavan Swift(LBO), Sue Field(SSD), Phillip Serjeant(SM), Louise McRoberts(SM)*.

**Love Muscle/NIDA Theatre Co.**, NIDA, *Tony Youlden(LD), Marcus Finchan(SD), Robyn Finchan(SD,SO), Tim Kobin(SSD), Phillip Serjeant(SM)*.

**Dead Heart/NIDA Theatre Co.**, NIDA, *Tony Youlden(LD), Gavan Swift(LBO), Paul Charlier(SD), Toni Glynn(SO), Peter Cooke(SSD)*.

**Road**, NIDA, *Kate McKay(LD), Andrew Richards(LBO), Louisa Gordon(SD, SO), Genevieve Blanchette(SSD), Cathy Hastings(SM)*.

**The Grace of Mary Trevors**, NIDA, *Louise McRoberts(LD), Adrian Harris(LBO), Leonie Pixon(SO), Andrew Raymond(SSD), Sheryl Talmage(SM)*.

**Other Worlds**, NIDA, *Kate McKay, Robyn Finchan(LBO), Marcus Verrall(SD,SO), Carson Andreas(SSD), B Phillips(SM)*.

**Daylight Saving**, Q Theatre, *Chris Day(LD&LBO), Sharna Galvin(SO, SM), Jennie Tate(SSD), Nonia Summers, Paul Gluis*.

**Sley**, Q Theatre, *Peter Holdemess(LD,SSD), Chris Day(LBO,SO) Noni Summers, Paul Gluis*.

**State of bewilderment**, Riverside/ Syd Opera House, *Tim Boyd(LD), Liz Thompson(SM), Mark Wilsner(SSD)*.

**Kissing Frogs**, Seymour Centre/ Riverside, *Mark Howett, Glen Steel(BO), Stacey Stanboulides(SD)*.

**The Sleeping Beauty/Aust Ballet**, Syd. Opera House, Opera Theatre, *Bill Akers(LD), Alynn Pratt(LBO), SOH Audio(SD), Neil McGarry(SO), Hugh Colman(SSD), O'Shea(FS), N.Heman(FS), S.Jenkins(FS), J.Reynolds(FS), PDunesky(SOH light supervisor)*.

**Into the Woods/Sydney Theatre Co.**, Syd.Opera House, Drama Theatre *Roger Barratt(LD), CODA(SD), Michael Schell(LBO), John Senzok(SSD), Roger Miller(SC), Michael Bader(SM), Louise Fisher(FS), Andy Vass(FS), Moz Lockwood(SO, light super)*.

**Shirley Valentine/Peter Williams**, Syd. Opera house, Playhouse, *Jamieson Lewis (LD), John Lewis(LBO), SOH Audio(SD), Liz Warren(SO), Angus Strathie (SSD), Bernard Angell(SM)*.

**Angels in America/Syd Theatre Co.**

The Wharf Theatre, *Mark Shelton(LD), Kevin Blyth(LBO), Peter Eades(SD), Justine Thompson(SM), Barbara Durwood(SM) Brian*

**VICTORIA**

**John Utans**, Anthill At The Gasworks, *Gail Davidson(LD), Sandra Ayache(LBO, SO, SM)*.

**Remember/Auspicious Arts Prod**, Anthill At The Gasworks, *Margie Meldin(LD), Sandra Ayache(LBO, SM), Dalmazio Babare(SD), Peter Jago(SD), Hamish Ingles(SO), Jacqie Everitt(SSD), Jennifer Pryce(C)*.

**Contact**, Warragul Perf. Arts Centre, *John Comeadow(LD), Ian Fiddes(LBO, Brett Cabot(SD), Yvette Simpson(SO, SM), Brett Stewart(C) John Sezneck(PD, SSD)*.

**Vive**, Old Melbourne Gaol, *Erez Gordon(LD, SSD), Asas Gordon(LO, SO), Angela O'Donnell(SSD, SM)*.

**QUEENSLAND**

**Joseph & The Amazing...Dreamcoat**, Qld Performing Arts Centre, *Andy Bridge(LD), Hugh Carlton(LBO), Mark Leven(SD), Paul Hitchins(SO), Anneke Harrison(SM), Mike Hyde(C), Ian Blackburn(C)*.

**And a Nightingale Sang**, Qld Performing Arts Centre, *David Walters(LD), Geof Kelly(LBO), Mark Blacker(SO), Bruce Bolton(SM)*

**ACT**

**High Society**, Canberra Theatre, *Karen Norris(LD), Heikk(LBO), John Mattheson(SD), David Greasely(SO), Mare Crimpton(SM)*.

**TASMANIA**

**Aust Choreographic Ensemble**, Theatre Royal, *Angus Dneton(LD), John Comeadow(LD), Damien Fuller(LBO), Brett Cabot(SD), Sandy Campbell(SO), John Senezk(SSD), Yvette Simpson(SM)*.

**Out of order**, Theatre Royal, *Damien Fuller(LBO), Sandy Campbell(C)*.

**Strictly no balls groom/Old Nick Co.**, Theatre Royal, *Damien Fuller(LD,LBO), Craig Wellington(SD), Graeme Paine(PD), Snady Campbell(C), Hemisphere Productions(Video design)*.

**WESTERN AUSTRALIA**

**Madame Butterfly/WA Opera**, His Majesty's Theatre, *Donn Byrnes(LD), Jan Coenraats(LBO)*.

**ON TOUR**

**Death & The Maiden/ Syd theatre Co.**, On Tour, *Nigel Levings(LD), Peter Eades(SD), Brian Thompson(SSD), Julie Lester(SM), Gerard McLaughlin(C)*.

## NETAA

National Entertainment Technology Association of Australia

The March issue of "Connections" introduced the new technical association called the National Entertainment Technology Association of Australia - NETAA for short.

In the last 20 years there has been amazing growth in the entertainment industry. Not that long ago (early '70's) there was only one place to go for stage lighting - Strand. Since then at least a dozen companies have entered the Australian market in a sustained way.

Interesting figures have come from the Australian Bureau of Statistics and been collated into a publication entitled "Arburst", put out by the Australia Council. Employment in the "Arts" from 1971 to 1992 has grown at an average rate of 5.7% p.a. - as compared with total employment growth of only 2.0%. The "Arts" which includes actors and their technical support, musicians and their technical support, the film and TV industries and others, has grown at almost three times the rate when compared to the total growth in employment.

Looking at only part of the entertainment industry - theatres, it is interesting to see the growth in venues. If we look at "cultural centres" there has been a significant improvement in access. Many of the newer buildings are going up in a decentralised pattern and in the period 1972 to 1992 there has been an increase in total seating capacity of almost 470%. All this at a time when the total Australian population has grown by only 32%.

As the industry grows and involves more people, regulation increasingly pushes in on us. The industry must find ways of having its voice heard in the places that these regulations are made.

This growth also leads to diversity and there may be a case for looking to standards that, for example, help make equipment from different manufacturers more compatible. Also, as the number of people working in the entertainment industry grows, questions of training and safety are a higher priority.

This need for people in an industry to communicate with each other and to communicate as an industry with outside groups is why we have NETAA.

-Mark Carpenter, Chairman.

Call NETAA on (02) 697-4860

**Abbreviations:** Lighting Designer- LD, Sound Designer- SD, Production Designer- PD, Lighting board Operator- LBO, Sound Operator- SO, Set designer- SSD, Stage Manager- SM, Crew- C

# The Psychology of 'The Punter'

In this occasional series of readers contributions, we explore the deep, dark world of the intrepid gig-goer. Or, as Queensland reader **Kim Wilkins** discovers, *THAT* breed we all know and love ... as 'The Punter'!

Something has been of concern to me lately. The way some of the patrons act at my band's shows has me intrigued. They stage dive, they mosh, they thrust their heads in speaker cabinets cranked beyond the sonic pain threshold and request songs that the rest of the world has tired of. This is, as they say in the business, 'The Punter'.

Anyone who has ever had the dubious honour of playing in a working covers band knows what I mean. Every musician has heard the catch cry of "Play some Doors", "Do youse know Khe Sanh", or (if female, as in my case) "Show us yer tits!"

Why do these people act this way? Is it the music, the alcohol or a combination of both? Intrepidly, I set out to discover the answers.

**Dateline, 19th December, 1992**

A tall lanky youth is standing in front of the

right speaker stack, his head straining towards the music, while the force of the noise tries to drive him back. He is wearing a *Megadeth* t-shirt. I lean over during the guitar solo and tap his shoulder. "Why are you doing that? Aren't you afraid of going deaf?"

"Rock'n'roll," he replies, gracing me with an even grin.

"You'll be deaf before your thirtieth birthday. Industrial deafness is untreatable!" I remarked prudently.

His smile never wavers. "Show us yer tits."

**Dateline 20th, December, 1992**

A young bride to be, two suggestively named cocktails gurgling in her stomach, is pushed by her friends up to the stage. "Can Shazza sing a song with you guys. She's *rooly* good, and it's her hens night tonight."

I looked at Shazza who is trying to run away. "Do you want to sing?"

"No."

"Yes she does," her friends assure me, "don't you Shazza?"

"What song are you going to do?" I ask Shazza kindly.

"Khe Sanh."

God spare me. "Come on up then."

For someone who literally had to be dragged up screaming, Shazza soon finds her stage feet. She prances about like Madonna, even suggestively caressing her breasts. So what if the song is about Vietnam War... sex sells. Not that she gets any of the words right anyway... except for "the last plane out of Sydney" bit, which she sings at twice the volume.

"Did you enjoy that?" I ask her as she leaves the stage.

She throws up on my boots.

**Dateline 24th December, 1992**

(continued over)

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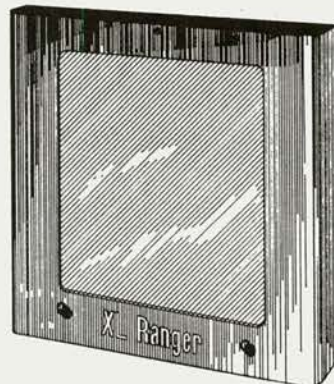


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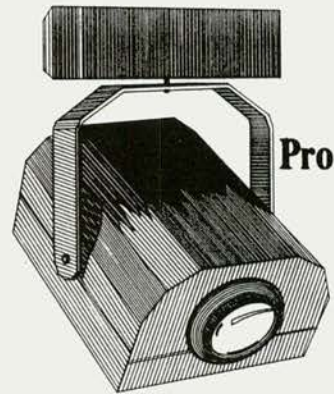


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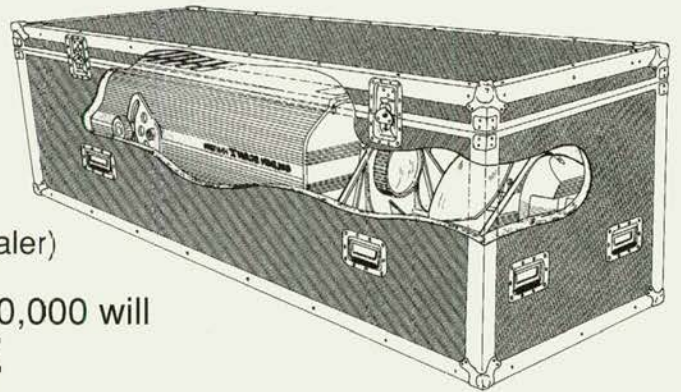
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Between brackets, a man in his mid thirties wanders up.

"I play a little guitar myself. Can I have a go?"

Words to strike terror into the guitarist's heart. It's too late, he's got my vintage Stratocaster in a head lock and I've just remembered I have no spare strings. Instantly, he's transported, or he looks like he's been transported. The eyes are closed, the lips pout, and could that be a primitive form of the blues he's playing? Yes, he seems to have really got the hang of the first three notes of the pentatonic scale. "What are you thinking about?" I ask him, eager to know of the kind of paradise he is experiencing.

"Eddie Van Halen," he replies.

He bends the strings and leans on the the tremolo arm like a man possessed and taps the neck hard enough to bruise it. When the B string snaps with a hearty "twang", he proclaims that his guitar at home is an "excellent" Magnum strat copy that he stole in 1987, and he *never* broke a string on that one.

#### Dateline 31st December, 1992

He walks up to me. Only his glazed eyes belie the fact that he is not sober. He pats my back, tells me I've got a great little band but... "You're sound guy should be shot, man. It sounds like shit out there. I used to mix for the

Angels (!) and I can tell you for a fact your guy knows nothing."

His aggressive manner does not endear him to me.

"Well," I respond, "if you're so good why aren't you working on New Year's Eve?"

He doesn't even blink. "I had a turn with the Screaming Jets, but I pulled out 'cos they weren't offering me enough money. But if you buy me a beer, I'll mix for youse."

Never argue with a punter.

#### Dateline 1 January, 1993

"Can you play 'Life is a highway'?"

"The DJ's already played it four times. Why do you want to hear it again?" I ask.

"Oh, I love that song."

"We don't play it."

"No. come on. Play it."

"We don't know it. I switch off when it comes on the radio."

"No come on. Ask the other guys. You gotta play it. It's me mate's birthday."

"Really, we don't know it."

"Do you know Khe Sanh, then?"

#### Dateline 2 January, 1993

Oddly enough, the slurring, drooling bewiskered person accosting me at the bar works for *Sony*, where he is not only the head

of A&R, but also wrote the songs on Michael Jackson's *Thriller* album.

"Really," I say. "What are you doing in this extremely small and dingy pub in Brisbane?"

"Never mind all that," he tells me, secretively. "I know enough about eighteen *trap* recording (something to do with golf, maybe?) to produce you guys. You know, youse are rooly good and everything, but I've got some advice for you....."

**Now I'm intrigued.** I've always wondered what the head of Sony would offer as career advice. "Yes?" I ask.

"Take drugs. They helps you release your creative potential."

In conclusion, friends, I worry not for the loss of their hearing, the tiny confines of their taste, for their alcoholic tendencies or even their eternal souls.

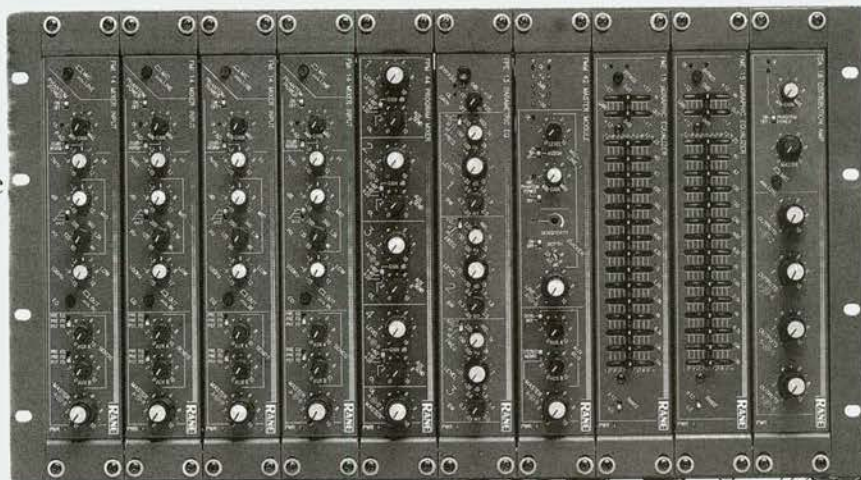
But each and every morning one of them takes up their position in an office or a factory to help run this country we live in.

And *that* worries me. ●

Readers are invited to send their contribution to this section. Mail to: PO Box 439, Epping, NSW 2121, or Fax: (02) 876-5715. A free subscription for each submission!

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PA

# Yamaha's D2040 Digital PA Processor

*Not just another black box ....  
2 in, 8 out, and everything  
from crossover, limiter to  
parametric EQ. Connections  
Editor Julius Grafton puts the  
D2040 to the test*



The D2040 is first and foremost a PA system controller, a replacement for the active crossover and system limiter of yesteryear. What it can do for you if you own one or more PA systems is very liberating indeed!

In appraising Yamaha's new wonder box, I found the mind wandering back to my various PA drive conundrums, starting with the first crossover I touched, a Jands JX4. This allowed basic PA crossover functions, and for system protection I used a DBX 160 compressor/limiter. It worked.

**WAFFLE:** Over the years the JX4 gave way to Sound Developments, Urei, and BSS crossovers, the latter with an output limiter - a primitive affair - on each of its four crossover frequencies. My favourite combination was a pair of Yamaha F1040 crossovers (which offered switchable crossover points but no gain boost) and two DBX 160's again for system limiting. Thereafter I discovered 'smart' system processing and figured a box that did everything while explaining nothing was a good idea. Having found some shortcomings there I ended up in big-time passive PA mode, by developing the F500, the first of Australian Monitor's passive full range speaker cabinets.

My basic criteria then and now is that you need system protection to save money and hassles. Second to that base need is having your chosen PA configuration sound as good as possible.

Japan has led again with a variety of develop-

ments aside from the D2040 featured here. TOA have the Saori, which is modular and considerably (32 bit) upmarket - modelled somewhat on Showco's proprietary Prism® system controller. Arch rival outfit Ramsa have a beta-test digital system processor, the WZ-DM30, which is mono four band but with the addition of digital 3rd octave equalisation. Like D2040, Ramsa's is 20 bit. Yamaha don't give you system EQ with the D2040 - but you DO get 2 parametric equalisers PER output. They have the DEQ-5 digital equaliser as somewhat of a sister unit to the D2040. So the style of things to come is set!

**WHAT YOU GET:** D2040 has two analogue inputs as well as digital in. The two inputs have four outputs each, each of which has identical controls - so it's a two in, eight out device. You'd use it as a stereo four way system controller typically, or stereo three way, stereo 2 way - and variations on this theme we'll get to.

Each of the eight outputs has four main features - crossover filters, dual parametric EQ, compressor/limiter, and time delay. Also a mute control, clip led, and a fader for each output. You set up your system, then you can memorise the settings on one of 15 RAM memories. Why? Because you may own more than one PA, silly. Imagine you are Eric Robinson of Jands Production Services, who owns more PA's than anyone south of the equator. Each of his configurations has a dedicated PA drive rack - TMS3's, Concords, S4's, Modular etc. Even if he keeps adding system

types I doubt he'd get to 15 different variations. But if he did, the D2040 would have a set of parameters for each.

Once you establish your parameters you can lock away the memories, and even take this a step further: by locking all controls except the power switch, via a three position back panel switch. D2040 is 2 rack units tall, a hefty 8.5kg, and has a fan for cooling.

Aside from the protect switch, there is also an output level switch for +4dB or -6dB analog output selection. An RS-485 port allows linking to other D2040's, or external computer control. I don't pretend to understand how this is accomplished, nor see a need. Digital input is either AES/EBU or Y2. All audio enters and departs on balanced XLR's. The power lead is thankfully fixed, no 'jug cord' here to fall out, arc and spark!

**HOW IT WORKS:** Turn it on and it goes to the last memory used, which is identified on a two line LCD screen. You've got enough space to input a nice title, like '4 Way Stereo EV' or 'This is set for big noise!' etc. In this manner you see what you are getting. But there is also an easy way to actually check what it is you are hearing.

Each pair of outputs, left and right, has its set of parameter controls above the pair of faders - which are motorised, but manually controllable. Press the Limit/Comp button, and the settings are shown on the LCD screen. Likewise the Filter button reveals the crossover settings. Beneath the LCD screen are four buttons, the lower two

are Left and Right selectors, you can set each side of your fourth output pair independently if need be. Equally you can link them, so what you set on the right side is mirrored on the left.

**CROSSOVER FILTERS:** Variable high pass and low pass on each channel, virtually any setting from 20hz to 16Khz. Crossover slope is adjustable to -24db, and you can adjust gain at the actual crossover point from -3 to -6dB.

**COMPRESSOR/LIMITER:** Can be ON or OFF, variable threshold from 0dB to +20dB, ratio adjustable from 1:1 through infinity :1, attack time variable from 1ms to 20ms, release time variable from 0.01 seconds to 5.0 seconds. You can also select 'through', where 100% full range signal is output. This means you could configure the unit as, say, a stereo 3 way controller, with the fourth left and right set outputting full range - for a passive delay zone, perhaps. Equally there is no reason why you can't operate left and right with two separate 2 way crossovers from each - the second pair with time delay if needed. You can run a stereo 3 way system with optional subwoofers - in fact any configuration!

**DELAY/POLARITY:** You can set normal or reverse phase, then you move into time delay

functions. Individual channel delay can be set anywhere up to 1365ms (1.3 seconds). This is greatly useful for time aligning a horn loaded PA, where the midrange speaker is physically behind the horn, for example.

Time Offset for the whole left or right channel set can also be set independently of channel delay. Set one offset, and the other three channels follow, so you can make a small adjustment for a different length of speaker cables on the left side, vs. the right side.

**PARAMETRIC EQ:** Yup, two of them per output. Adjustable from 20hz to 16kHz in 1/6 octave steps, gain adjustable from -18dB to +18dB, and Q variable from 0.50 to 10 - which I presume to mean 1/12 octave to 6 octaves wide. PEQ one can be set for low shelving, PEQ 2 for high shelving. These could simulate constant directivity horn equalisation if set correctly, or iron out deficiencies in your speaker cabinets - and EVERY speaker cabinet has some kind of deficiency, a little (or large) dip or peak in response that is built in, baby. The PEQ allows you to remedy the failings of the geek who designed your chosen system component! This could be dangerous. The PEQ settings also have a Digital Attenuator, allowing adjustment of digital output (in this part of the signal chain) from -18dB

to +6dB. Tooling with this is not recommended, unless you've twisted the gain structure with too much Parametric EQ! You can adjust the eventual output of the channel later on anyway, using the Output Level feature in the Utility area of the device.

**THE BIG PICTURE:** Signal from your mixer (then your system equaliser) are input via left/right XLR's. You need unity gain (0dB) because there is NO input gain control. Understand your gain structure, because digital clipping is not a sound beholden to your liking! L/R input LED ramps show you what's coming in.

You choose your settings, channel by channel, linking left and right together in most cases. The fader on each output is motorised - you set it yourself, then when you memorise your settings it'll remember where it was, and motor up there next time you fire up that particular memory. You can manually adjust it anytime it isn't motorising, lest you damage the rubber band and give the rodent peddling the treadmill a dislocated digit!

So now you have up to 15 different ways to run your PA!

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Howard Page, who would shake his head at you before taking over your mixing attempts in the early days of big PA systems. The Howard knew then, as now, if you have too much input at your mic channel, and not enough at your subgroup, then the eventual desk output would be wrong. You need approaching 0dB OUT of your mixing console and a not-savagely cut system equaliser to get the best out of the D2040. 0dB in or a little under = bliss. Remember 0dB is the lowest threshold the onboard compressor will trigger at, and if you use the PEQ to boost anything this will increase the gain at the Compressor stage, which comes after.

The lack of input gain controls probably help you attain a proper gain structure.

The downside to the D2040 is the lack of visual indication of output on each channel. Sure you

KNOW things are working, but suppose you've got rude things boosted on the PEQ - the first you know is when the channel CLIP LED flashes at you. Indications are the CLIP LED flashes AT clip, not a couple of dB BEFORE.

The lack of visual indication is most missed at the Compressor/Limiter, where it would be very nice to see it working. But, as evidenced by the lack of input gain controls, the D2040 requires a working knowledge of gain - and if you don't have this, it will teach you to appreciate the subject.

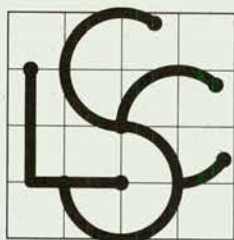
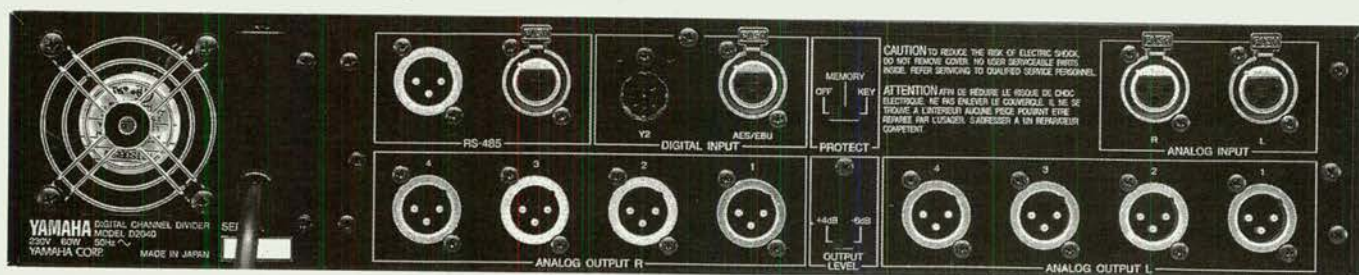
**OTHER STUFF:** You can link all the faders together, although the use for this is not apparent. The Utilities menu lets you protect your software (settings) from the front panel rather than disabling using the back panel switch, you can copy parameters and do things with the RS

port. It's feature heavy, sister.

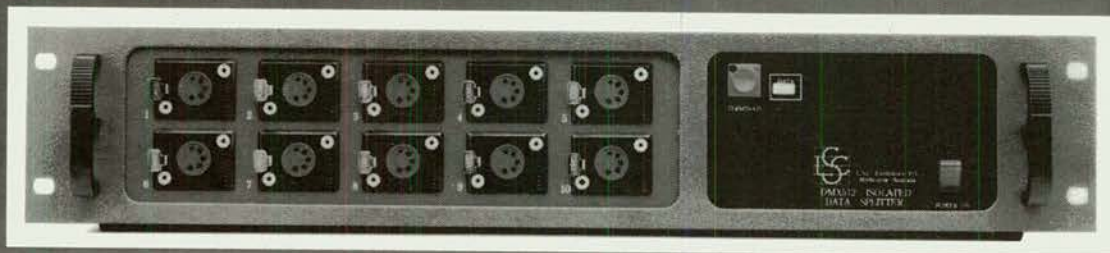
**OUTCOME:** At well less than \$10,000 retail, a device that achieves in two rack spaces what couldn't even be done in 12 a few years ago - and along the way integrates, protects and offers versatility. It also magages to sound just fine too, no crappy VCA's in sight! If I still owned my old PA Hire Shop, I'd buy one of these for each PA. If you stop long enough to think about it though, I'd bet Yamaha will eventually combine the DEQ-5 with a D-2040 type device to make the ultimate PA tool. But that's in another time.

**PRICE: \$6,795 retail inc. tax.**

*Thanks to Rock & Roll Music, 96 Pyrmont Bridge Road, Camperdown NSW, call (02) 550-3828, 008 804-994. They made the unit available to us.*



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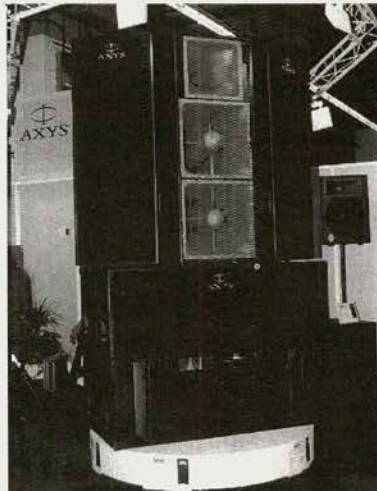
CIRCLE 165 ON READER SERVICE CARD

# Musik Messe - the world's **LARGEST** music show. *Pictorial*

Our Singapore correspondent Ray Bond was there, and he snapped these shots exclusively for Connections.



... and of course Ray slips in the latest Mitec mixing console, the EVENT. Isn't that the registered name of a Jands lighting console??



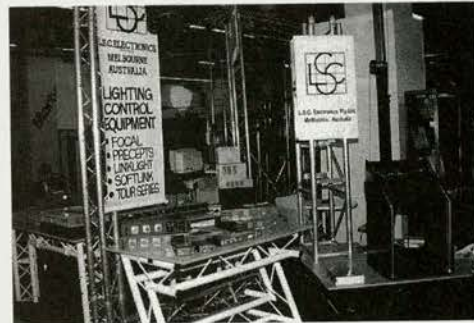
While Dutch firm AXYS build a Meyer clone but with INBUILT amplifiers. This will NEVER work!



Big news for Akai, with the DR4 digital hard disk 4 track recorder. \$4000 retail here in Australia!

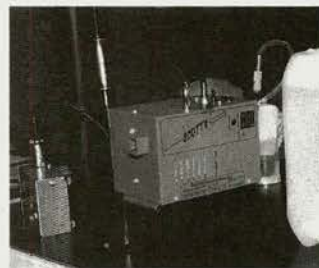


Alesis enter the four track market- but it's NOT digital...



LSC - Aussie LX control firm where there.

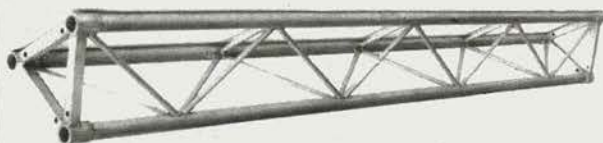
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Company .....

Address .....

Postcode .....

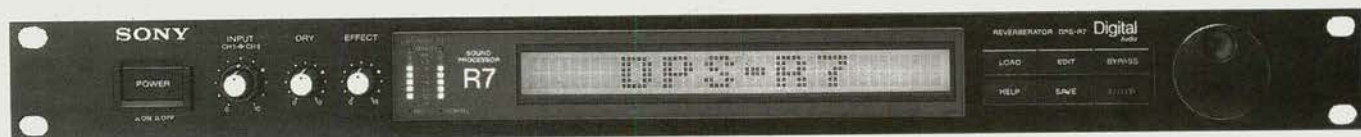
Telephone: (    ) .....

Post to SONY (Australia) Pty Ltd 33 Talavera Road, North Ryde NSW 2113 or Fax Coupon to Sony on (02) 805 1151.



# Sony's Fourpack: DPS Digital EFFECTORS

*Four Effectors from Sony - they may look alike, but they all have a purpose. Bruce Waite & Dave Macken put them to the test*



**D**o you remember the time that you dialled up what was certain to be a perfect vocal reverb..... and it wasn't?! Or can you recall adjusting all those parameters, frantically searching, only to find..... the effect isn't switched on in the multi program. Best of all, how was it when you thought you had just invented the most incredible effects combination only to find that they weren't available together and you needed two processors. Do you remember? Yeah well, so do we.

These tales of disappointment aren't designed to make you go straight out and destroy all multi effects, more as a means to point out that whilst most other studio equipment has increasingly been designed towards dedicated units, effects units seem to be getting trimmed down into half-arsed, do all single units. For instance it is dismal to note how many of these all in one boxes will not allow the user to modulate the delay process. Furthermore, many "digital" products have super accurate compression algorithms included when the sound quality makes them less usable than analog compressors. In a large market place these units have amazing appeal though to a professional user the individual components of an algorithm may not stand up to scrutiny.

All of this leaves us looking for a new idea; what a coincidence, we've just scored the new Sony DPS loan stock. So what is it? Well loan stock is the units supplied by wholesalers for market evaluation but that's not important right now. Sony DPS, however, is a new range of high quality digital audio processors consisting of the M7 sonic modulator, F7 dynamic filter, D7 delay unit, R7 reverb and the RM-DPS7 remote control. At first we thought that Sony had sent us four of the same unit though this proved incorrect upon closer inspection. The reason for our confusion is that if ever there were products that could be called a range, this is it. All the chassis and exterior control/ connections are identical for each model. Not that each one is unrecognisable from the next as they do have a colour band across the fascia panel. Very pretty.

Stereo input levels can be set using a concentric dial while two single rotary dials take care of output level and three possible gain metering configurations. There is a hooded power switch, six function buttons, an alpha wheel and a large backlit 40 x 2 character screen. The rear panel offers balanced and unbalanced inputs and outputs, MIDI in, out and thru, and two 9 pin sockets to allow the RM-DPS7 to control from one to fifteen DPS series devices. As with many other

## SPECIFICATIONS

### MANUFACTURERS CLAIMS:-

<b>DPS-R7 Digital Reverberator</b>	
<b>Quantization:</b>	18-bit linear
<b>Inputs &amp; Outputs:</b>	2 channels, XLR's, balanced
<b>Frequency response:</b>	10Hz to 18kHz (+0, -1.0 dB)
<b>Signal to noise:</b>	More than 90dB
<b>Total Harmonic Distortion:</b>	<0.004% @1kHz

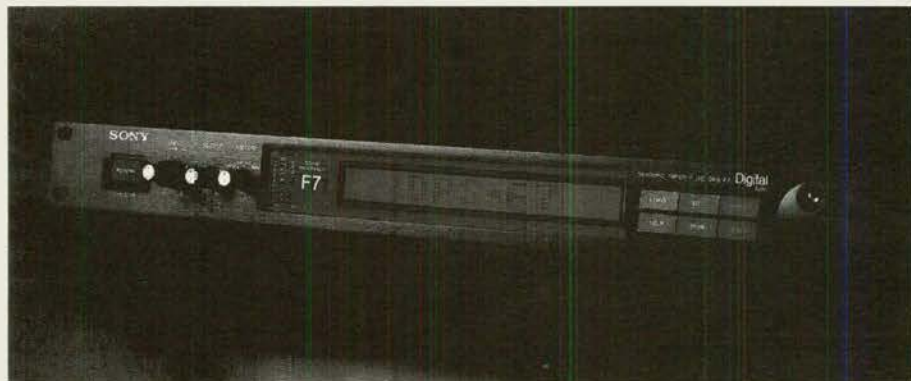
The above is typical of the four units, the DPS-D7, for example, has frequency response of 10Hz to 22kHz, +0, -1dB and less THD.

### PRICES: (retail, INC. Sales Tax)

DPS R7	\$2232
DPS D7	\$1932
DPS M7	\$2640
DPS F7	\$3036
RMDP7 Remote:	\$1104

*Thanks to Turrumurra Music for prices.*

# END USER REVIEW



hullabaloo about how great the manufacturer's digital research has been yet, once again, there is a notable LACK OF any form of digital I/O ports. When will someone clear up the difference between a digital unit and a digital unit?!

So...carefully disregarding anything written in the manuals (yes, even the safety page.... gasp) we put our faith entirely in the hands of the Sony HELP button. This feature enables the user to read a short prompt regarding any current cursor position. Straight away we were able to use and modify any of the 100 factory/256 user programs with relative ease assisted greatly by the speed with which the operating system replaces previous program material and data. Before we knew it we arrived at the sure to be popular "Roll da Tape" program onboard the M7 sonic modulator, it's good to see a manufacturer with a sense of humour. Without discounting any of the other programs, this one had us laughing our heads off and kept us very entertained as it accurately simulated a tape machine coming up to speed and then slowly stopping at regular intervals. The M7 uses 20 basic modulation algorithms and 12 other specialist algorithms to achieve effects ranging from chorus and rotary speaker simulation through to complex stereo, two band pitch shifting. Of particular note was the phasing program and how quiet it was, this observation made us then focus on

the F7 dynamic filter looking for unwanted noise within its sophisticated filter circuits.

Our search didn't turn up much noise at all instead we found a bunch of programs usable for pushing around almost any sound in any direction. Most common instruments and indeed most vocal effects such as de-essers and operatic simulation are catered for as well as parametric equalisers, waveform synthesis, dynamic filtering, gain reduction and non-linear saturators for recreating analog tape warmth. The F7 seems ideal for audio post production use.

The two remaining units, the R7 reverb and D7 delay unit, don't require much explanation as to their uses though it should be revealed that they have extensive parameter control and possess the same sound quality as the rest of the range. By not throwing everything into one box Sony have thus freed up these effects enabling them to process audio to a profes-

sional level using a 48 KHz sampling rate, 32 bit signal processing, 18 bit oversampling and a D/A clock rate of almost 50MHz.

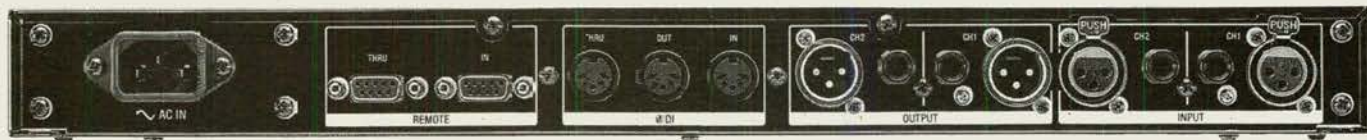
Ultimately, the four Sony DPS series units appear to be pretty much the same physical, operational and A/D/A conversion hardware with each model differentiated only by its allocated purpose and the colour it is adorned with. With a series of products so well integrated and usable from the one remote control we will be keen to see if the Sony DPS series is as well received by others as it was by us. Despite the lack of digital inputs and outputs, they provided us with all the sound control and quality we could need. The only thing we couldn't fathom was why such a "professional" system would require a wanky gimmick where the user may have the unit remember to wish him/her a happy birthday. How about a can opener next time?



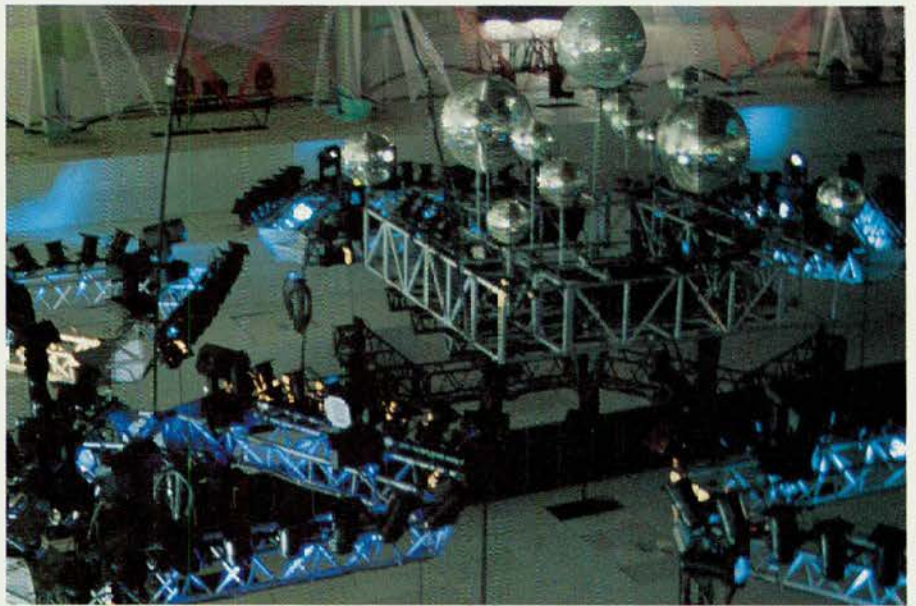
*\*Thanks to Sony Australia, who provided these evaluation units. Call the professional audio department manager, Peter Norman: (02) 887-6666 for more details.*

*Bruce & Dave operate 'Blind Lemon Pie', a project studio in Sydney's North. Contact them on (02) 457-8304.*

**RM-DPS7 Wired Remote Control Unit.**  
Will control up to 15 DPS units.



Catriona Forcer reports  
on Australia's largest  
dance party



## Gay Mardi Gras Time

Once again lighting designer Alan Parkinson was asked by the Gay & Lesbian Mardi Gras committee to come up with a lighting concept for the huge party after the parade. Unlike previous years where Alan has been responsible for lighting all the venues at the Royal Showgrounds, this year he was restricted to lighting the largest venue, The Royal Hall of Industries only. But as expected, he came up with a spectacular and successful design based on the theme of a pink triangle which is one of the gay symbols. Starting with one triangular pod, Alan added more until he had six of them forming a star. Alan believes that 'every gay person wants to be a star'! Alan then consulted Ian Messner of Jands as to whether the project was technically possible. Alan credits Ian with a lot of the brains behind the project making his visualisations work.

"I often think 'Thank God Ian is around' especially when you've got rooms like this," Alan told me.

The six pods hang together from an X grid which has six arms and each pod has three one ton motors on it. Each pod can be used individually so that they can invert, revert (*a new word created by Catriona! -Ed*), go side to side and up and down and are really as versatile as possible. The middle grid is used as a sound grid which is a new sound concept for the RHI - a room known for resident sound problems. If there are sound problems everything can be lowered down.

"This is the first time that Jands have done the whole production," said Alan. "I think hanging the S4s so they can be lowered down is extremely clever. Although they only come down a few feet they make all the difference to the sound. As usual Jands have been great although we've had a bit of a problem with a couple of the companies doing the sashire." (*Outspoken is Alan, yes? -Ed*)

On each of the pods there are four VL2bs (twenty four all together) plus 110 par cans, ranging from floods to very narrow, as well as some strobes and a bit of beacon.

*Alan Parkinson with Ian Messner*



The trussing, yet again from Jesus Christ Superstar, is Tri-truss. Hung from the centre of the rig is an array of mirrorballs in a wide selection of sizes. Alan had to book them two and a half months ago to make sure he had them for the night. There are also some mini ACLs for one of the shows with John Paul Young, as well as forty-eight ACLs. When all the pods are fanned out and focused, they actually draw a six pointed star on the floor in the colours of the rainbow - each pod being one colour.

There are twenty-five VL5s in the room on the peripheral and the stage. It was the first time they were used in Australia, Alan describing them as 'fantastic, much better than the VL4s as they are a totally different look'. Dave Harding was tech'ing and operating the VL5s whilst Alan, despite having his wrist in plaster, operated the VL2bs. A Celco 90 way was used for control and was run by Ivan Smith who Alan describes as one of the better analogue operators in the gay nightclub field. Ian Messner and Mike Kent were in charge of operating the Skjonberg motor control system.

Lighting for the stage was basically forty-eight pars, eight 2Ks on the front truss and the VL5s. Alan also used the VL2bs on the main truss which, when in stage position, could wash over the stage with gobos.

The stage itself actually had a revolve on it to bring the artists up onto and off the stage. The stage spanned 96ft across and the depth was 32ft. The first show of the night was performed to the record 'Celebration' by Kylie Minogue and, for the first time, the parade was brought into the show and onto the stage. The performers included The Marching Boys, The Marching Girls and the Super Models totalling 140 people in all and at the end of that there was a pyrotechnic display. The next show was John Paul Young singing 'Love Is In The Air' with a hoard of professional dancers.

The highlight of the night was the 7am 'Effects' segment complete with a 'firestorm'.

Alan decided to try out a new technique, previously only tested in the shop, which involved using alcohol on glass. At the front of the stage was a trough from which a wall of fire was to shoot up to the sounds of 'Disco Inferno'. What happens is that the alcohol is lit, starts to burn and as it burns the glass diffuses the alcohol putting it out. The result is a wall of flames across the stage which Alan insists it's 100% safe. At this time there are also three KV8 wind machines by the control area which are switched on, glitter is thrown into them, the lighting comes in and then pyros explode on stage.

The final show is Julian Clary who takes the stage at 10am with the gay choir to sing 'Somewhere Over The Rainbow'. Unfortunately Julian slipped and ended up with his wrist in plaster just like Alan.

Unlike The Horden which has a flat ceiling, the RHI has a scalloped ceiling which makes it difficult to rig. A mother grid was put in and everything was hung off it so none of the moving motors go into the ceiling.

"The RHI can be a nightmare," said Alan. "That's why, if you're going to design lighting for it, you've really got to know what you're doing. There are not points all over the place so a lot has to be bridled and the stress weights in the RHI are extremely crucial. It's a good room but it just depends what you do with it. I've done many parties in here with some fantastic flying rigs."

The Horden Pavilion, lighting designed by Gary Rogers, had no shows but was used for the costume parade which was huge and started at 11pm lasting for an hour. After that it was used just for dancing with some lasers done by Jeffrey Rose. A young girl did laser dancing with mirrored costumes and fibre picking up the lasers and shooting it back out again.

The overall budget for the lighting was about \$60,000 and nearly \$30,000 for sound. Then there is the effects side like the pyros which cost \$5000, and the entertainment budget which was \$30,000 so to get the party up and running cost over \$120,000 which is a lot of money. The tickets cost \$50 and all 17,000 tickets sold out three days prior to the party. The RHI is allowed to hold 11,000 people but with a stage and control area that large, probably 8000 would be more comfortable. The Horden holds about 6000 and The Dome about 2000 with a lot of people outside during the night. There were also the smaller venues - a Drag Bar where people could bring their own tapes to do a drag number and the Festis (*what's that? -Ed*) which was basically cabaret. Unfortunately there were no pony rides!

Loading in started on the Monday when equipment was dropped off, all of Tuesday was taken up doing the rigging and the lighting came in on the Wednesday fresh from the Camry Launch. A lot of sound proofing had to be done because of the regulations with the residents. There were huge problems at the Sleaze Ball because the weather was totally against them - it was very still and quiet so the sound just travelled right out. Artistic acoustic director was Steven Cooper who sat in certain points during the night measuring sound levels.

"All we really pray for at these parties is wind!" said Alan. "At the Sleaze Ball the sound levels had to drop to a level where people just wouldn't dance to it but The Horden, a much more compact room with a firm ceiling on it, was pumping. The result was that at 4am, when the RHI should have been crowded, many people deserted to The Horden."

As in previous years Alan was also responsible for the lighting on the awnings of The Oxford Hotel where he usually hangs a full rig for the actual Mardi Gras Parade. This year he decided to keep it simple and so he placed six 1200 followspots on the roof with some mirror balls across the road to reflect them. Added to that was about \$5000 worth of fireworks. \*

**The final act was at 10am. Unfortunately he slipped over & his arm is now in plaster!**

## National Studio Roundup

WHO & WHERE  
By Caroline Grafton

Hey well here we are only 239 days from Christmas and I'm already being battered by the Xmas wish list from my kids, people are raving about what a drama the end of the financial year is and really I wonder if any of this affects our productivity. And YES I think it does. Why? you ask am I crapping on, well actually its been quite month on the studio scene gosswise and I thought I'd just fluff it out a bit. But really I guess I had just better get on with it.

**BANDIT AUDIO** run by Stuart Coupland, in Sydney NSW has been working on Pre-production and Editing with such acts as Melissa Hanlon, Daniel Johns, Kevin Borich and Chris Turner. Stuart is a freelance producer/engineer who may be contacted on (02) 960-4598.

**TRACKDOWN PTY LTD** Sydney NSW, now has 8 tracks of digital available for you as well their existing 24 analog tracks. Call Jeff Watson on (02) 550-6890.

**UNDER NEW MANAGEMENT** Sydney NSW, is even a bit quite but Mark Moffatt and Greg Henderson have finally completed the Ana Christensen album. Mark of course is locked away with Anne Kirkpatrick and her latest album project, due for completion in May. Greg Henderson is currently working at Charing Cross with Zillion and the Zig Zag Men. Brent Clark has completed work with the Oils on their final? offering and is on his way to London for a while. Garth Porter is currently writing material and Mark Overden is preparing some remixes for upcoming releases. Ted Howard has been working with Rick L'Orange, Andrew Bett and This Life Fantastic. Brendan Morley is off to LA and

# NATIONAL TRACKING GUIDE

Fax 02 876-5715

ARTIST	PRODUCER	ENGINEER/S	NOTES
<b>New South Wales</b>			
Ⓜ Albert Studios ABC-TV "La Boheme" (Opera) "Bedevic"	Contact Leesa Baz Whirmann Anthony Buckley	(02) 953-2544 Craig Preston Craig Preston	48 Track Mix to picture Dolby Mix of film
Ⓜ All Music Manufacturing Lemon Ave 1000 Plane Raid Radio Freedom Quench Flash in the Pan	Contact Geoff Sturre Val&Nevin Rob Specogna Westside Viscious Vinyl Alberts	(02) 557-1169 Paul Bryant Paul Bryant Paul Bryant Paul Bryant Paul Bryant	Mastering CD Master CD Master 12" vinyl master 12" vinyl master 12" vinyl master
Ⓜ Bush Traks Recording Studio Pagan Love Cult Robbie Green Great Dive Nya Murray	Contact Ruth Miller D.Highet/ N Pike R.Green/ Dave Highet G.Dutton/ H.Vann N.Murray	(066) 89-1290 Dave Highet Dave Highet Dave Highet Dave Highet	24 Track Demos Demos Album Album
Ⓜ Charing Cross Studios Zig Zag and The Zillian Men Simone Dejerrah Ironbark Noel Zammit Judge Mercy Scary Mother	Contact Gordon Hervey Greg Henderson Anthony Chariton Ironbark Electric Hippies Andy Cichon Dorian	(02) 387-8362 Greg Henderson Alex Hodgson Gordon Hervey Gordon Hervey Gordon Hervey David Sykes	16,24 Track EP Demos Demos Demo Mixing Mixing
Ⓜ Damien Gerard Studios Dave Dwyer Screaming Tribesman Pearls & Swine Zool	Contact Elia Bell Mark Moffatt Rob Younger Pearls & Swine/M Wodd Steve Williams	(02) 660-8776 Tim Powles Mike Wood Mike Wood Josh Madeod	16,32 Track Album Album Release Demos
Ⓜ Enrec Studios Jan Kelly Kooriwasjula Mark Atkins Joane Slade The Flaires	Contact Ed Matzenik Steve Newton Steve Newton Ed Matzenik Steve Newton Steve Newton	(049) 36-1376 Steve Newton Steve Newton Steve Newton Steve Newton Steve Newton	32 Track Album Album Album Opera Demo Demo
Ⓜ Hullabaloo Music Slipstream Peter Kukura Heaton/McGarvey Theme Mad Hatta Strum Jungle	Contact Glenn Heaton Iuston Peter Kukura Heaton/McGarvey Iuston Heaton/McGarvey	(02) 684-2039 Adam (Luci) Iuston Glenn Heaton Glenn Heaton Adam (Luci) Iuston Glenn Heaton	24 Track Album Pre Prod 2GB's Big League ABCTV Sports Album Single
Ⓜ Main Street Studios Strumettes Wasted Youth Cactus Juice Thousand Plane Raid	Contact Rob Specogna Strumettes Rob Specogna. Cactus Juice Live Recording	(042) 83-4515 Specogna & Murray Specogna & Murray Rob Specogna Rob Specogna	16 Track Album Demo Demo Album
Ⓜ Megaphon Sound Recording Stud The Hellmen Rolf Harris Sydney Symphony Orchestra Scream Feeder Front End Loader	Contact Guy Dickerson David Price Clive Lendich Carl Vine David Price David Price	(02) 516 3917 David Price Peter Cobbin Craig Preston David Price David Price	24 Track Album Album S'tk - Bedevilled Album Re-mix Album
Ⓜ Rich Music Studios Joe Lee The Alchemist Peter Cromder Jan Carter Paul Stansway	Contact Elise Huntley Joe Lee/David Price Brett Stanton/Alchemist Peter Cromder Lindsay Jehan	(02) 264-7734 David Price/Jason Blackwell Brett Stanton/Fraser Stuart Tom Kazas Paul Rich/Peter Lees Karen Hewitt	24,32 Track Mixing Mixing Mixing Celtic Harp tracks Mixing

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# BASF

Connections. April '93

# NATIONAL TRACKING GUIDE

Fax 02 876-5715

## EX-TRACK

(...continued)

ARTIST	PRODUCER	ENGINEER/S	NOTES
Ⓜ R&R Recordings	Contact Robert Zimola	(02) 624 4484	16 Track
Jenny Too		Robert Zimola/Paul Crooks	Demo
Mortality	Mortality	Paul Crooks/Robert Zimola	EP
Nu-skin		Robert Zimola	Corporate Training
Ⓜ SAE Studios	Contact Tom Misner	(02) 211-3711	24 Track
Willie & The Drought Breakers	Michael & Joe	Oscar Gaona	Single
Chilli Vandals	Jason de Wilde	Anthony Novak/Jenny Farvis	EP
Nowhere Men	Jason de Wilde	Suzie Novak	EP
Ⓜ Skyhigh Recording Studios	Contact Rob Taylor	(049) 50-1574	8,16,24 Track
The Olive Branch	Mark Roberts	Craig Beck	Mix EP
Swoop	Swoop	Rob Taylor	Album
DEF FX	Rob Taylor	Rob Taylor/Craig Beck	Live Tracks
The Whitlams	Rob Taylor	Rob Taylor/Dave Henderson	Album Mix
Atmospheric	Matt Johnson	Rob Taylor	Single
Mantrasonic	Sean Lowry/Rob Taylor	Rob Taylor	Techno Project
Ⓜ The Vault Cremorne	Contact Gina	(02) 953-0332	24 Track
Anne Kirkpatrick	Mark Moffatt	Ted Howard	Album
Ⓜ Trackdown	Contact Jeff Watson	(02) 550 6890	24&8 Track digital
Icehouse	Iva Davies	Simon Leadley	Pre-production
Blinky Bill	Yoram Gross Film	Tim Ryan	TV Series
Liz Taylor	Terry Murray	Kirke Godfrey	Single
Ⓜ Trafalgar Recording Studios		(02) 660 0385	24 track
Hoodoo Gurus	Hoodoo Gurus	Charles Fisher	Tracks
The Persuasions	C.Fisher/J.Bonnefond	J.Bonnefond	Movie Sndtrack
Ⓜ Tracking Station Studios	Martin Cass	(02) 281-8899	24 Track
Pat Drummond	Martin Cass	Steve Pomfrett	Album
Alan Caswell	Alan Caswell/Martin Cass	Martin Cass	Album Track
Honeyman	Honeyman	Steve Pomfrett	Single
Various	Martin Reeve	Steve Pomfrett	CD Compilation
John Field		Steve Pomfrett	Album Track
Ⓜ Trinity noise	Contact David White	(02) 957 2270	16, 24 Track
Pure New Wool	N/A	David White	4- NZ TV Comm
Chesty Bonds	N/A	David White	TV & Film Comms
Paper Jam	N/A	David White	10min Pxeletion
Jenny Forbes	N/A	David White	Single

YOUR MUSIC IS SAFE WITH US



# BASF

Tom Colley is completing projects with Happy House and Cindy Ryan. Contact Gina on (02) 953-0332.

**CHARING CROSS** Bronte NSW, have let us know that Ampex have discontinued the 2" Leader Tape and only have a few reels left. I hope your back's a bit better Gordon Love CG. Contact Gordon on (02) 387-8362.

**STUDIO 52** Collingwood Vic, have extended their access areas from Recording and Rehearsal studios to a communal lounge which includes a pool table and bar. Look out for the launch gigs for the latest Nu-Music #6 and Metal Compilation due for release in late April. Call (03) 417-7707.

**SAE STUDIOS** Sydney NSW, now has CD recording facilities in addition to DAT Mastering and Analogue. Call Tom on (02)211-3711.

**DAMIEN GERARD SOUND STUDIOS** and **FOGORN RECORDS** Sydney NSW, are both owned by the dynamic duo Marshall Cullen and Elia Bell. They have their first release "Krunch" currently on the play list of JJJ and "Once Upon A Time" by Elia ready for pressing due for release in mid April. Call 0055 125 49 for a listen. The studios currently have on trial some new Klipsch studio monitors in B studio and are very impressed with

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# EX-TRACK

(...continued)

the warmth of the bottom end. The new Ensoniq DP4 is still proving to be an added attraction along with the studio multi FX currently being used as a guitar pre-amp direct into desk for guides/ solo's etc. Studio B has added a new wood floor for drums to give a greater choice of sound between Studio A and Studio B. Some new condenser mic's and some old style Shure dynamics have been added. Contact Mandy on (02)660-8776.

**RICH MUSIC STUDIOS** Sydney NSW, and Connections wish Elise (who works at Rich) a very happy 21st Birthday and every success in her life. Call Paul or Elise (but be nice) on (02)264-7734.

**ENREC STUDIOS** Kurri Kurri NSW, are releasing a new CD which covers the history of the Ex-Tamworth Label and Studio. Tracks from "Warrior in Chains the Best of Roger Knox" recorded back in 1983 on a Tascam 4 Track, Ampex 8 Track in 1985-88 and Tascam 16 in 1992. The originals are still selling and the studio now operates a 32 track Tascam. Contact Ed on (049)36-1376.

**ALBERT STUDIOS AND PRODUCTIONS** Sydney NSW, last month finally completed the Oils album "Earth & Sun & Moon" just 1 hour before producer Nick Launay's return flight to the UK. They also have for release in April Mark Williams, Strongheart and Flash in the Pan albums. Call Leesa on (02)953-2544.

**THE THEME PARK** Creative Music Productions Crows Nest NSW, is a production company specialising in original music for TV, Radio, Corp. AV and Film Scores. Jay Stewart, Tom Ferris and Philip Scorgie make up a diversified creative team and working exclusively with Apocalypse Studios, they feel they have a world class product with a fresh "live approach". Theme Park is a relatively young company but have already completed projects such as TVC's for KFC, Sega, Neslac as well as AV's for Hewlett Packard, Arnotts and AMP. Contact Jay on (02)901-4033.

# NATIONAL TRACKING GUIDE

Fax 02 876-5715

ARTIST	PRODUCER	ENGINEER/S	NOTES
<b>Wirra Willa Studios</b> Hurlstone AG Big Band Tony Sukic Spirit Sneak Preview Raining Steel Malcolm Baxter	Contact Will Rout Chris Luke Tony Sukic Anne Marie O'Neil Sneak Preview Raining Steel Malcolm Baxter	(02) 605 1203 Will Rout/Sharon Markut Will Rout Will Rout Will Rout/Sharon Markut Will Rout/Sharon Markut Sharon Markut	8,16,22 Track Album Demo Demo Demo Demo Demo
<b>Queensland</b>			
<b>Studio 19 Recording</b> Dan Everingham Bill Bright	Contact Allen Castleton Everingham/Castleton Everingham/Castleton	(077) 74-5439 Allen Castleton Allen Castleton	16 Track Mixing Album Tracks & Mixing
<b>Grevillea Recording Studios</b> Sexing The Cherry Chill- The Soul Experience Timetrax	Contact Malcolm Jacobson Edwin Morrow/Craig Sue Ian Taylor/Barry Sullivan Garry McDonald/Laurie Stone	(07) 262-8422 Malcolm Jacobson Bruce Jacobson/Ian Taylor Bruce Jacobson	24 Track Violation sing. CD US TV Series
<b>Victoria</b>			
<b>Gotham Audio</b> John Farnam	Contact Kerri Minchin N/A	(03) 696-2111 N/A	48 Track Lock Out/ Writing
<b>Metropolis Audio</b> Lisa Edwards Stephen Cummins Black Sorrows Outlaw T. Bones Cruel Sea James Reyne Bad Loves Shane O'Mara Lary Maluma	Contact Kerri Minchin David Hirschfelder David Hirschfelder Joe Camilleri Cameron Craig T. Bones Tony Cohen James Reyne Bad Loves/ Doug Roberts Shane O'Mara Lary Maluma	(03) 696-2111 Doug Brady/Andy Baldwin Doug Brady/Andy Baldwin Jan 'Mack' McKenzie Cameron Craig Nigel Derricks Tony Cohen Ross Cockle Doug Roberts Doug Roberts Robin Mai	48 Track Single for film Single for film Single & Tracks Album Independent EP Album Mix Remix Album Mix EP Album
<b>Platinum Australia Pty Ltd</b> The Sharp Peter Andre Slaves of Cool Jimeoin Victory Girls Barry Michael The Guise	Contact Gary Moorehead Nick Mainsbridge/Peter Farnam Ashleigh Cedwell Slaves of Cool Jimeoin Rob Crow Barry Michael Loz	(03) 827-7483 Kalju Tonuma Mark Forrester/Bruce Cumow Chris Corr Mark Forrester/Moira Lawson Ted The Head Ted The Head Lawrence Maddy	48 Track Mixing Album Single Single Album EP EP EP
<b>Sing Sing</b> Black Sorrows Kill Joys Ripe Sharp Platinum Meanies	Contact Mark Wood JC Chris Thompson Peter Farnam/Nick Mainbridge Andy	(03) 428 6204 Phil Butson Mark Woods Chris Thompson Kalu Tonuma Andy	Unplugged Single Album Album Album
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# STUDIO COURSES: RIPOFF OR NOT?

By Ian Scrivener

Out of the blue in March came a media release headed: "Music Industry personnel agency calls for government action on audio schools". The release, from Music Staff, continued: "After hearing dozens of hard-luck stories from graduates or attendees of audio engineering schools and other 'music business' educational facilities, the music industry's primary employment service, Music Staff, intends to approach local and Federal government for investigation and regulation of these schools."

"These dejected students have paid thousands of dollars pursuing their dreams of being the next big producer or engineer, and some have paid over \$4000 - \$6000 for a certificate at the end of their course which is often viewed as a chump's certificate by prospective employers. We've seen dozens of graduate students or those still paying their way through classes who assume studios will hire them with their 'degree' or some company in the music industry will want them because of their enhanced knowledge."

Music Staff partner Phil Tripp - who taught for over two years at Music Business Institute, an accredited 15-year old school in the U.S., believes that in the current economic climate and in the next five years, there's little future for audio school graduates. "I've received countless calls over the years from students and parents who are doubtful of the schools' claims of 'industry accreditation', 'recognised degrees', 'job assistance' and other promises. Most studio owners I know wouldn't hire someone fresh out of these schools, because there are either no jobs or there are more highly qualified people seeking any available positions. Many of these schools are preying on the dreams and aspirations of young people and those seeking entry into the music biz."

The release went on to quote some industry professionals, here are some extracts:

**Michael Fronzek, former studio manager, Rhinoceros Studios Sydney**- "For years it has concerned me that there are people masquerading as educator, who are achieving little more than relieving desperate students and their parents of money."

**Geoff Watson, Artistic manager & owner of Trackdown Studios Sydney**- "Why do I get at least five calls a week from people seeking employment as an engineer, all claiming to be 'certified', when we probably employ one new person every one or two years? Why is it that only one audio school has ever asked me what I think of their syllabus?"

**Peter Dawkins, studio owner and one of Australia's top producers**- "I for one would not even consider hiring anyone from one of these courses, as they would be entirely unprepared for the job."

**Jim Taig, Facilities Manager, Studios 301 Sydney**- "There is no 'industry recognised' course of diploma in this country today. Therefore such advertisements and innuendo pertaining to these courses should be stopped immediately, as such

claims are plainly dishonest and misleading."

**Mark Moffat, one of Australia's foremost producers**- "Most courses are simply an opportunity for second rate studios to fill downtime."

**Jim Mountford, owner of Platinum Studios Melbourne**- "We have interviewed many 'graduates' and have never employed one as an engineer. The one 'graduate' we hired as an assistant required at least six months training to come up to our assistant standard."

## To this, the three major Audio Schools responded:

### School of Audio Engineering (SAE)

As the world's largest educational institution teaching audio engineering, SAE would like to agree with some of these points.

At SAE we have always told prospective students that ultimately their job prospects depend on themselves. However with an SAE certificate or diploma, they will have a far better chance of acceptance.

As Thomas Misner, SAE's International Director says, "While we cannot guarantee students jobs, we do run an active placement service, which has seen SAE graduates, since 1977 working in hundreds of recording studios, radio, television and film studios and audiovisual and concert staging companies. Information on our track record is available on request."

### Academy of Audio Engineers

The Academy of Audio Engineers considers this investigation of audio schools long over due and warranted.

In the past the Academy has approached several industry publications with the view to improving conditions and wages for live engineers, and encouraging women to join the industry and for stricter regulations regarding audio schools. The Academy has been operating for almost ten years.

Unfortunately in order to bring an investigation of this nature to public attention there seems to have been an indictment of audio schools across the board.

The Academy of Audio Engineers believes this shake up is well overdue, and congratulates Phil Tripp and Lisa Treen for their efforts in improving the state of the industry.

### Audio Education Centre

The management, staff and students of AEC are dismayed and disappointed with recent criticisms of audio schools. While we agree with many of the points raised, we feel the generalised nature of criticisms suggests that all audio schools are a rip-off. This is not the case.

Music staff need go no further than AUSMUSIC, the non-profit company jointly established and funded by music industry bodies and the Federal

government. AUSMUSIC has developed a sound engineering course in conjunction with industry professionals. The course is accredited with the State Training Board of Victoria (STBV), and is currently seeking accreditation with the Vocational Education and Training Accreditation Board (VETAB) in NSW. One wonders why there was no mention of this in the press release, would it have shed light on the gloomy picture he (Tripp) was hoping to paint?

Last year AEC sent out a questionnaire and a copy of our syllabus to the top recording studios in Australia, including rhinoceros, requesting feedback, with the aim of fine tuning our course to the needs of the local industry. We received few replies.

Many assistant engineers are paid paltry sums of money, less than \$10 per hour, and work incredibly long hours without penalty rates. If a survey were taken of how much assistant engineers were paid, and compared to award wages, it would show that studio managers have been "ripping off" assistants for far greater sums than the cost of a sound engineering course. This is the reality of the industry, and one that we warn our students about. ○

Contact any of the above schools for full text of their replies, space precluded us running every word! -Ed



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# Great Mistakes

I don't know if my story qualifies as a Great Mistake, but it sure made for an interesting day. I had a contract to provide production to Radio 2SM in Sydney during the early 1980's, and their summer promotion was a thing called: "The Road Rocker". It was a mobile stage that appeared at a beach near you, complete with band for an hour or so.

Although the hype talked about a semi, it was really a 24', 8 tonne pantech that Dave Suttor at Orana Truck Rentals had cunningly converted into - a convertible, of sorts. One side was reinforced, and winched down to become the floor, with a wind out roof and foldout PA wings. This was in the pre-Butler's Hire era, and really fast to erect. When not Road-Rocking, the truck was a standard 8 tonner in Dave's hire fleet. Well, a 6.5 tonner, because he'd welded a tonne and a half of steel into it!

The second year we did the Road Rocker run I decided to trim the budget by foregoing the 2 tonne table top that I'd transported the generator on. Instead, I'd tow a car trailer behind the Rocker, which would handle the weight because it was empty. My equipment truck would follow, and the whole thing would need 2 drivers, not three. Dave readily agreed to weld a tow bar tongue onto the Rocker.

To complicate things slightly, Dave had another hire for the Rocker the night before my first gig, so we compared schedules and decided it was feasible his driver deliver the thing to my house at 4am. This he did, and I'd had a restless few hours sleep half expecting to wake when I heard the airbrake outside. I did, and tossed for another hour before getting up.

I walk outside, stretch and focus on the back end of the Rocker - and see the towbar tongue is there - *without a towball!* There is NO HOLE drilled through the steel either! It's 5am, and I must pickup the car trailer at Kennards at 7.30am, and be at Coates Hire by 8.30 so they can crane the generator onto the car trailer - they close at 9am on this Sunday morning! *Shit!*

How many drill bits are in your tool box? Big ones, I mean. My Goddam towball (A miracle I have one) has a 3/4" thick threaded shaft, and the tongue sticking out the back of the truck is about the same thickness. Luckily it had a small guide hole through the middle of it, so I set about enlarging this with my 1/2" drill bit. I'm on my back on the road, pushing the drill upwards, it's taking forever, and the red hot scraps of steel are flicking onto my face. I blunt every drill bit in stock, but finally after a solid hour or so, get the hole large enough for the

towball.

The Generator is chained to the car trailer, the whole procession is mobile, and on time. We setup on the promenade at Bondi Beach, and have the usual hassles. The council inspector arrives and knows nothing of what we are doing, threatens to have us arrested, calls the Police to standby, and generally acts like most municipal employees with a power complex. I setup my PA, and eventually the promotions guy from the radio station arrives to sort out the council smurf.

The Dynamic Hepnotics arrive on time at 11am, setup squinting at the sun, and play their gig. The mixing console is down on the sand, well below the stage. The wind is 10 knots on shore, so the sound is blown backwards. 50 curious bystanders watch the gig, the D.J./M.C. tries to look important, and can't convince two 15 year old girls he really is a D.J.!

After the fun was over, we had 2.5 hours to pack up and move to another location - Whale Beach, which was at least an hours drive North. Goanna would be waiting when we got there to do a 4pm set before doubling to a night gig. A frenzied pickup was easily done, but the Rocker's pan had warped a bit, so we couldn't bolt the side back up. Two sledge hammers and choice cursing fixed this.

Of course the car trailer with the ultra heavy metal generator on board had been unhitched when we arrived, and we discovered it was a tad too far back on the trailer. The trailer bar shot a foot into the air as soon as we released it, but we forgot about it in the haste. Now we've backed the Rocker up to the trailer, and in doing so completely blocked the two lanes of traffic on the Promenade. We can't get the towbar down onto the tow ball! The only option is to un-chain the generator, and use the chains - and truck - to jerk it along the car trailer a few inches, so the thing is balanced.

Anyway, like all perfect days, we got where we were going, and were only a few minutes late. Goanna's crew were pissed off with us because we were alive, or something - why did Melbourne crews of this era have a superiority complex? Mercifully it started to piss rain just as we were about to start the setup. We went home. The following week we managed to get everything bogged in sand at Maroubra, but that's another story!

OOOOO

Send us YOUR story! Fax (02) 876-5715, or mail: PO Box 439, Epping NSW 2121 Australia.

# Into The Woods

*Catriona Forcer visits the set of Sydney Theatre Company's \$1.3m production, and talks with Lighting Designer Roger Barratt*

There have been various newspaper reports with titles like 'Fairytale can be a nightmare' and 'Long-awaited musical is not out of the woods' about Sydney Theatre Company's \$1.3 million production of the Stephen Sondheim musical 'Into the Woods'. Several previews were cancelled due to technical problems involving the failure of a clutch mechanism in one of the two stage revolves. A replacement was flown in from Germany. However, just as the technical problems were resolved, one of the leading actors got sick and two more shows were cancelled. On top of this, even if the show is a sell-out, the Sydney Theatre Company will still lose money on the production.

The musical 'Into the Woods' was inspired by psychoanalyst Bruno Bettelheim's book 'The Uses of Enchantment' in which Freud and Jung meet the Brothers Grimm. It originally opened on Broadway with a record advance for an American musical and ran for two years. However the west end version closed after just five months. Into The Woods won Sondheim three Tony Awards in 1989.

Lighting designer Roger Barratt is in much demand with several current production utilising his talents - 42nd Street in Melbourne, a national tour of Nun Sense Two - The Second Coming, five operas for the Australian and Victoria State Opera and Buddy in New Zealand. In fact Roger usually lights about thirty productions a year. I visited him at the Drama Theatre of the Sydney Opera house where rehearsals were still in progress and he spoke of the delays in the

production.

"Really it was delayed because it was technically too large for the theatre and too many (new) things were going to be tried in the production," Roger said. "What it has gone back to is the right schedule for the size of the show, what it should have been in the beginning. The problem with an auditorium of 550 seats and a company of 50 is that, with all people, they need to generate box office income as soon as possible which is why they tried to get it on faster than they should have. They knew it was fast and we all thought it would be complicated but it was even more so."

"There have been three productions of 'Into The Woods' around the world. The American company was played in a traditional proscenium theatre with a high grid and counter weights every six inches on stage where as the



Drama Theatre has no grid."

"There are batons, some are counter weighted and some are motorised, you can't actually get to the grid. All the scenery is three dimensional and has depth to it. There are trees, feet, a wedding cake, a giant, hands, a

head and if you added up the depth of everything it would be the worlds biggest stage but it's on a small stage. We had to put the orchestra pit at the back suspended over the back of the set."

The deceptively simple looking set was designed by John Senczuk and is basically a raked disc that is actually two revolves - an outside and an inside revolve that travel in different directions. The height between the two revolves, if they are both in opposite directions, can end up being over one metre. In the middle of the centre revolve is a scissor lift so the revolves can be going in different directions and the scissor lift going down with scenery flying in. To coordinate everything has apparently been a bit of a nightmare. The show was choreographed on a flat floor and then put on the raked surface of 1:6, which is quite

steep, and this obviously required a lot of attention from the cast. Also built into the revolves are doors and careful coordination is needed to make sure they are where they should be so the actors can go from inside to outside as well as disappear for fast costume changes.

There are 250 lighting cues in the show which is a lot for any normal theatre show - Buddy has 170 and 42nd Street has 150. There are all the props coming in at different times, people are flown and disappear through the outside

revolve and go through traps in the floor.

There are lots of Flash pods - in fact everything you can think of all combined in one show," enthused Roger. "I had seen the Broadway production and the National Tour in Philadelphia but they were entirely different to

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this and done on a flat floor. I start with a totally clean sheet seeing the set and talking about the problems right at the very beginning. The problems on this are that there are no full width spot bars on stage with everything being a part bar. Because of the scenery running across the stage, there might be four metres upstage two spot bars, two trees, a wedding cake and a foot all in the same line. So there are two metre sections of spot bar, some sections of trussing and hence the rig is not symmetrical or rather certain parts are and certain parts aren't. The last full width spot bar is on the second line just behind the proscenium. Everything else is a part bar under slung from the grid on droppers. We have remote controlled radio dimmers (remote controlled batteries created by Stephen Firkin) in the revolve because there is no power to the revolve which is the outside ring. There are big tractor batteries on the revolve driving them up and down."

The rig comprises of about 250 lanterns with most of them being in house equipment. There are fourteen Colourset Scrollers using only about eight colours but a couple of the colours are split because they are used with gobos and back light through smoke. The twenty two gobos used in the show are mainly Rosco foliage gobos for a solid 'woody' feel. Approximately half the lanterns contain gobos. On the whole, the show is lit in shades of lavender and blue with the odd 'straw' colours. A lot of the show is set at night with three midnights during the course of the first act. The second act is very desolate and all done in 202 and pale lavenders. There are two Solo CID follow spots on stands, because of the size of the venue, and they are used for soft coverage on the faces. Control desk is a fully optioned Galaxy 2 which Roger describes as a very sophisticated board. (Especially when the backup is loaded!-Ed)

Michael Shell will be the board operator during the scheduled ten week run and Roger requested him because he is very fast and can think quickly.

"I would have problems if there wasn't a very good operator on this show, I can tell you," said Roger. "Also on the technical crew are one floor electrician, two follow spot operators, three sound crew and eight mechanists."

At the time of the interview there had been four previews which Roger said went fine. The reviews were exceptional.

"I'm modifying each preview," he said. "I sit in the control room and take notes, change speeds of cues, positions of cues, intensities, down cues. All sorts get changed. The technical runs are like doing ice carving with a chainsaw - really broad strokes chopping off all the problems and sorting things out."

## Peter Kemp says:

As I am writing this column I am preparing for my trip to the SIB (Salone Internazionale Delle Attrezzature E Technologie per Discoteche E Locali Da Ballo - which translated is, International Exhibition of Equipment and Technology for Discoteques and Dance Halls) show in Rimini, Italy. I started attending these shows in the early eighties and have only missed a couple of shows since the beginning.

A specialized show, exclusively dedicated to discotheque and dance hall trade professionals. There is also a considerable programme of "cultural" events held alongside the actual show; specialized conferences which closely examine the sector's main themes.

Naturally being based in Italy, SIB is usually the major new product push for the Italian manufacturers, with both Coemar and Clay Paky being the predominant Italian forces at the show. However it is also well attended by the other European and USA manufacturers.

The other point to remember is that SIB is also the real first European lighting show for the year (with only Frankfurt Music Fair and SIEL Paris - not really an Internationally show, being staged prior to SIB). Therefore it provides all the manufacturers with the first real showing for the years new products.

The town of Rimini is basically an Italian seaside resort being positioned along the Adriatic Coast, known everywhere as the capital of Europe's seaside resorts, however in March the town is very quiet due to the fact that it is fairly cold.

In addition to the show itself the area also provides the opportunity to view a number of Italy's fine nightclubs which naturally also thrive on the visitors from the show.

In addition to the SIB show a further fair known as MAGIS is held every second year in conjunction with SIB, and 93 will see the two shows featured. MAGIS basically caters for equipment for Theatres, Cinemas, Convention Centres etc and therefore usually includes Theatrical, Television and Film Lighting and Sound, Movie Projection equipment, Stage Machinery etc.

For myself the trip in March of each year also allows me to visit various manufactures factories and offices, which is the best and only way to seriously view the products, facilities and personnel a company has to offer.

This year like all others, will provide us with many new products to select from, however one must be very cautious as it is also not uncommon to find manufacturers exhibiting prototype products which may never get into production!

Peter Kemp runs Coemar DeSisti Australia.  
Call them on - (03) 467-866

## Phase ... are you really hearing it ?

By Glenn Leembruggen & David Connor, from *Elecoustics, Consulting Electro-Acousticians.*

There have been a lot of words spoken in the industry over the years on the audibility of phase. The terminology around phase is quite often misunderstood and you quite often hear comments like 'you can really hear the phase effects', so this month we get some of the concepts clearer and see the effect that phase has on the sound engineer's and listener's everyday life.

For starters we need to separate phase and amplitude. Basically we hear the amplitude or amount of spectral energy, but to say you can hear phase (while not impossible) is a very brave statement indeed. Phase is not an animal that you can easily listen to or hear. When we talk about the audibility of a bad phase response, we are almost always talking about hearing the effects on the spectral energy caused by the misalignment of the phase responses of the contributing sound sources.

Let's look at some quick definitions.

The *amplitude response* of a device or system is a measurement of the difference in level of what comes out, compared to what goes in at each frequency. It is similar for *phase response* except that the measurement is time related.

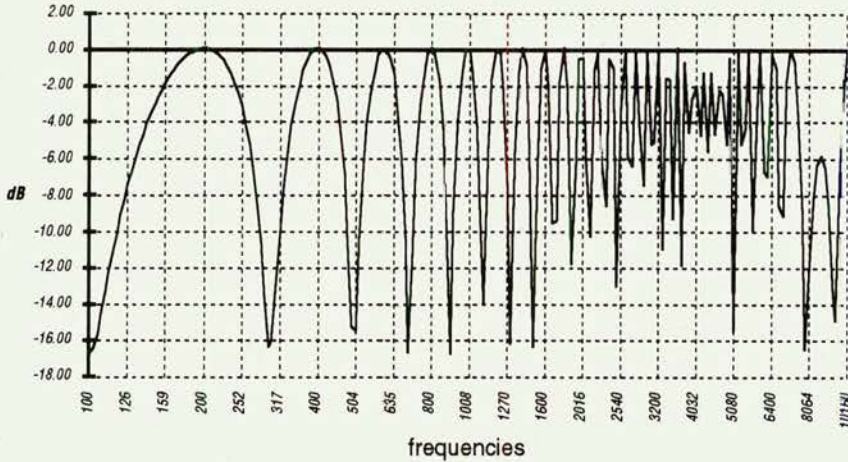
*Spectral energy* is the amount of sound energy in each frequency band. A flat amplitude response results in equal spectral energy in each band. When you hear a system with flat spectral energy you are hearing a system that delivers constant spectral energy over the entire frequency range. This is a complex sum of the loudspeaker response, reverberant energy, reflections, driver directionality and phase induced interactions, etc.

### Amplitude.

In a near field environment such as a recording studio or lounge room, we basically hear spectral energy of the direct sound. In a PA situation we hear the spectral energy of the direct sound, reverberation and reflections. Phase as such is not heard but it does shape the spectral response.

The sound that people normally call 'phasing' is actually the amplitude effects brought on by phase delays. Let's take a look. If two flat signals are combined after one is delayed by 5msec in a digital delay (the phase of both signals is 0° at all frequencies), the amplitude response will be altered to a mish mash of cancellations. The audible effect isn't the delay but the comb filters created by the delay. Figure 1 demonstrates this effect. (the graph resolution is 1/30 octave, which is not sufficient at the top end for the whole picture)

Fig 1: effect of 5msec delay on second sound source



This effect also occurs when two loudspeakers are spaced apart. Figure 2 shows the effect of standing 10 metres back and at 30° from two ideal loudspeakers spaced 300mm apart. The phase of both signals is linear but different due to the time it takes for the sound waves to arrive at the listener. You can see that the modification to the spectral energy would be quite audible. If you were to walk across the front of this arrangement, you would hear the familiar 'phasing' sound as the comb filters change. Notice how much energy is missing in the prime region of vocals.

## Phase.

It is possible to hear 'phase' under very controlled circumstances but what people mainly hear is the amplitude effects caused by phase differences between two sound sources combining (or trying to).

A phase anomaly is a departure from a linear phase response. The audibility of true phase anomalies is a lot smaller than the audibility of amplitude anomalies caused by phase cancellations, and unless the anomalies are approaching the Blauert and Laws criteria, they will be unnoticeable. We hold that in a hi-fi environment 95% of what you hear is amplitude related, and in a PA environment it's more like 99%. The additional effects in PA are reverberant energy, a lot more delayed reflections outside the Haas window and generally a lot less accurate reproduction from the loudspeakers.

All most all loudspeakers on this planet do not have a linear phase response on their own. Time alignment of drivers, ie. moving acoustic centre of one relative to another does not produce a linear phase system but only produces a more linear phase. Moving drivers into time alignment primarily changes the amplitude response around the crossover region, and it is quite possible to have flat spectral energy in the crossover region

with time misalignment between drivers.

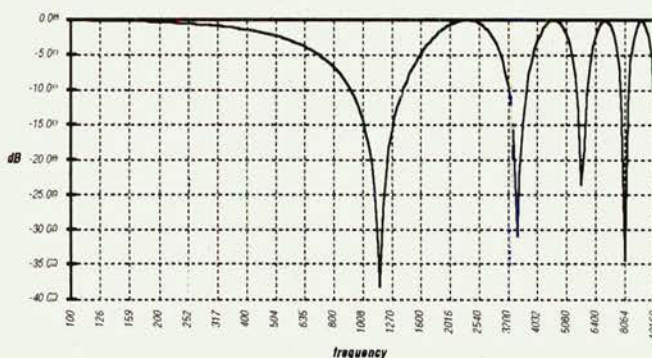
Quite a few years ago now, we used group delay equalisation to correct phase response anomalies in a very high quality experimental loudspeaker system for the University of NSW Music Department. The object was to produce a loudspeaker that was as technically accurate as possible for their precise work in psychoacoustics and electronic music departments. The results were technically good but the audible difference in going these extra ten miles was minimal.

It is possible to hear the effects of phase correction, but it's really only discernible in headphone and hi-fi situations. These days many companies are now doing this and we welcome the advances, but the point of this discussion is to highlight that most audible differences are made in the amplitude domain, and a loudspeaker that is consistent and accurate in it's frequency response will sound very good, irrespective of the phase response.

That means that if you have an amplitude response that is less than optimal and correct it using equalisation, you will have a better sound irrespective of the phase response. As a matter of fact in most circumstances equalisation of loudspeakers (using equalisers that introduce phase shifts) will actually also improve the phase characteristics (within limits).

A flat amplitude response with a phase

figure 2 - effect of standing at 30° to two speakers spaced 300mm apart.



anomaly will most probably sound fairly similar to the same flat loudspeaker without the phase anomaly.

## Important effects

The effect of phase misalignments between drivers or systems show up every day in most sound system set ups.

They are very important in loudspeaker crossover design (both passive and active) and anyone who tries to use 'off the shelf' crossovers or substitute drivers in a commercial product with a more powerful or 'better' driver to get an improved performance are tinkering with danger, and possibly don't know what they are doing. Either that or the designer got something wrong in the first place.

Another example. At the last AES conference in Melbourne a 'PA shoot-out' was set up where the delegates were able to compare a reasonable selection of commercial small concert sound reinforcement speakers. One well known manufacturer set their product up with two boxes stacked side by side. The result was that off axis a significant amount of energy was missing in the upper frequencies (above 1KHz) due to phase cancellations caused by the time delay introduced by the separation of the horns, giving severe comb filters. The product *would* have sounded better using a single box.

Recently we were called in to investigate sound complaints at a Sydney theatre musical. Another well known product with two 100° x 100° horns were mounted side by side and being used as coverage for the dress circle, but only splayed by about 20°. The predictable result was measured and heard as immense energy missing around 1-2.5 kHz over much of the circle (other than on-axis). No amount of equalisation can cure this problem as the problem is spatial caused by path length differences and is not related to the loudspeaker response. Any changes made to electronically correct the off-axis problems would have shown up as increased problems on-axis. What was required was a rethink of the positioning and angling of the boxes.

Sometimes one box can provide better coverage than two because the spectral cancellations are reduced, and if one has enough sound pressure output, consider using one box only.

So next time you think you hear phase problems, try changing the positioning of the loudspeakers or equalising the amplitude response. It may just work.

There'll be more to follow on this topic. See you next month.

Contact Elecoustics on  
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## What is DMX-512?

Thirdly, in electronic terms it is more reliable to transmit a discrete or digital signal than an analog one since the dimmer need only decide whether the state is off or on rather than if it is 5.0 Volts or 5.1 Volts.

A perfect example of this is the modern CD versus the LP record. The LP operates as an analog system since the sound reproduced depends on the relative movement of the needle, whereas the CD is recorded in a digital format that is read by a laser inside the player. I am sure you would all prefer to have the quality of the CD as opposed to the LP.

As an aside to this you would also notice that the LP record is subject to a lot of noise (crackles and pops) however the CD is virtually noise free. This holds true for our lighting system as well; the digital system is less prone to interference or noise than its analog counterpart.

This is not such a large concern when the desk and dimmer are both within a few metres of each other but is of great advantage if they are separated by some 50 or 100 metres.

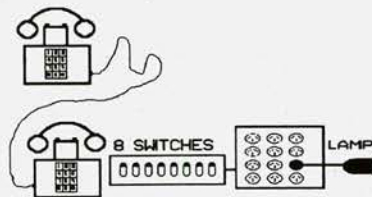
Nevertheless, it should also be borne in mind that just as a scratched CD will not reproduce correctly our digital signal is not necessarily bomb proof.

### SERIAL COMMUNICATION:

Now to convey the state of our switches (our byte of information) from the controller to the dimmer, we could use one wire for each switch thus requiring at least nine wires for every dimmer we wished to control.

individual switch is transmitted one after the other in a pre-defined order.

To draw a parallel; imagine two people on a telephone line. The person transmitting the information could convey the state of the switches by the words "START, (which off course indicates to the receiver that the information is about to be sent) OFF,OFF,ON,ON,OFF,OFF,ON,OFF,STOP". The person receiving this would then be able to interpret these and set the dimmer level accordingly.

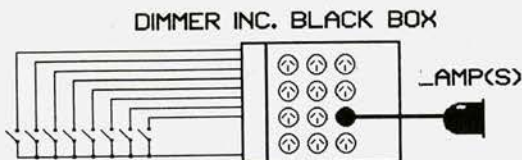


Obviously electronics is able to carry out the task much faster than two people on the telephone and to give you an idea of the speed involved, DMX512 would convey the above information in about 44uS. That is; about 44 millionths of a second.

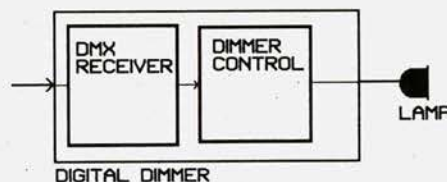
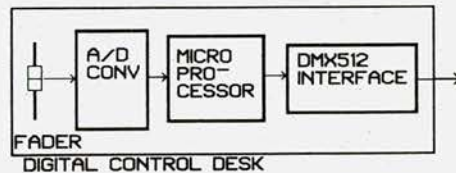
Thus using serial communication we can get back to two wires per channel.

Naturally enough in the lighting control desk we want to use a fader and not switches to set the level of the lamp. To achieve this the control desk contains an Analog to digital converter (or A/D converter) to first convert the position of the fader into our desired digital representation of eight states.

So our control system now looks like this:



This doesn't appear very attractive and again electronics can be used to our advantage. What in fact is used is a technique called serial communication. What happens here is that the dimmer is first told that the state of the switches is about to be sent. Then the state of each



### MULTIPLEXING:

We have seen that it is possible for us to convey the desired level of the lamp to the dimmer in a very short time. It seems fairly ludicrous therefore for the controller to tell the dimmer every 44uS what level we want the lamp to be. There is no way that the intensity of the lamp could alter appreciably in such a small amount of time.

What if we were to only send the level of the lamp to the dimmer say once every milliSecond (mS) (thousandth of a second) This would still be faster than the lamp could visually respond (in actual fact even faster than the average dimmer could respond but that's another story).

If we choose to do this we are now only utilising the wires between the controller and dimmer for only a small percentage of time; 44uS every 1mS. So instead of letting the line sit idle and doing nothing for most of its life, we have another option. That is to use the spare time to send the level of other channels down the same wires.

This is in fact the technique used in DMX512 and the engineering term for such a technique is "Time Division Multiplexing" or simply multiplexing for short.

In DMX512 up to a maximum of 512 dimmer levels can be sent down the same pair of wires. This results in the level of each dimmer being updated approximately once every 22mS or about 44 times per second. This is considered to be a practical limit or perhaps more a compromise between the number of channels we can send down the line and the update rate of each channel. In practice it has been found it to be a good compromise.

### Continued next month.

*Gary Pritchard is the owner of LSC Electronics, an Australian Lighting Control manufacturer, based in Melbourne.*

### Chapter 3: Directivity and Angular Coverage of Loudspeakers (continued)

#### A Comparison of Polar Plots, Bandwidth Plots, Directivity Plots and Isobars

There is no one method of presenting directional data on radiators which is complete in all regards. Polar plots are normally presented in only the horizontal and vertical planes. A single polar plot covers a single frequency, or frequency band, and a complete set of polar plots takes up considerable space. They are, however, the only method of presentation giving a clear picture of a radiator outside its normal operating bandwidth. Beamwidth plots of the 6-dB-down coverage angles are very popular because considerable information is contained in a single plot. By itself, a plot of DI or Q conveys information only about the on-axis performance of a radiator. Taken together, beamwidth and DI or Q plots give a fairly complete picture of the performance of a radiator.

Isobars have become popular in recent years. They give the contours about the principal axis which is the response is -3, -6 and -9dB relative to the on-axis maximum. They are useful in advanced system layout techniques involving two-dimensional mapping of spaces. The methods of presentation discussed above are shown in Figure 3-4. (bottom, left) Still another way to show the directional characteristics of radiators is by means of a family of off-axis frequency response curves, as shown in Figure 3-5. (right) At A, note that the off-axis response curves is the JBL model 2360 Bi-Radial horn run almost parallel to the on-axis response curve. What this means is that a listener seated off the main axis will perceive smooth response when a Bi-Radial constant coverage horn is used. Contrast this with the off-axis response curves of the JBL model 2350 radial horn, shown at B. If this

device is equalised for flat on-axis response, then listeners off-axis will perceive rolled-off HF response.

#### Directivity of Circular Radiators

Any radiator has little directional control for frequencies whose wavelength are large compared with the radiating area. Even when the radiating area is large compared to the wavelength, constant pattern control will not result unless the device has been specifically designed to maintain a constant pattern. Nothing demonstrates this better than a simple radiating piston.

(Continues)

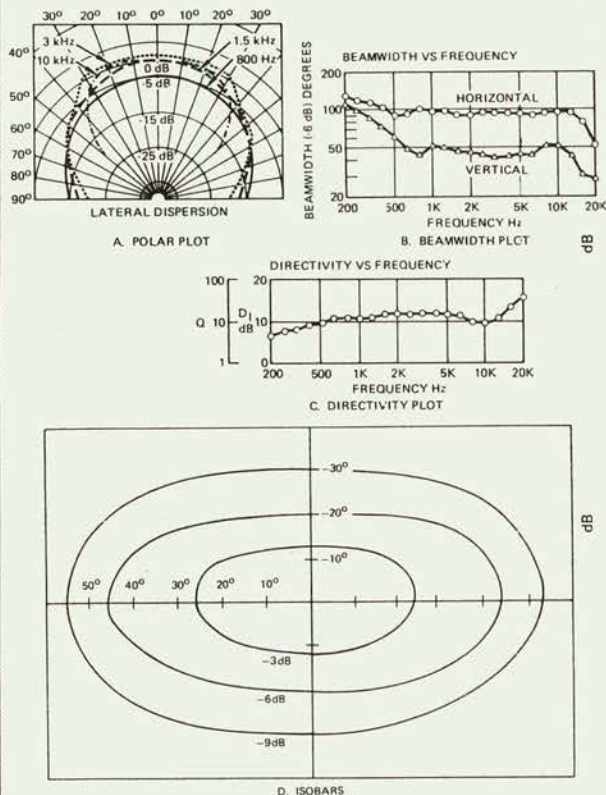


Figure 3-4. Methods of Presenting Directional Information

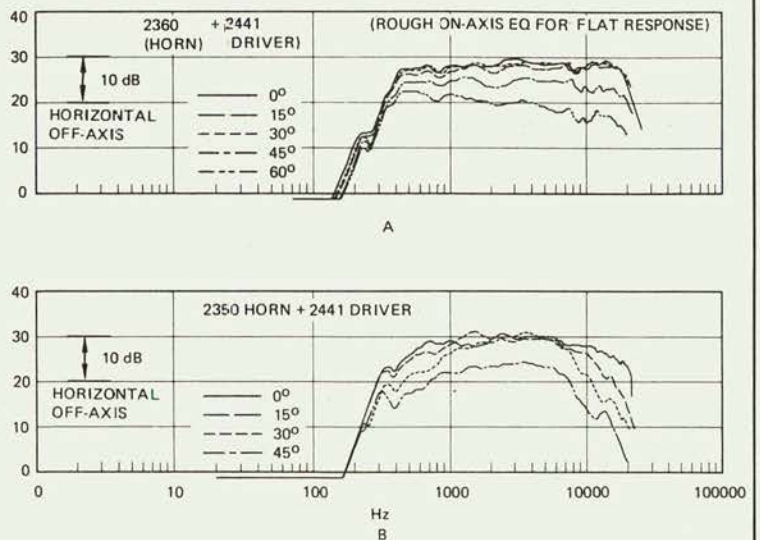


Figure 3-5. Families of Off-Axis Frequency Response Curves

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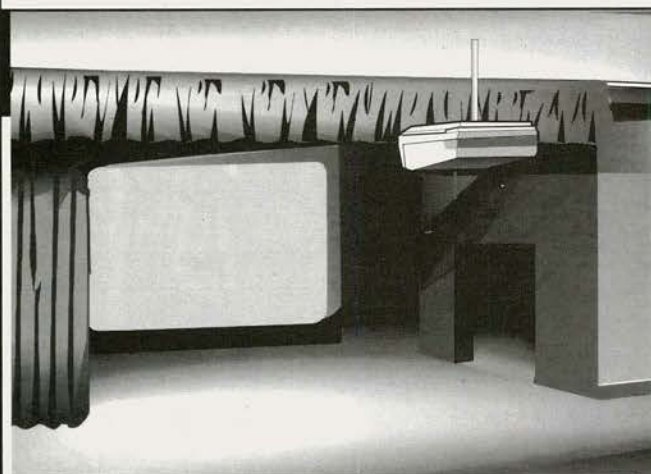
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# ACTIVITY PAGE!

## The Punter's THEATRE XWord

### Across

- 3 Not a home unit.  
5 Put in the aperture.  
8 A filter, not for your hair.  
9 Made by the props department.  
10 Colour gel like a girls name.  
11 Out of the closet into the ...  
15 When this lady sings the show's over. 16 Lost the...(re lighting).  
19 Loadout. 20 Roll ou the...  
25 MAKES all the money in a theatre.  
26 Pretty FOH person.  
28 It's your...call.  
29 Mesh that attenuates light.  
30 A door on the floor.  
31 Up in the...  
33 Before halogen, after lime.  
34 A small curtain or somwher to bet.  
37 Not a oval.  
38 Not postset.

- 23 Load in.  
24 All the world's a ...  
27 Not him.  
32 people sit there, cars do it.  
35 Not the one on the front of a Cessna.  
36 The greatest sin to raise the curtain...



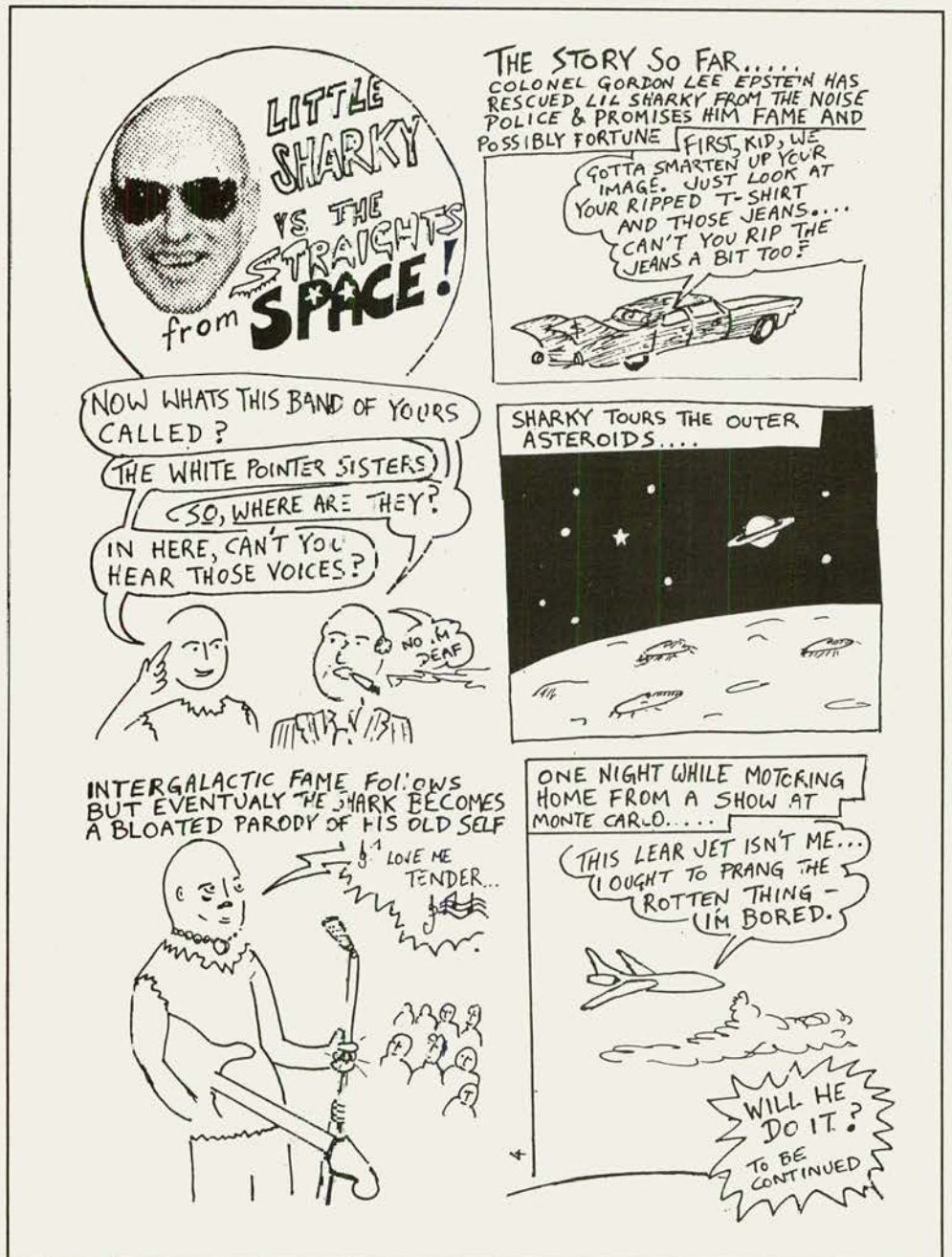
### Down

- 1 Famous Sydney theatre now gone.  
2 Early morning...  
3 Were the punters sit.  
4 Were the punters walk  
6 Shut the...  
7 ...the coup.  
12 Softgoods.  
13 Not prompt.  
14 Illusions of infinity.  
17 Measure of light or good for washing woolens.  
18 Often found in theatre, but not regal.  
21 Lights and trams have them.  
22 Bar were lights hang out.

### Last Months answers:

**Across:** 1 Bate, 3 Phil, 6 Mick, 9 Bevan, 10 Clay, 11 Messenger, 13 Brown, 14 Sattler, 15 Bob, 20 Valleys, 21 Lewis, 22 Moose, 24 Black, 27 Coote, 30 Barnes, 31 Irvine, 32 Rogers  
33 Twenty, 34 Raper.

**Down:** 2 Hyde, 4 Holman, 5 Langlands, 7 Keraney, 8 Aubert, 10 Churchill, 12 Eleven, 16 Beetson, 17 Norm, 18 Karalius, 19 Gasnier, 23 Seventy, 25 Ayliffe, 26 King, 28 Gibson, 29 Cleal.



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CIRCLE 162 ON READER SERVICE CARD

# Duncan

## Zippin' on the Zippo

After reading about my April Fools Day record shop prank, in a previous incarnation of this magazine, quite a few people have asked me if I have any more stories about the record industry, so here's another one.

At the record company where I worked, we had all been given chrome plated Zippo lighters with the company logo emblazoned in Red on them. Since I didn't smoke it wasn't really much good to me, but I thought I'd keep it in my pocket so I could light the cigarettes of the dealers. The idea was that I would zip it out with a flourish as soon as they started to drag a fag out of the packet, so they would forever be in my debt and order a whole stack of records they didn't want. It was great to be so young and naive!

So, Monday morning, with this plan in mind, I filled the thing up with petrol, stuck it in the pants pocket of my suit, and went off to my first call, a major record store in the city. The buyer there was a compulsive chain smoker so I figured that I'd be sure to whip it out once or twice during my visit.

I waltzed into the shop at my allotted time, and waved hello to Margaret, the buyer, who was busy talking on the phone. The shop was fairly empty that time of day, except for a few early rising record addicts browsing through the racks, and a girl listening to something on the headphones at the side of the counter. It was quiet in the shop, and you could hear the girl humming loudly and tunelessly along with the music she was listening to, the way people do with headphones on when they can't hear themselves.

Suddenly she started waving her arms at her girlfriend, who was across the other side of the shop.

"Oi!" she yelled, in a voice that could have been heard by a deaf person swimming underwater in the City Baths, "COME AND HAVE A LISTEN TO THIS - IT'S FUCKIN' GROUSE!"

The rest of the customers put their hands over their ears and turned around to see the source of this noise. Her girlfriend came over and yelled at her to shut up. The one with the chainsaw voice suddenly realised the situation, blushed red in embarrassment, and the two of them ran out of the shop.

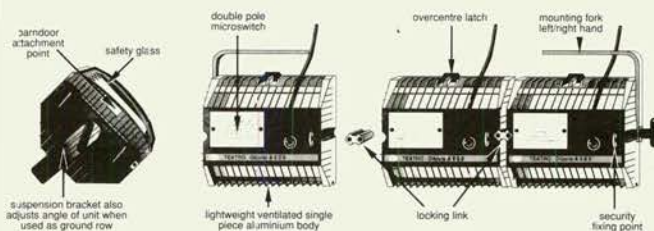
Margaret got off the phone, pulled out the record orders and laid them on the counter in front of me. I began to write them down on my order pad, and out of the corner of my eye I saw her start to pull her packet of cigarettes out of her pocket. I put down my pen, and surreptitiously put my hand in my pocket to grab hold of the lighter.

When these lighters had been given out to us, the Sales

# Fry

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#### SAFE

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Manager had shown all the non-smokers how to get the things going.

"You zip them down your trouser leg to flip open the cap," he said, "And then you zip them up your leg against the little wheel to get them it lit up."

When he demonstrated it, it worked perfectly. So during the weekend I had secretly practised all this zipping up and down until I thought I had it all pretty well worked out for a non smoker.

Margaret's fingers selected a cigarette, and slowly moved it towards her mouth, then she patted the pockets of her cardigan for a light.

"No, let me," I said, pulling the Zippo from my pocket. I zipped it down my leg to open it, zipped it back up my leg to light it... and my trousers caught fire!

I hadn't put the thing back together properly after my weekend practising, and all the petrol had leaked out into the material of my trouser leg!

"Shit, shit," I yelled, hopping around the shop on one leg while beating my hands against the other trying to put the flames out.

"Hey, Dunk, hold still, will you," cackled Margaret, bending down with her cigarette in her mouth, trying to get a light off my flaming pants. Nearly wetting herself laughing, she leaned back against the counter, tears pouring down her face as she laughed...

"Shit a brick Duncan," she said, after the fire was put out and she had regained her breath. "Have you got any more tricks like that? If so, for Christ's sake don't try them so early in the morning. Let's have a look at that thing."

I presumed she meant the lighter, so I placed it on the counter.

"Oh, a genuine Zippo," she said. "Very nice."

I saw my opening.

"Do you like it?" I asked. "You can keep it."

"Can I? Are you sure? Won't you need it?" She didn't wait for an answer, though, and slipped it straight into the pocket of her cardigan.

It was my ticket to riches. She ordered so much stock that I didn't have to make any more calls that day! (Or that week!)

# Elton John...

*Steve Cohen is a lighting guy in a hurry - but he likes a chat, as Catriona Forcer discovered in Sydney!*



Elton John's 'The One' tour has been taking Australia by storm and lighting designer Steve Cohen flew in especially to update the show which has already played in over a hundred venues around Europe and the USA. The lighting was some of the best I've seen for a long while and was executed by an extremely animated Steve. There were four crane like trusses which stood at each corner of the stage and provided a varied framework over the performance area. The lighting instruments included Starlasers, Starlites, VL4's, VL2b's and, added on this leg of the tour, some VL5's.

There were also a monumental twelve follow spots. Highlights of the show included the piano riser which, once airborne, could rotate a full 360 degrees. Also memorable was the animated starfield which appeared on the backdrop during 'Rocket man'. Steve Cohen must be one of the easiest lighting designers in the world to interview because once he gets going there's no stopping him!

"Usually I design the shows but I don't actually run them myself. I go through the



rehearsal period and then I appoint a lighting director to go out and operate the show although I may come in for spot checks and to make notes. What we've done on this tour is that we've changed a good deal of what we originally started doing for a couple of reasons, the main reason being that we felt the show needed a bit more for the venues in Australia."

"I've known the Elton John organisation for quite a time being personal friends with a few of the members. Also I've been working with Billy Joel for about twenty years who is also a singer/pianist. I've been asked before to design

for Elton John but, for scheduling reasons, I haven't been able to do so in the past."

"Elton had already asked Gianni Versace to do the production design which was all well and good except as production designers they were unfamiliar with the process. I'm a very production

orientated designer, I understand how the things I do relate to the overall production."

"The tour went on to do a hundred shows around the States and Europe, I went in and did a couple of adjustments when the show

## 21 Years Mixing Elton John - !



Clive Franks is not your typical sound engineer - not at all. Clive is refreshing because despite the fact he's worked with his act for almost all of time, he is not overtly technical, nor does he claim to be. "I don't actually go up on stage", he says, and it's not the mark of a prima-donna, rather it's the realisation he has people who can better fuss with equipment. For Clive it's the mix that matters - and he has a client who has a surprisingly loud stage level, making it a challenge.

Elton John has the world's loudest

# ...live in Sydney

finally came to America. We added some VL2bs and I introduced a little bit more colour into the show because we were finding that this visual effect we were going for, which was very monochromatic, very cold and underlit, worked for the new material off 'The One' because that was the album design and concept by Versace. But it really wasn't effective for songs like 'Saturday Nights Alright' that require, visually, a lot more going on. Then there was a change of equipment - we had 18 Telescans out on the road with us and for financial reasons, as well as shipping, we had to do some kind of substitution."

"The difference between a Telescan and any other mirrored instrument is the movement is really controllable on the Telescan especially the timed movement. They are also very bright and they have spinning gobos so they are the best product of that type although they are expensive to rent. They are big, cumbersome and a pain in the arse for production people.

"Elton is fairly static on stage which makes my job more difficult because if you have to make it look different in every possible way. There's a fine line between making the lighting proper and upstaging him."

"I've added some VL5s to the show here, you get tons of light out of them and they give a fat, punchy beam. Instead of invading the cues that we've been rewriting for the sixty odd Vari\*lites we've already got in the show, I set up the other VL5 console and whacked in maybe 30 cues and I'm operating that. They've been really helpful as spice. Because I've been away from operating shows for a couple of years, I feel I've come back with a better power of observation, my perspective is different and, all of a sudden, I'm enjoying it. I was still doing a lot of work but avoiding going on the road. I know a lot of designers who send out operators with their shows dread going to see the show a year down the line because either the crew have fucked with it or they've not injected vision. That's why I get called out to my shows to check them. A lot of artists feel that if they've paid a large sum the design is there and they are laughing. If I got a phone call from someone saying they had seen the Elton John show and it didn't look like anything I had done before, I'd be on a plane to find out what was going on!"

"I have a worry that the process of design

without direction will open up the flood gates of a lot of people because the younger artists won't want to do it anymore. They'll say 'hey why do I have to pay Steve Cohen a zillion dollars if I don't get Steve Cohen out there to make the show evolve'. We have to be very careful although it doesn't effect me personally because I'll always have a steady diet of clients. It won't cut into me directly but will erode the quality overall and it will erode the ability for designers to generate technology which I think a lot of us have done. Without people like the Brantons, Smeeton, Bennetts, Brickmans and me, I don't think Vari\*lites would have developed a lot of these instruments."

"I get excited about everything. I've literally used every moving light that there is with the exception of a few that sort of come in and out of the market. I've used Vari\*lites, Telescans, Morpheus, Intellabeams and every colour changer around. It keeps me honest and it keeps all contractors honest because they know I'm not particularly in bed with any one of them. It also gives me the ability to use all the tools because I believe there are horses for courses, there are particular applications for different kinds of instrumentation. I love the VL5's so much, I'll probably use 150 of them on Billy Joel! This is the first light that I have found that can accomplish, for a limited budget, so much and notoriously with Billy we don't spend a lot of money.

The business is competitive if the manager or artist is smart. Some production guys will ask four or five lighting designers to submit ideas which I don't think is really proper. I don't do that. I'll give you a meeting and, once I've got a sense of what is wanted, discuss the show. Coming up with the ideas and presentation is three quarters of the job. I'm still very much star struck, when I sit with an artist like David Byrne I think 'wow!' even though I knew if I worked with him I couldn't charge my standard fee. I don't care because I've got the chance to sit across the table from someone I respect musically and visually. Eventually we both passed it because of finances because basically he didn't want to spend any money on the design." ○

foldback - four wedges, two each side of his now-a-days electric keyboard. The output in S.P.L. is truly staggering.

"I've worked on some of Elton's albums in the studio, I'm a musician, so I'm referring to how the albums sound when I mix. I look at a show musically rather than technically- I'm a studio engineer".

Clive mixed the Australian tour on a PM-4000 48 input console, which he was very happy with. It was a long way from the first device on which Elton was mixed, a valve thing in Amsterdam.

"I was asked to fly out and mix a show, and I'd never done a live gig. It was 1971, and the monitors ran from the same board - there was no prefade - I turned the vocals up and it fed back! The audience were screaming at me in Dutch - it was a disaster. Elton called me in and thanked me after, he said it was great because at least it hadn't feed back through the WHOLE set like before!"

The great leap forward was the Clair Brothers S4, when all the speaker components went into one cabinet and PA became like a large hifi. "I used to really look forward to going back to America each year because everything would change and improve".

EQ is Clive's number one focus. "If you get the room sounding right everything else falls into place". This is borne out by the generally flat settings on each channel of the PM 4000. "Some people tune (PA) with Pink Noise, some with a tape they know - I in fact use my voice. I always use an SM 58, I go through the system for 15 minutes to get it sounding right, then put on Peter Gabriel's 'Sledgehammer', because it's got every frequency on it".

Clive demonstrated the 60 S4's flown in Sydney's Entertainment Centre, then showed me how they sounded flat, without EQ. Although his EQ curve was savage, with more cut out than the text book says is advisable - he had it right!

-Julius Grafton.

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### Langeley BIG Console Debut

Soundcorp recently had a showing of the new BIG console from the AMEK group. It features Supertrue Automation - and it talks back to you! Pictured are Shaun Ferrigan (left) and Michael Rutledge.



Jenny & Chris Royce, from Australian Monitor.



Andrew Balawin & Visard MD Sam See, caught at Metropolis



Friends' David Williams, Fiona Blackett & Chris Johnson.



Dave Edwards, famous guitar tech, about to go worldwide with INXS. Hard at work!



At Metropolis, all kindness with Brendan Watkins & Kerri Minchin



Emmauel Zino of Australian Disco Supplies, with Gina Zino on lap. Hmm. Night Sounds Mike Jordan looks on.



Peter Wait, famous sound engineer, practices sunlight squint - unnatural in back of semi.

### Nostalgia Corner

Well it **had to happen** eventually! Over the past -almost 3 years- that we've been producing a magazine (Channels before this one) we've been given certain mouldy old photographs detailing the raw origins of the Aussie firm, Jands. Given they are all at least 20 years old, they show certain foundation staff in a very favourable light. Our first 'expose' is current Vari\*Lite Australia Director, **Peter Rooney**. Note the keen and excited expression!





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## Venues

### Capella gets a cultural centre!

By Graeme Hague, Connections FNQ Correspondent

The place really deserves a tourist tee-shirt, like "where the hell is Capella?" - and it's a bloody good question! You might be on the road with a small theatrical production or a band with a country flavour, and think "well, at least we don't do one horse towns!" Capella has one pub, one bank, one main street, and 1,000 people. It also has, would you believe, one brand new performing arts centre that seats 500 punters!

Capella is 320k West of Mackay, Queensland. The manager of the Capella Cultural Centre, Sandy Bowman, was getting buried under his workload, being responsible for everything from cheque signing to landscaping the huge carpark. He let out a yell for a theatre tech to help with the 'soft' opening, three shows with some very smelly Russian Cossacks.

Sandy took me around the venue. The day before, some willing helpers had painted the stage with its first coat of 'Elephant's Hide' grey paint, which they managed to paint halfway up one of the cloth legs as well. Sandy explained that small-town diplomacy was preventing him from asking how they actually achieved this. The grey the paint shop sent wasn't elephant hide grey either, unless it was an albino elephant!

Technically the building seemed OK, it was already in use as a cinema. I did a double take at the sound system - the suppliers opted to provide a 31 band EQ for the FOH, along with a stereo compressor - but no EQ for foldback. I checked with Sandy - 'what EQ?' he said. I wanted to run 8 Shure microphones very hard over a bunch of weird, quiet acoustic instruments - each being played by deaf Russian musicians insisting in broken English their instrument be loudest in the monitors! The monitor priority was based on pecking order, not any practical sound theory). I needed an EQ, I whipped the back off the effects rack - the hard wiring was very efficient - I couldn't re-patch anything.

The show went on, of course. The Russians had their own technicians, the sound guy didn't know what he was doing and was a real fiddler. During the performance I had to content myself with standing behind him and making noises like 'Tut!' and 'Nyet' when his hands strayed towards the desk. Very effective!

One of the local lads did followspot for the first show - a real spot in a real theatre, it took him a couple of days to calm down. The next show and no-one fronted, so I operated the spot. Being Mr. Theatre I excelled by knocking into the Prolite and splaying a beam all over the walls before recovering. After three shows I'd had enough. Sandy and I tested the new Bar Facility, while the Russians got more smelly.

The theatre is equipped thus:

**LX:** is driven by a 24 channel LSC Precept with 24 x 2k dimmers. 2 FOH bars are fixed, likewise o/head bars are static. There are 40 lights, all 650w, and one followspot.

**PA:** Yamaha MR 1642 desk, Yamaha EQ and Compressor, Inkel MA910 amps, Yamaha S3115 boxes FOH and EV wedges. There are four microphones only - 2 Eleco wireless and 2 EV dynamics. The patchbox is too far away. In the control room is a Denon dual tape deck & six CD player - with the rest of the gear placed on the back wall well away from the desk, for Christ's sake! There are comms - a master and 2 sub stations.

**STAGE:** (Guestimates!) 12m proscenium with about 5 metres of arch, and about 8 metres deep to the BLUE cyclorama. The metre high flooring is compressed chipboard with storage space beneath, so things can get a little boom-boom. There are fixed legs and a French-action house rag.

It's got a good loading dock, and a flat parquet auditorium floor.

**Contact:** Sandy Bowman, Manager.  
**Operator:** Peak Downs Shire.



## DBX swap local distributor

*Syntec International now represent expanding line*

No sooner had DBX announced a swag of new product, they also changed representation in Australia, displacing Amber Technology in favour of Syntec International.

Typical of the new product released by the California based but AKG owned firm is the 1024 Buffer Amplifier (above). This is an interface for connecting high-end studio equipment to -10dB equipment, or

consumer equipment to +4dB. Better still, the 1024 can act as a gain stage where you need to drive balanced signal a long distance.

Both RCA and XLR inputs and outputs are featured, with groundlift for the XLR's. DBX say the amplifier stages have a 'vanishingly low distortion - it's a nice phrase, huh?'

For more DBX details, call Syntec International: (02) 417-4700.

## Premier Exhibit Lighting

The Next Move In Lighting was a showcase of the latest lighting equipment for theatre, film & TV - held by Premier Lighting. The event was staged in Sydney, Melbourne & Brisbane, with most of the country's main LX distributors on board. Michael (Dr. Light) Tanner Y Rosco Australia's Ian Baseby travelled to the three cities.

Interesting items included ShowCad software, used to run the demonstrations linked using a SMPTE timecode to music. Rosco's new Rosco Chiller (below) is an attachment for Rosco foggers to give a low hanging fog. The Melbourne

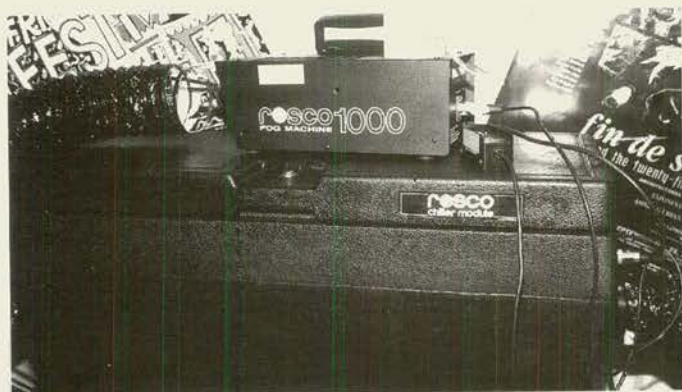
## Apogee for BMG Arista

Apogee 944G linear phase anti aliasing filters have been installed in the Sony 1630 mastering system at BMG Arista/Ariola Limited in Sydney. Bruce Sherdrick says he is very pleased!

Apogee Details from Shane Morris, (02) 953-0020

show saw an announcement that Premier are now the new service agent for Jands Lighting. Premier are pushing hard into sales and service as well as their traditional hire market in the three cities.

Contact Premier: (03) 646-4522, (02) 550-9233, (07) 262-8366.



## EV debut Interface

*New console modular, 8 to 40ch & options*

Having had several examples here on pre-release trial, Mark IV Australia have now formally released the Interface, a live mixing console family with origins that go back to DDA - another Mark IV firm.

To quote Mark IV's Grahame Harrison: "any Thesaurus will define the noun 'Interface' to mean connection, link or bridge, and the verb to denote co-operation or unity." Heady stuff!

For Australia Interface is a 4 or 8 subgroup live console, (four subgroup version is pictured below) with some fairly unique module options, like the 2816 Multi-Module. This accepts six inputs on XLR's, and finds favour where a sound hire

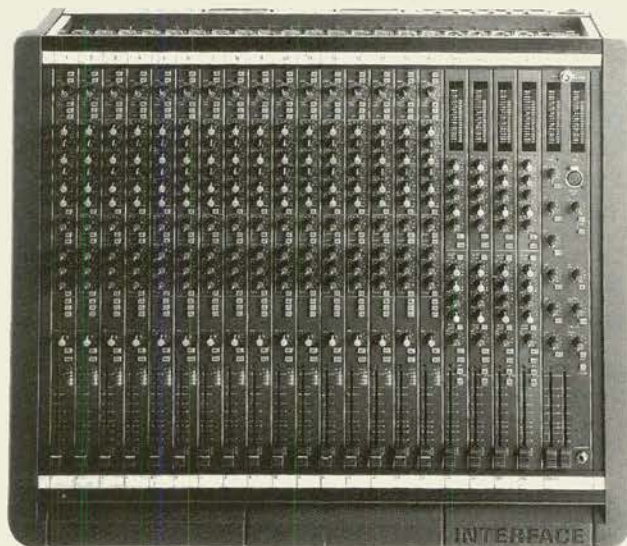
outfit does big band or orchestral type work.

Standard Interface input modules have a five LED input meter ramp, and four band EQ with dual midrange sweep. Six auxiliary busses are further enhanced with a 'direct' out, a feature adopted by Soundcraft and Ramsa in recent times, allowing a channel to 'direct' feed an external processor or effect.

Other module options extend to a Matrix (four output) module, Stereo line input module, and Dual line input module. A Digital input module takes fibre optic input.

For details call Grahame Harrison, Mark IV: (02) 648-3455.

**CIRCLE 110 ON SERVICE CARD**



## SALES BYTES

■ TASCAM M600 mixer to Beyond 2000 with Tascam CD-601 CD player. Sold by AVD Sydney, (02) 550-0982.

■ ETC Microvision FX lighting console to Ch. 10 Brisbane, Jands.

■ ShowCad LX control software to The Staging Company. Sold by Startec Melb, (03) 646-6566.

■ YAMAHA DMC 1000 mixer for Roger Savage at Soundfirm, Melb.

■ JBL 4892 Array Series loudspeakers to Syd. Opera House for Into The Woods, with 2 ES 52000 digital processors & S.A.F.E. fly gear. From AR Audio, Sydney. Call (02) 299-2240.

■ RAMSA 24ch mixer for the Aust. Museum, sold by AR Audio.

■ MORE JBL ARRAY: Burswood Resort have 8 JBL 4892 Array boxes, an ES 52000 controller and 4 Jands SR 3000 amps. Rick Browne said to be happy. Sold by Kosmic in Perth.

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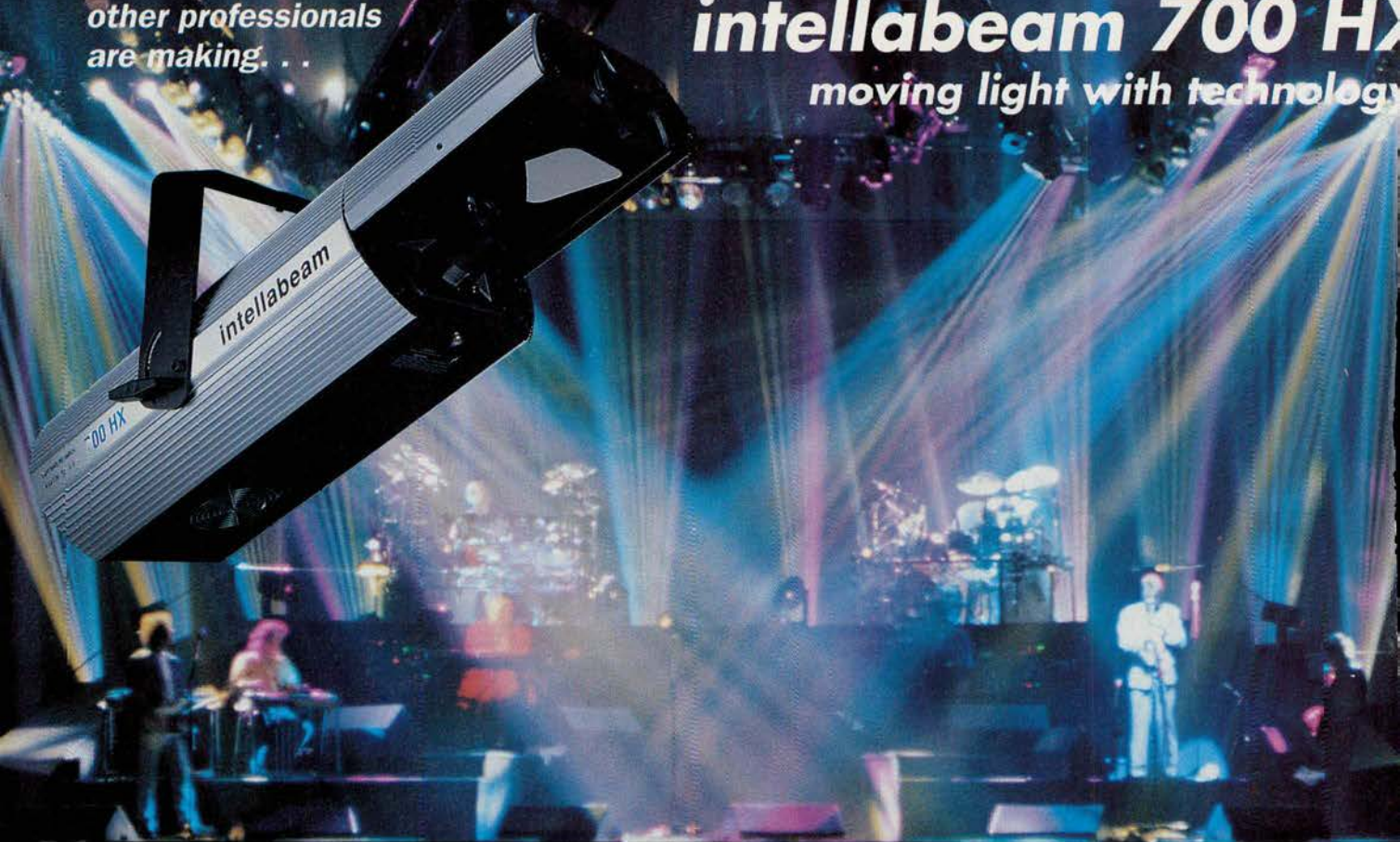
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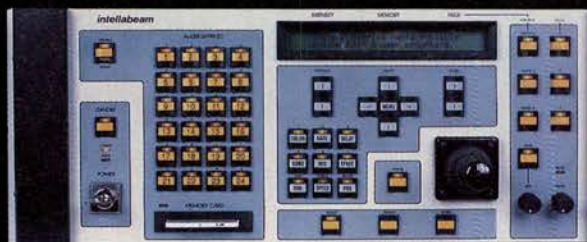
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## Product Bytes

■ **ROSCO** have the 'Setting The Stage' videos, whereby anyone can learn about adding dimension and interest to scenery. There are three tapes, 'Preparing The Surface', 'Painting Exteriors', and 'Painting Interiors'. Why not? Call Rosco for details, (02) 906-6262.



■ **ROSCO** also have Glow Tape and RoscoGlo, a liquid phosphorescent paint - all handy for stage markings.

■ **GLASS** lighting filters also available from ROSCO; 50mm square & 168mm round, 12 spunky colours.

■ **REEL FX** in L.A. say they have the industry's finest smoke machine - the Diffusion Fogger. As well as all the usual sales blurb, they have a ruling from the State Of California that states the thing is safe to work with in terms of health exposure. They also have 101 film and stage effects, and The RE Fan, which moves air quick and silent. For details you must call Mr. Ken Sher himself, in LA: 213 960-4500, or pager 818 410-8663.



## PA SABINE Feedback Killer

Now a new 12 filter model - with full control

**SABINE** found a niche with the FBX-900, now they have added the FBX-1200 which is even more of a feedback exterminator!

How it works: the 12 EQ filters are DSP based, the device senses acoustic feedback and applies a filter, faster than you or I could, they say. Each filter is user definable, with width from .01 (that's *one-tenth of an octave* - less than the tightest Q on most parametric equalisers) through to 2 octaves wide.

The user gets to set parameters for speech and different musical applications, and different modes mean that you can fix the filter position or set it on automatic mode,

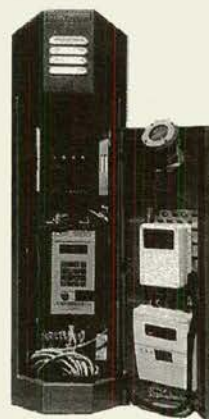
where the device hunts down your feedback and kills it, without mercy! This occurs in .3 seconds at 1000Hz, for example.

Sabine say the maximum filter depth is a staggering 70dB!

More details from Audio Telex, (02) 647-1411, (03) 562-8566.

## Denon Deck

The DN-720R (*below*) is an affordable workhorse rack mount cassette deck, according to Denon. A very useful speed control varies things by +/- 12%, great for live pitch matching. It's got 2 heads (better than 1?) and a wired remote control. Easy controls, Auto tape selector incl. Details from an AWA near you!



■ **TOUCH TELL** is an information dispenser & AV activator. You put your hand on it, and it tells you things! It's made in Qld by Creative Lighting, (07) 252-5686.

## HOW

### What's the crossover point?

A crossover point is the point in the frequency range that your high frequency starts and your low frequency stops. The 'crossover' usually starts to fade the low frequency out, with a slope of up to 24dB per octave. At the same time, your high frequency is faded in, with both at about -3dB at the actual point of 'crossover'. One octave either side of the 'point', both high & low are -24dB - quiet!

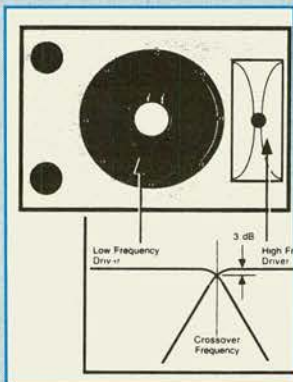
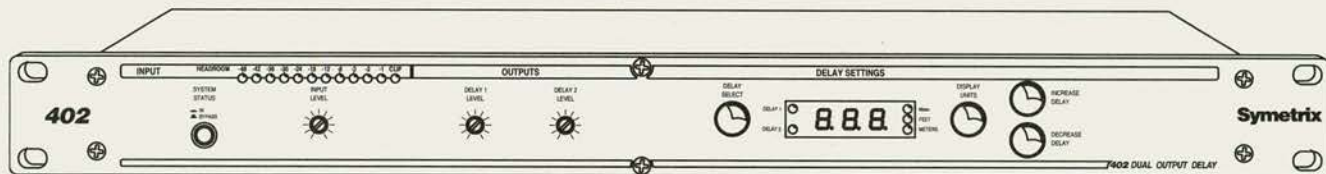


Diagram courtesy Yamaha Australia

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## PA Symetrix 402 Dual Delay

Remote speaker system delay is the purpose of the Symetrix 402 (above), a one input, two output digital delay offering up to 884ms delay.

Depending on conditions, this means you could situate a speaker system 999 feet (or 325 meters) in front of the main speaker system, then adequately delay the signal to the outlying zone. While very few

applications call for this length of delay, it is typical of the versatility a device like this needs.

Both outputs can be set independently, and the 19 bit A/D thence 18 bit D/A converters ensure bandwidth is a healthy 12Hz > 20KHz at 1dB, which is the correct way to express this! (IE: Honest)

*Info- Audio Telex (02) 647-1411.*

## Vocalist II - rackable VHM-5

Digitech's VHM-5 Vocaliser is a very successful 5 part harmony device - and the new Vocalist II (below) is a rack mount version of the same thing. Essentially this pair offer around 100 programs, pitch randomisation on each harmony, and intelligent chordal, scalar and chromatic harmonies.

Both devices sample 16 bit linear

at 31.25kHz, for a vocal output bandwidth of 30hz to 12kHz - more than adequate for harmony functions.

You can program +/- fixed pitch detune on each voice, and program the harmony volume. Footswitch & MIDI control also, naturally!

Accepts line or XLR mic input.

*Full details from distributors C.M.I., (03) 315-2244.*



## Contracting Topics

■ **JBL** have added a new midrange horn combination, the 200 watt 2490H compression driver is a first for JBL. It operates in the range of 250Hz to above 3kHz with low distortion, and when mounted to the new 2393 Optimised Aperture Bi-Radial@horn, gives 126dB SPL. The combination is perfect for large scale voice reproduction systems where accurate dispersion to a measurable specification is required. Details from Jands Professional Division- (02) 516-3622.

■ **TOA** say the AX-1000 8 channel automatic microphone mixer will gate on quietly, quickly and auto-



matically. In a church, auditorium, function or court room, the AX 1000 will measure system gain and adjust each channel accordingly. The mix-

ing logic has been designed so each channel's detector operates differently depending on whether the input is On or Off. Detectors for 'ON' channels are more sensitive to 'gate open' than those which are off. This eliminates choppiness as a quiet talker uses a mic, it resists false gating due to background noise.

*More details from an AWA office near you.*

■ **BOSE** have designed a system for NASA, which is now in use aboard the space shuttle. Australian Richard Paynting said the speakers NASA had been using could not provide the clear voice reproduction needed - the space crew need to hear the ground crew without misunderstandings.

The resulting system, combining two speakers and a microphone in a single housing, was based on Bose's tiny Acoustimass-5 speakers. The system also conveys alarm, caution & warning signals. *More info from BOSE: 008-023-367.*

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# Inside Neds Atomic Dustbin

By Catriona Forcer

After a series of successful shows last year Neds Atomic Dustbin returned to Sydney in March to play three gigs - The Marquee, The Venue and Selinas. Other cities on the Australian tour were Brisbane, Canberra, Melbourne, Adelaide and Perth. Lighting designer Nathan Matthews, (who occasionally wears full Las Vegas Elvis gear whilst operating the show, took time out for a chat.)

In the UK Nathan chose to use the Whole Hog control system supplied by Neg Earth, whilst in New York the supply company, See Factor, gave him the new Lighting Coordinator which is the competition to the Whole Hog.

"Bob See himself came down to ask if the Light Coordinator was the better desk," said Nathan. "But I'd only had one days go at it and, like any new equipment, you have to tour with it to appreciate it. It's certainly good competition and the show actually looked brilliant. The problem with other desks is that the playback is not true because they still use linear faders. Whenever I played the Whole Hog or Lighting Coordinator back it was always true. It's like Vari\*lites, the light is a great light but it's how you program it that makes the effect. I managed to do some great things with Superscans because of the diachroics inside, the gobo changes and the prisms so in England it looked great. I've been trying to persuade Tony Davies of Chameleon to buy a Whole Hog desk and I've been telling him what's been going on in England."

Originally Nathan wanted eight Intella-beams for the Australian shows because he had been using them in America but he was told he could only have four Intellabeams and a

trained operator would have to go out with them. Nathan was a little indignant seeing as he has worked for Spot Co. in London and has used them for a long while. No matter what he said he couldn't convince them that he knew what he was doing probably because it is still a fairly new instrument over here. Nathan was consoled by having two Tigerscans to use.

"But Tony Davies is excellent, he's always rushing about doing things, and his equipment is great," said Nathan. "Yesterday I broke a side of the strobe and Tony said 'don't worry it will be there tomorrow' before I even asked him."

In Australia Nathan was using a Jards Instinct 60way for the conventional lighting and an Event Plus for the Golderscans and Tigerscans. There were also eight white lightning Strobes, six UVs, a ray rig, a couple of colour changers and two six-light units on either side of the floor. The impressive backdrop was taken from the album sleeve where all involved contributed an icon to the design. Nathan, rather obviously, supplied a light bulb.

"I don't like putting bars on the front as I don't like full light," explained Nathan. "They're not that kind of band. Last night we played what was the Venue club at Dee Why which has been revamped. It was bad last time we played it but this time it was worse because they've taken all the scaff bars off the roof and painted it up all nice and disco like. The thing is we have a good time over here."

Occasionally Nathan also

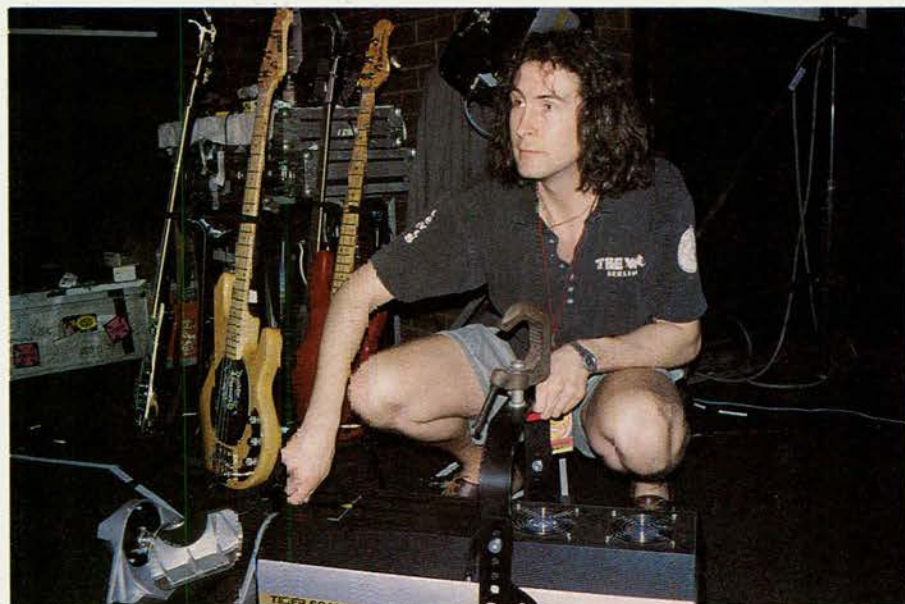
does on film lighting and has worked on films such as Memphis Belle. Also he sometimes works for the BBC in London and remembers one time when he was working on the serious political programme 'Question Time' three days a week and then doing raves all weekend for Spot Co. Nathan said he was prim and proper all week and then deranged at the weekends!

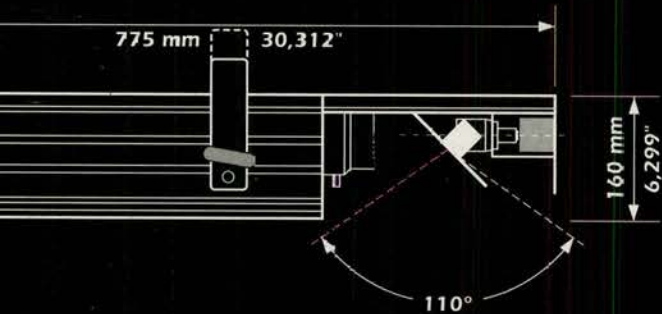
One of Nathans other clients is The Everly Brothers who surprised him in the US by turning up at a Neds concert.

"There they were in their nice suits with all these kids thrashing around to Neds Atomic Dustbin!" laughed Nathan.

Crew include sound engineer Simon Tableman, production manager Kevin, a 'Mr Smith' and the dreadful backline twins called Vern and Ree Stanard. Simon Tableman described the sound system as 'big, black and noisy' and after some persuasion finally revealed that he was using a Yamaha PMI200 desk and a Meyer system.

*Nathan with Tony Davies of Chameleon.*



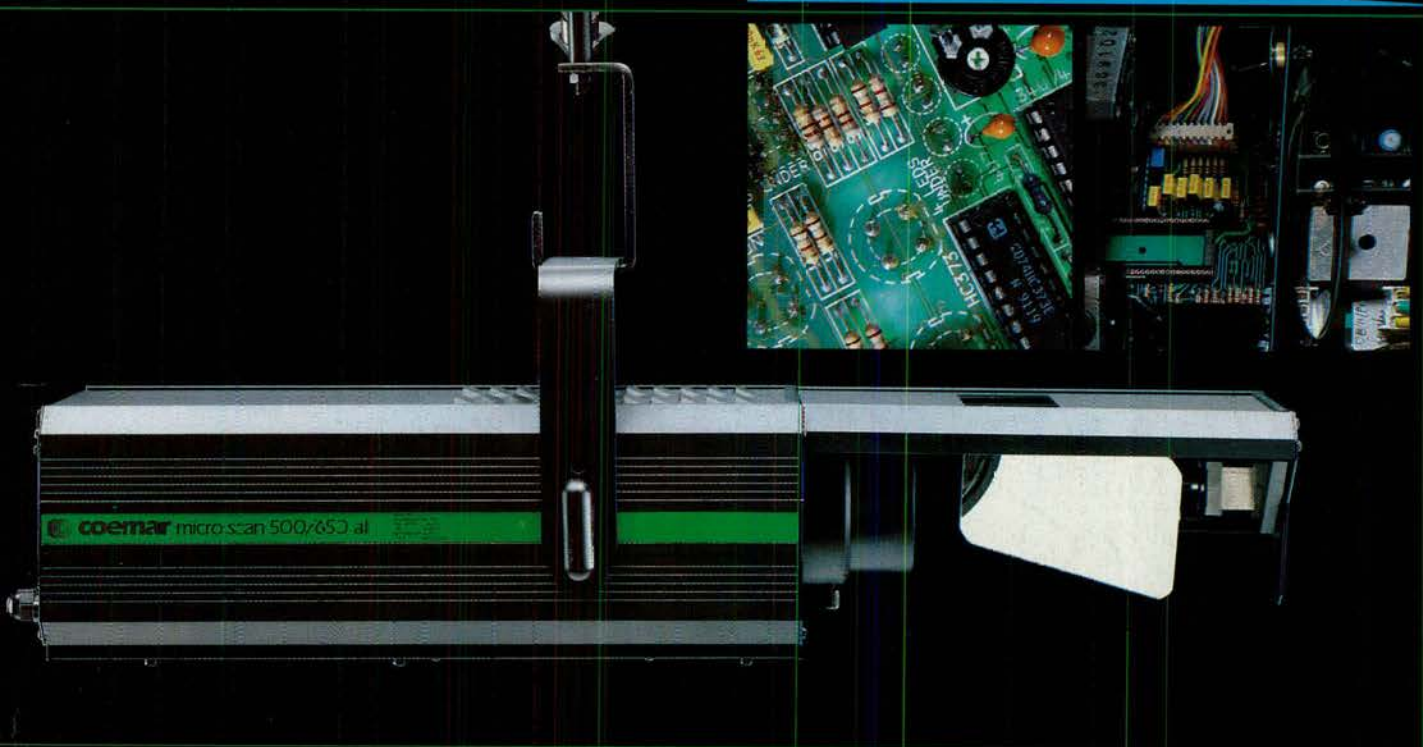


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