Display ir music publication area

Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

Singapore Hong Kong 30 00 Malaysia New Zealand 6.50 **AUSTRALIA $4.50** # 25. **AUGUST 1995**

Staging of the BEAST

Death in Winter
Four industry notables depart our world for a bigger stage

TAPE CHOICES
What to feed your digital multitrack

Thailand Theatre
Lighting South Pacific in Chiang Mai

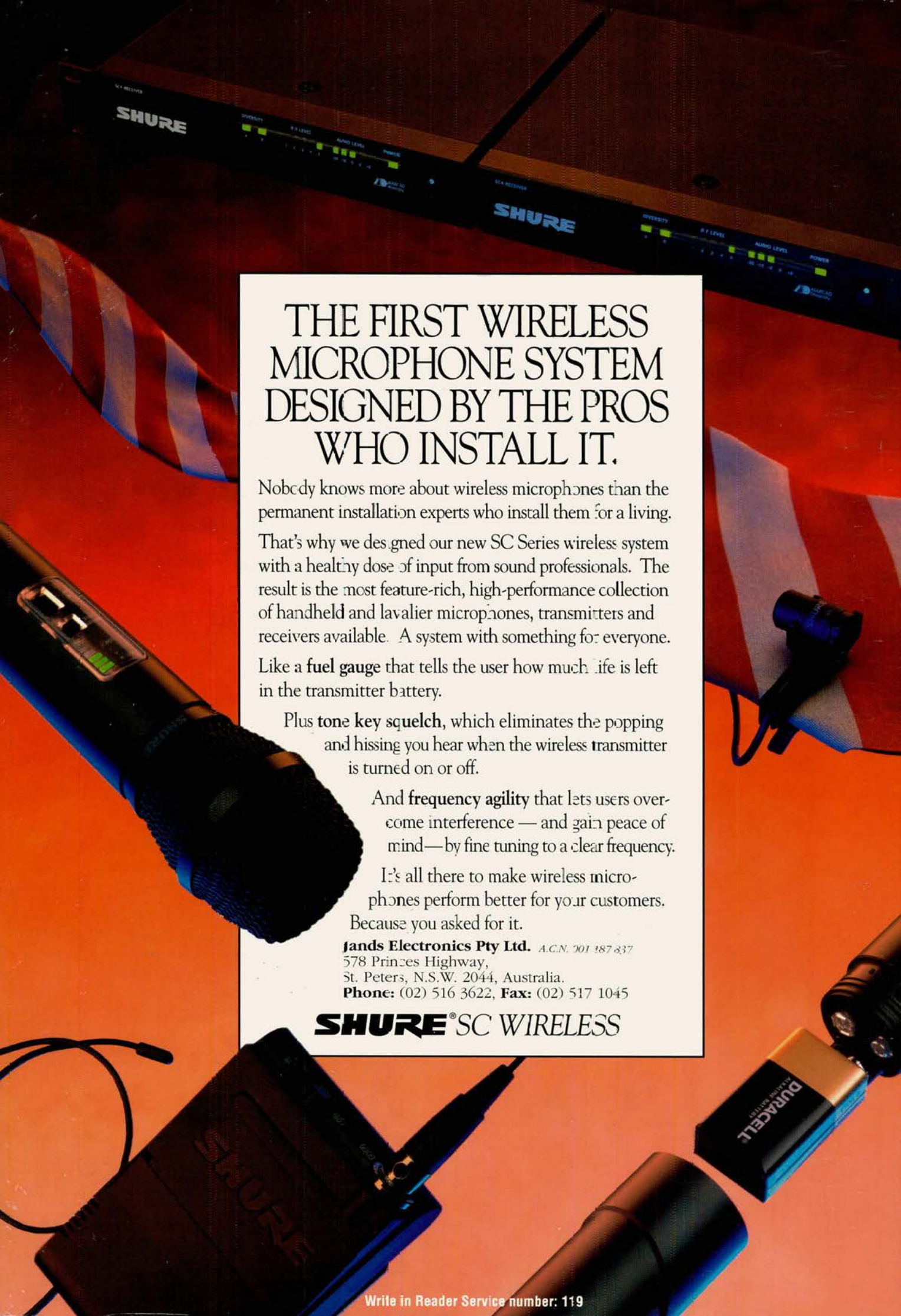
STUDIO MIXERS
Studio Consoles, the Buyers Guide

Lighting Control
Dimmers and Desks, Buyers Guide

SN 1320-5595 04

1320 559004

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



THE FIRST WIRELESS MICROPHONE SYSTEM DESIGNED BY THE PROS WHO INSTALL IT.

Nobody knows more about wireless microphones than the permanent installation experts who install them for a living.

That's why we designed our new SC Series wireless system with a healthy dose of input from sound professionals. The result is the most feature-rich, high-performance collection of handheld and lavalier microphones, transmitters and receivers available. A system with something for everyone.

Like a **fuel gauge** that tells the user how much life is left in the transmitter battery.

Plus **tone key squelch**, which eliminates the popping and hissing you hear when the wireless transmitter is turned on or off.

And **frequency agility** that lets users overcome interference — and gain peace of mind — by fine tuning to a clear frequency.

It's all there to make wireless microphones perform better for your customers. Because you asked for it.

Jands Electronics Pty Ltd. *A.C.N. 001 187 837*
578 Princes Highway,
St. Peters, N.S.W. 2044, Australia.
Phone: (02) 516 3622, **Fax:** (02) 517 1045

SHURE® *SC WIRELESS*

Write in Reader Service number: 119

ALWAYS full of NEWS

TECHNOLOGY

New products, Yamaha 02R 12
Windows 95 12
Audio Sound Centre: Outlet preview 16
AVID Media Suite Pro 16
Status: a new flying control system 20
NuMark debut DJ mixers 20
JAMO enter PA market 22
Tactile: a new concept. Overview: 24

Beauty and the Beast:
The Disney stage show opens, we detail the sound, lighting and automation. 28

Archiving Audio:
We visit Canberra to see how it's done 33

STUDIOS

Interview: Matt Thomas 45
MDM tapes 45
Studio News 45
New studio: Velvet 47
Hothouse 51
BASF National Tracking Guide 53
Equipment and the divorce rate? 50
Robbo's HOW TO DO IT! 52

BUYERS GUIDE

Studio Mixing Consoles 44
LIGHTING: Dimers, control Desks 82

LIGHTING: 23 pages

Batman & Martin? 65
South Pacific in Chiang Mai 69
The Forgotten Truss factor 70
Big Bob Bobbed out 72
Brisbane LX firms, we go calling 76

CLUBLAND

New clubs, SKY 60
Mayfield, Liberties, Winter Daze 62

.... and all your favourite regulars!

- Industry news from 5
- Letters (we always run the naff ones!) 38
- 20 years ago. A fart remembers..... 39
- Hire & Production news 40
- Duncan Fry. The 'no tone page' 58
- The PA Page 90

Obituary page 42,43
Denis Braham. Rober Barratt. Bob Schenk. Rob Stapledon.

NEXT MONTH:

- **EDUCATION**
  We detail which audio, lighting and AV courses are available for 1996!
- **BUYERS GUIDE**
  Microphones, Fresnel Spots.
- **AUSSIES in ASIA**
  Our yearly review of opportunities.
- **MISS SAIGON**
  The mega-musical - backstage!

and more!

3rd Proud Year of Independent Publication

The intelligent Matrix PA

with Flexibility, Versatility and Ease of use.

TOA MATRIX PA makes distributed sound management easier than ever.

The TOA FE-2200 Series represents nothing less than a revolutionary shift in PA management systems. Its high versatility makes it ideal for installations such as hotels, department stores, "intelligent buildings", factory complexes, business malls and parks, or any applications requiring audio information to be precisely and smoothly distributed to selected locations.

TOA's ease of use means that highly trained sound engineers are not required for safe and reliable operation, and the benefits of simplicity continue when the time comes to expand the system in the future. Added to the superb hardware is a wealth of TOA applications software designed to make the Matrix system work to your best advantage, meeting your PA system needs no matter what they are.

AWA Limited *Unit 1, 175-179 James Ruse Drive, Rosehill NSW 2142 Tel. (02) 838 7666 Fax 898 1135*

Write in Reader Service number: 137

SPOT ON!

When you need optimum precision performance - every time, the Ampower AM4000 will never let you down. AM4000, the ideal studio model, is a real all-rounder. Whisper quiet operation and versatile, it's just right for monitoring.

The compact AM4000 delivers a full 200 watts per channel of pure, clear sound.

If its power, performance and price you're after, the Ampower range from 150 to 750 watts has got it all!

AUSTRALIAN MADE.

AMPOWER® **All-Australian Quality**

6 Adrian Road, Campbellfield, Victoria 3061
For dealer information contact Amps Unlimited
Telephone: (03) 9357 8580 Facsimile: (03) 9357 8572 Mobile: 018 322 544

Write in Reader Service number: 126

Connections

AUGUST 1995. Number 25

Winter gloom as leaders die

INDUSTRY REGROUPS AS KEY PEOPLE PASS ON

One after another they died suddenly in the dark days of winter, victims of common illness - and all leaving well before their time.

First we lost Capitol Theatre manager **Denis Braham**, struck down by a sudden heart attack at home in June. Days later, leading lighting designer **Roger Barratt** left us after fighting leukeamia for six months. Then Bose Australia general manager **Bob Schenk** fell victim to a cancer we all thought he had overcome. Finally, on the eve of great success, DSP founder **Rob Stapledon** died from the sudden effects of a long illness.

All were aged between 34 and 49, all were the picture of good heath, all were fit and energetic, and all were leaders in their fields with many years experience. All were survived by loved ones, and all have left a void in their fields.

Connections salutes them, our obituaries start on page 42.

AMRA '*synergise' CONVENTION

The 1995 AMRA Convention scheduled for late september in Sydney is a music industry first, joined with the ARIA awards to cap a week flagged the ARIA Music Week.

To add synergy to the event, it is also aligned with AIMS 1995, the bi-annual mega music equipment trade show.

AMRA *(the Australian Music Retailers Association)* chairman Barry Bull said the convention will pull together the nations retailers, wholesalers and all industry people under one roof at one time. "It's not only an industry trade show and convention, it is also an industry showcase".

Keynote speakers will include Ms Pamela Horovitz, Executive VP of NARM, *(the USA National Association of Recording Merchandisers)* and Mr Michael Lee, federal minister for the arts.

The dates run September 30 through October 2, venue is the Sydney Exhibition Centre, & you can contact Rob Walker for details, (03) 9525-6755.

**buzzword!*

YAMAHA MUSIC (AUST) RESHUFFLES

After four years Sam Takeuchi has left his position as managing director of Yamaha Music Australia, for a new post with Yamaha Indonesia.

During his tenure Yamaha Music Australia achieved a record net profit of $2.5 million for the year ending March 1995.

The new managing director for Yamaha Music Australia is Mr Kevin Kobayashi, who joins from the international division of Yamaha Corporation, Japan. He has most recently been responsible for PA products, and has held positions in Yamaha America.

• *Meanwhile, long serving Yamaha pro audio chief Stephen Leonard has departed the firm for a new job outside the industry, and long serving manager Philip Burn departed earlier this year to run a print music distribution co.*

ACP buy Flashlight

Brisbane based Australian Concert Productions have purchased a complete Turbosound Floodlight/ Flashlight PA system, the first truly new system of its kind in Australia in the past decade. Part of a $1 million upgrade.

•Full details, Hire Business, P.40

THE SECTIONS....

CLUBLAND

Stirrings after winter-

• SKY is Sydney's newest sumptuous hip zone, perched atop a mall in the city.

• CLUBS large and small, and the people who run them, in our Clubland section!

CLUBLAND starts page 60

LIGHTING

Thailand: Working Chiang Mai

BRISBANE: We go calling on some firms

DIMMERS & DESKS: The Buyers Guide

LIGHTING: From p.65

Technology

02R is the next *affordable* digital console from Yamaha. It leads our 10 page Technology section.

Technology starts p. 13

STUDIOS

Tape formulations- what to feed your hungry MDM!

Interview: **Matt Thomas,** recording engineer.

Studio Mixing Consoles - the Buyers Guide

STUDIOS: Page 45

contacts 1995 **UPDATE**

i ABOUT....

Connections CONTACTS is our first directory, published in July. It has 130+ pages of listings and of course some have either changed, were wrong, or missed altogether. We do not quite know how this will pan out, but we would LIKE to update you progressively each month so you can simply ammend your copy, or use your latest Connections to find anyone we missed. OK?

If you would like a copy of Connections Contacts, it is in Newsagents across Australia, or just use our SHOP order form in this mag, or dial 1-800-635-514 with a creditcard handy. Cost is $9 plus $5 postage.

BIRTHS, WEDDINGS

Simon Garrett of Selecon New Zealand Ltd. and wife Sarah are pleased to announce the birth of son "Felix" on June 12th 1995. 7 Pounds 2 ounces and cute as a button. To say he is pleased is an understatement and No, he was not born with sideburns.

Scott Lucas of Alcatel and wife Kate are proud to announce the birth on June 16, 1995 of their daughter, Zoe Katherine, 7 Pounds 14 oz. at Sandringham (Vic.) Hospital.

Tony & Mandy Russo of AR Audio had a baby girl on May 27th. The couple listened to the South V. Wests game between contractions with hospital staff maintaining a keen interest. All celebrated after the delivery with a large pizza. Score: Souths 0, Russo 1.

Con Andrews of Black Express married on 22/7/95 to Christine Nasser after a 3 year court/hardship. The wedding took place at the Bankstown Greek Orthadox Church with a reception at the Brighton Beach Novotel. The happy couple will be honeymooning in the Maldives.

SEND US YOUR NEWS: Fax (02) 876-5715, PO Box 439 Epping NSW 2121 Australia.

OOPS!

Category: Production/AV/Hire
Avcom Pty Ltd
Correction:
Avcom Corporate Audio Visual Services

Category: Studios
Brian Lawerence sound
Correction:
Fax (03) 9696 1208

Category: Tech Crew
Cafe, David
Correction:
Email deecee@ozemail.com.au

ADDITIONS

(we will run more additions next month only, then not until the next issue of CONTACTS)

DISTRIBUTORS

AVID Technology (Australia)
Suite 345, 102 Longueville Rd,
Lane Cove, NSW 2066
Ph (02) 428-4842 Fax (02) 418-3231
Contact Belinda Hanna

Music Link Australia
42 Victoria St
Richmond Victoria 3121
Ph (03) 9429-9299 Fax 03) 9427-0740
Contact John Grant
Brands: Ampeg, Crate, D'Addario, Fatar, Korg, Opcode, Pearl, legend, Latin Percussion, Paiste, Remo, Selmer-Bach, Toneworks.

Music Technology
9 Edgecliff Road
Bondi Junction NSW 2020
Ph 369 4990 Fax 387 8676
Brands: Kurzweil, Steinberg, Emu, Hammond.

Stylus Tapes International
111-112 Harren Road
Smithfield NSW 2164
Ph (02) 892 1133 Fax (02) 632 3549
Contact: Colin Powell
Brand: Nashua Gaffer Tape

PRODUCTION/AV/HIRE

Ashley Scott Productions
124 Carlingford Rd
Epping NSW 2121
Mob (018) 16 3332 Fax (02) 869 0571
Contact: Ashley Scott

Chameleon Touring Systems.
Unit 7/41-45 Bourke Road
PO Box 206, Alexandria NSW 2015
Ph (02) 310 5222 Fax (02) 310 5511

Compact Holdings
204A Grand Prom, Bedford WA 6052
Ph (09) 271 1544 Fax (09) 271 1544

LAVA Lights Audio Visual Australia
9 Moray St, Sth Melbourne 3205
Ph 03) 9682-7000, Fax 03) 9682-7001
Contact Adam Nevzat

Powersound
4 Durham Road Cooee Burnie TAS 7320. Ph (004) 31 7722
Fax (004) 31 4151 Mob (018) 13 0154
Contact: Neville Fisher (proprietor).

R & K Lighting Design
14 Naomi Circuit Bayswater VIC 3153
Ph (03) 9720 7689 Mob(018) 38 6410
Fax (03) 9738 0990
Contact: Rolf Greve

Sparktail Visual Entertainment
Ground Floor 49 Chapel Street
Fitzroy VIC 3065. Ph (03) 94190083
Fax (03) 9419 5996

Topstage
13 Wiluna Street Fyshwick ACT 2609
Ph (06) 280 5710 Fax (06) 280 7545

Total Concept Productions
34-36 Adderley Street East
Silverwater NSW 2128
Ph (02) 648 3444
Fax (02) 648 5900

REPAIRS

Soundtronics
47 Princess Street
Camphill QLD 4152
Ph/Fax (07) 3843 1517
Email scottv@mpx.com.au

STUDIOS

Telehold Australia
462 The Parade, Rossyln Park SA 5072. Ph (08) 364 4482
Fax (08) 31 4682
Contact: Wayne Allen
Specialises in: Voice Production

Upper Room Recording
4/39 King George Street
Victoria Park WA 6100
Ph (09) 361 5772, Fax (09) 470 1708
Email ag@multiline.com.au
Contacts: Ainslie Grosser

VENUES

Mount Isa Civic Centre
23 West Street
Mt Isa QLD 4825
Ph (077) 44 4244
Fax (077) 43 3413
Contacts: Kerry O'Rourke (manager).

MOVED & CHANGED

Altronic Distributors Pty Ltd, the Melbourne office moved to: The Waverely Business Centre, 1 Aristoc Rd, Glen Waverely, VIC 3150. Phone & fax unchanged, ie: 9550-1821 and fax 9561-5360.

Amps Unlimited is moving to 6 Adrian Rd, Campbellfield Vic 3061. Ph (03) 9357-8580, fax (03) 9357-8572.

Australian Audio Supplies (who distribute Mackie) have moved to the Gosford area. Address: PO Box 183 Ourimbah, NSW 2258, Phone (043) 291-711, fax (043) 291-747. Its a big new warehouse!

Rock & Roll Music, Sydney Concert Light and Sound, and **Cannon Sound** have all joined forces as Cannon Sound Systems. The business is moving to: Unit 6, 102-112 Edinburgh Rd, Marrickville NSW. Same phone numbers, ie: (02) 550-3828, Hire dept: (02) 550-6949, fax (02) 550-6919. This is Niel Smith and co at work, folks.

Disco World have moved to: 20 Cave Hill Rd, Lilydale 3140. Ph (03) 9735-0588, fax (03) 9739-5255. They distribute Gemini and Lytequest. The new place is 5000 square feet.

Image Audio Productions have moved, new address: PO Box 289, Browns Plains 4118 Qld. Ph (07) 3278-2477, 0416-156-619.

Technical Productions has moved to 196 Denison st, Queens Park NSW 2022, Ph (02) 386-9494, fax (02) 386-9490.

Universal Lighting and Audio have moved to 4/43 Olympic Circuit, Southport QLD 4215. Phone (07) 5532-9922, Fax (07) 5532-4155.

*Corrections

*Good name for a magazine, perhaps?

ENSONIQ DP/4+

The retail price on this multi-effector is a humble A$3199. Last issue we were wr..g (hard word) and published a list in excess of this. Sorry to Ensoniq, sorry to Electric Factory, sorry to you, Reader.

•Electric Factory (03) 480-5988.

OUCH!

Sorry to the nice man from the Guinness Book Of Records, and to **every one of our female readers.** The collective grimace you could almost feel last month was re. our item on Angus Forcer-Strom, new addition to the Connections team, who was noted as arriving at 11kg in weight. This should have been POUNDS. The pain, the pain..

Steve Gilbey

Our Brisbane Exhibition Centre story last issue carried a photo captioned *Steve Gilbey*. We got the wrong dude ....THIS is STEVE!

AIMS next month

The Australian Music Association has announced that the next Australian International Music Show will be held over the popular Spring long weekend in Sydney between September 29 (Friday evening) through to Tuesday, October 3 - the first three days being open to the public.

To date over 80 wholesalers and manufacturers have booked space in what promises to be the most exciting AIMS yet. Organisers are tight lipped about the usual high level artist attractions due to confirmations and contracts, but the line up promises to be impressive. AIMS will use the Convention auditorium to showcase its live attractions this year.

The AMA has invited Ms Fran Rauscher to keynote a special meeting of music educators on her research into the relationship between learning music and improved intelligence levels amongst young children. The research team found some staggering correlations between young children who learn music and their intelligence levels. Children who had for nine months been involved in a controlled music learning environment were found to have enhanced levels of spatial reasoning skills of up to 47% over kids that had no music involvement. This theme received extensive press and network TV coverage in the US.

• Details: (03) 9525-6755.

New AV Training Course

SYDNEY: Last month we lamented the sad state of industry based training for new technical crew, an issue raised by Steve Gilbey of the Brisbane Exhibition & Convention Centre.

Kevin Hammond of AVS Presentations has launched a new training series called AV Experience, held initially in Sydney.

AV Experience has already run one full week duration course which was aimed at novice training, but attracted participants already employed by major AV firms. Kevin discovered employers are keen to hire newly oriented staff, and also to run new recruits through a course such as his.

Levin Hammond has credible industry experience, and is a current practitioner of AV presentation work. His course is an intensive introduction to all facets of the industry, from audio to lighting and video.

The course is structured into modules, delivered by other industry trainers who are experts in their fields.

Hammond says the conference and meetings industry is estimated to turnover more than two billion dollars a year, and that Audio Visual operations are an area of high jobs growth. This we can verify here at Connections after compilation of our 'Contacts' directory, where AV and Presentation firms are a rapidly growing sector according to our data.

The issue of further employment beyond a course is always a bait for students, Kevin Hammond offers to list his graduates on his AV Technical Crew listing service. His claims in regards full time work are based on expansion in the AV Industry at this time, but certainly a course such as his helps.

A one week course costs $995 with full notes. The next course starts September 18th, with an info/demo night on Fri Sept 1st. Call (02) 744-8245.

RECORD RETAILERS SQUEEZED

SYDNEY: In a clever move, music industry publicist Phil Tripp alledged USA mail order was eating into retail CD sales, on the eve of his Music Industry Conference.

Siting a survey he commissioned, Tripp detailed an attempt to buy ten current release CD's from four major Sydney music stores and from a variety of USA Mail order houses. The outcome was predictable to anyone who has pondered why CD's retail for US$14 (A$18.50) over there, vs. as much as $30 in Australia.

Tripp says the result is a shocking lack of titles at the local outlets, which were Brashs, HMV, Virgin/Blockbuster and Edels. The USA mail houses offered the ten titles ex-stock at a total landed cost of between A$203 and A$289, the lowest Sydney store price: A$283.

Edels fared worst in the survey, with only one of the ten releases in stock at their Pitt Street store.

Award nominations called

AUSTRALIA'S only truly representative Entertainment Technology industry awards are to return, to be handed down at a major industry dinner during ENTECH trade show next April.

The ENTECH AWARDS will be determined by readers of Connections Magazine, who may now nominate worthy people, establishments and equipment for an award. Nominations will then be announced, with readers invited to vote for a maximum of three nominations in each category.

The awards presentation will be a dinner and concert function at Sydney's Metro during ENTECH.

The decision to call for nominations will tighten the process. Last year, returning officer Bruce Rowland of industry accountancy practive Partlett Chave & Rowland, dealt with several thousand individual votes across more than 50 categories. As a result, some categories did not achieve a winner last year. **•See Page 49**

2 halls for ENTECH

It's a long time until next April, but ENTECH, the Entertainment Technology trade show has already sold a complete hall of exhibition space at the Sydney Exhibition Centre in just over a month. The demand caught the promoters -Connections- (that's us) off-guard, and an additional adjoining hall was quickly secured following a cancellation. *•Dates: April 23 - 25th, '96. Call (02) 876-3530.*

This magazine published by:

Connections Publishing
Pty Ltd.
ACN 058443182.
All Mail: P.O. Box 439, Epping NSW 2121 Australia

Sydney Head Office
Century Plaza, Level 2,
41 Rawson St, Epping, NSW.
(Mon-Fri 8.30-5.30)
Phones: (02) 876-3530
Faxes: (02) 876-5715

Melbourne Editorial Bureau
Phone: (03) 9510-2459
Faxes: (03) 9510-2659

E-Mail: Connections@msn.com
Compuserve: 100242,3662

Editor, grouch: Julius Grafton
Lighting editor: Catriona Forcer
Audio editor: Will Burston
Roving writer: Caroline Grafton
Clubs, music: Natalie Apostolou
Staff writer: Daniel Cole
From Detroit: Buck Freeman

Contributing writers:
Duncan Fry, Howard Jones, Michael Orland, John Robinson, Nigel Levings

Advertising, Damage control:
Caroline Grafton.
Discipline, Tennis: Elaine Auld
Graphic Art & Layout:
Catriona Forcer, Julius Grafton.

Publisher: Julius Grafton.
(Unrelated to 'Graftons Sound & Lighting')
Printer: Maxwells,Waterloo NSW
Newsagents Distribution:
NDD (Aust), Network (NZ), AllScript (Singapore)
Music Store, Direct Outlet Distribution: 50% disc. (Aust)
Call us direct: (02) 876-3530

SCHEDULE/DEADLINES:
Published MONTHLY except January. New from '95: JULY issue is a YEARBOOK. Deadlines every issue 15th month prior.

DIAL 1-800 635-514 (freecall) for SUBSCRIPTIONS
+61-2-876-3530 from O/S

AUSTRALIA: $39.90, NZ: $65, Asia $70, USA $95, Europe/UK $110. Int. airmail, all AUD $, all 12 mths.

Submissions: *We WELCOME well written articles and stories for consideration. Send hard copy, pref. WITH PC or Mac word processing TEXT file. Photograph prints, B&W or colour, & transparencies (prefered) also welcomed. Stamped self addressed envelope required if return desired. No responsibility for loss accepted, sorry.*

All contents © Connections Publishing Pty Ltd, 1995. Nothing herein to be reproduced in any way or transmitted by any means without the express written consent of the Publisher. No Warranty is extended in respect to any information herein. Opinions expressed in Connections are not necessarily those of the Publisher. Materials herein reproduced in good faith. Corrections made wherever material errors occur. It is a condition of purchase that the Publisher does not assume liability or responsibility for loss or damage that may result from any inaccuracy or omission in this publication. Opinions expressed herein are not necessarily the publishers. Please do not sue us.

SHOWSCENE

The Barber of Seville - a Slapstick Opera

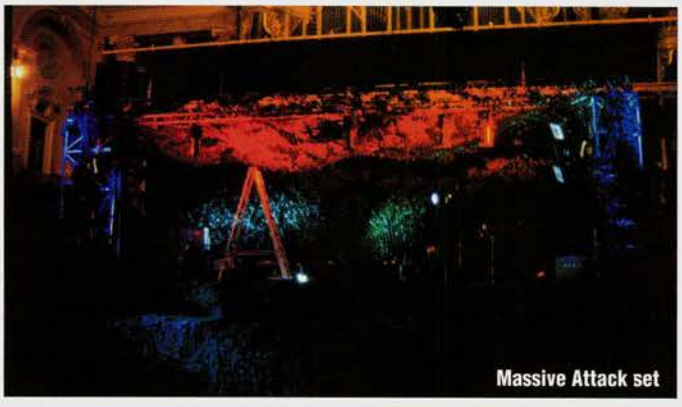
The mood was set before the curtain raised for the Australian Opera's latest production of *The Barber of Seville*. Director Elijah Moshinsky is in great demand internationally and often works in collaboration with the set designer Michael Yeargen. Moshinsky is famous for his fresh approach to opera and having directed one, he doesn't like to re visit it preferring his production to remain unique. Yeargen and Moshinsky went through many designs for *The Barber of Seville* before deciding on the set incorporating a cross section of a house with six rooms. Looking like an over size dolls house, the set is bright and quite gaudy.

Moshinsky has stated that this production could only work in Australia- in Italy, they think only of the voice. Here, the vitality of the performers combined with an audience seeking an experience allow *The Barber of Seville* to be produced in such a lively manner.

Conductor: *Ivor Bolton/Tom Woods*
Director: *Elijah Moshinsky*
Sets: *Michael Yeargen*
Costumes: *Donna Granata*
Lighting: *Howard Harrison*

Playing at The Sydney Opera House until October 7th.

•Cat Forcer



Massive Attack set

Pix: Suzi Precanica

Bottled

A testament to rock & raunch, two hard femmes took toyboys on the road for sellout shows nationally. Chrissie Amphlett and her Divinyls, supported by Joan Jett worked a hellish schedule. Leather, lace and flung bottles in Newcastle - it had it all. **•Nat Apostolou**

Promoter: Andrew McMannus
Tour Manager: Michael O'Berg

Whingeing Poms on the Massive Attack (but they had their reasons!)

Putting one of the UK's most popular dance bands in Sydney Town Hall was an aesthetic error and technically impractical

"The whole time we've been in this building it's been 'you can't do this or you can't do that'," complained Andy Pole the lighting designer *(pictured nearest left)*. The English crew had little or no time to work on the problems of the tour as the schedule was ridiculously tight. Friday: Sydney, Saturday Brisbane, then Sydney for the Sunday show.

"The show finishes at 2am and you're out by about 4am," said Andy. "You're back at your hotel for 5am and then up at 6am to catch your flight to the next place. I try and find somewhere to sleep during the day. You can't leave the local crew to put the show up as it is very hard to explain how we want it to look particularly with the camouflage (*in most venues the band drape camouflage around the whole room but in Sydney it was limited to the stage).*

Added to the problems was the fact that each Australian city had a different moving light system for Andy to cope with - Vari*lites in Sydney, Icons in Melbourne and Intellabeams in Brisbane.

The show is a long five hours (with DJ's at the start) during which Andy has to do the lights.

Ed the video man wasn't very happy either. In fact he was quite distressed. "It's been really difficult," he told me. "I've had so many problems with the Australian supplier because they just can't supply the equipment I need. I'm not too enamoured with them and if I never work with them again I'll be happy.

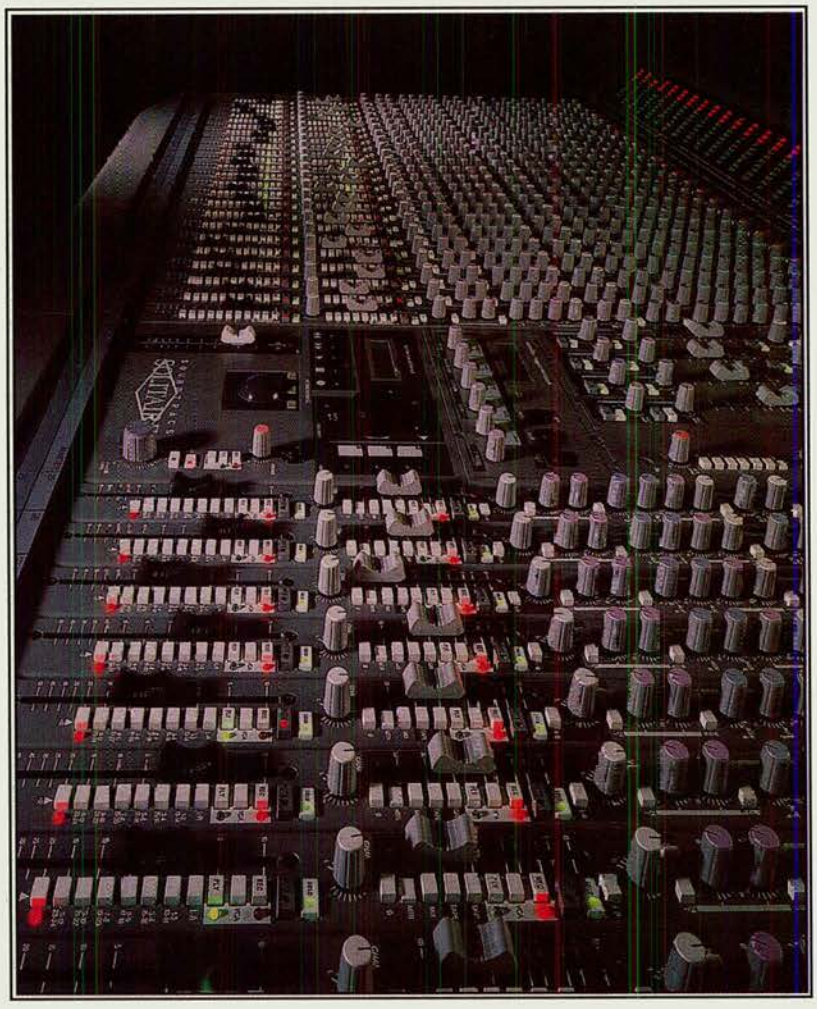
"I don't like this venue as it's too big with a white ceiling, everything gets lost," Ed continued. The tour had been a nightmare for him and he said he had only had three hours off since it started.

Sound engineer Mark Littlewood was finding Sydney Town Hall a very difficult venue to cope with.

"At Friday nights show we had problems getting definition on the vocals and instruments so we decided to put drapes up around the sides and back," he said. "It's tightened it up quite a lot so it's not to bad. We didn't have time to do anything about it on the Friday.

"I have no control over the equipment I get. You sent a spec to the different companies but wether they adhere to it is a different matter. Here I have 12 stacks of Turbo TMS3, six a side, for the main PA and 16 subs. FOH desk is a Yamaha PM2000 with not many effects as the band aren't in to them."

•Cat (I'm a pom too!) Forcer.



FULL 24 BUS INLINE CONSOLE.

DYNAMICS IN EVERY CHANNEL- GATES, COMP./ LIMITER/ EXPANDER, PANNING.

VCA OR MOVING FADER AUTO- MATION.

CALL FOR OUR PRICE NOW!!

SOLITAIRE

—INTRODUCTION—

The new Solitaire Production Console embodies everything Soundtracs: The finest audio quality combined with leading edge DSP multi-processor control. Equipped with highly developed assignable dual inputs on every module, each with mute automation and EQ along with optional fader automation plus dynamics processing on the main input, and optional VCA automation on the secondary input. It's the most sophisticated console in its class. You'll find Soundtracs' unique, patented and highly acclaimed FdB™ Parametric Equaliser which provides precise control of all frequencies in the audio spectrum. In addition, all monitors have a punchy 2 band equaliser with access to the mid band equalisers from the channels. To maintain audio purity and signal coherence, inputs and outputs are balanced where beneficial to minimise hum and RFI interference with all circuits having extended bandwidth electronics to ensure ultra-low phase distortion. Utilising similar circuitry as first used in the high-end Jade Production Console, Solitaire is fitted with an optional on-board Assignable Dynamics Processor (ADP). This Soundtracs innovation provides a comprehensive range of gating, compression, expansion, limiting, modulation and auto-pan functions on every channel. Most manufacturers would be more than happy to stop there. But Soundtracs, predictably, goes further with mute automation as standard and the choice of two, high-speed automation systems - motorised fader or VCA. The finest audio quality combined with leading edge DSP multi-processor control. Introducing the new Soundtracs Solitaire.

PRODUCTION CONSOLE

Distributed in Australia by:

Syncrotech Systems Design Pty Ltd Unit C, 9 Gibbes St., Chatswood NSW 2067. Tel: +61 2 417 5088, Fax: +61 2 417 8360.

Write in Reader Service Number 105

NZATT CONFERENCE

The Fourth **NZATT** *(New Zealand Association for Theatre Craft, Design and Technology)* Conference was staged during June at the Memorial University in the beautiful city of Wellington New Zealand. Although known as the windy city, where it is not uncommon to see people grasping to railings and telegraph poles, the geography and architecture of Wellington is similar to that of San Francisco one of my preferred US destinations.

The NZATT was founded in 1981 to provide a forum in which live theatre technicians/practitioners could share concepts, ideals and thoughts on the tidal wave of technology engulfing live theatre.

While the main thrust of the conference is education, also featured were trade displays of costuming and theatrical make-up to road cases, luminaires and intelligent lighting by various manufacture, wholesale and production companies with the main sponsor being Selecon New Zealand.

Seminars included three streams:

STREAM A -

THEATRE CONCEPTS: Theatre Design Concepts with guest speaker Tony Youlden of NIDA (Australia); Theatrical Architecture - "Should function follow form"; Circa - Concepts and reality; Safety In Your Theatre; Costume Design.

STREAM B - LIGHT & SOUND: Sound For Small Shows; Luminaire Design; Medium Budget Sound For Musicals; Lighting Design; Practical Application For Programmable Lights In The Theatre.

STREAM C - THEATRE SKILLS Theatrical Pyrotechnics; Using A Showmaster Console; Properties; Scene Painting; Technical Production Training For Theatre - Toward 2010.

Tours were also available to many of Wellington's finer repertory theatres for which Wellington is famous.

While visitors to the conference were limited in numbers, professional and amateur theatre technicians from all fields were united in an environment conducive to learning and net working, a resource vital to all entertainment in the southern hemisphere.

I would like to thank Nevil Brownlee, NZATT Chairman and Ross Foubister NZATT, Wellington Branch Chairman for the opportunity to contribute to a worthy event.

•Caroline Grafton.

Steve Marshall, editor of the NZATT magazine 'Profile'.

Jillian Carpenter NZATT committee member and VP of Khandallah Arts Theatre; with Tony Youlden of NIDA.

Richie Mickan of CDA Australia demonstrating design software. The other guy has a hat on.

The Connections stand at NZATT, as usual, the place to be or not to be seen!

DIAL 1-800 635-514 from Australia for SUBSCRIPTIONS, (A$39.50) - or +61-2-876-3530 from New Zealand (NZ $65)

CROWN & BOSE HOST AUSSIES TO USA

Bose Australia recently hosted a trip to the USA for several dealers. They attended a CROWN I.Q. Certification Course at Crown HQ in Elkhart, Indianna. Afterwards they attended the N.S.C.A. expo at Indiannapolis, and then went on to Bose HQ at Framington. Chris Dodds from PA People attained the 2nd highest mark ever and highest ever for a non-USA person at the IQ certification exam.

• *Pictured are: (left to right) Trevan Johns (TJA Associates); Ray Walsh (Complex Sound Albury); Terry Hammond (President of Crown); Paul Jervois (TCP, Sydney); Kathy Stutzman; Shane Spinks (Bose Australia); Jerry Stutzman (Crown Marketing Manager) and Chris Dodds (PA People, Sydney).*

Music News

With Natalie Apostolou

■ One of Australia's largest and well connected PR firms **Tudor Tyler** has appointed a new director of operations and publicity, **Kerry O'Brien**. Kerry formerly occupied the role of Sony Music's National Publicity/Artist Relations Manager from 1993-1995

■ **The Victorian Rock Foundation** has ceased to exist and has been placed in voluntary liquidation, a decision that was made in May pending on the results of consultation with the Arts Minister for Arts Victoria Haddon Storey. The final countdown arose after the disquieting results of the 1995 Melbourne Music Festival which failed to create the expected monetary returns and most fundamentally displayed the lack of industry support needed to keep the foundation alive.

■ **rooART Records**.has restructured its 3 year relationship with Warner sealing a liscensing deal with Warner for a unique pressing and distribution arrangement.

■ Things are changing all over at **Sony** with the news that **George Michael** has finalised an equitable deal with his tumoltuos label relations. The terms of agreement follow along the lines of Sony receiving a cash sum of approx $30-$40 million as payment for releasing Michael. The amount will be paid by his new label DreamWorks/ Virgin against earnings from the release of his next two albums.

■ **The ARIA Association** has announced major changes concerning unauthorised live recordings. The amendments to the Copyright act, effective from July 1st., will make it unlawful to import, manufacture, distribute and/or sale of unauthorised live recordings.

■ **The Stone Roses** swiftly departed the Glastonbury Festival after accident prone guitarist John Squire broke his collar bone after falling of his bike in San Fransisco. They have also cancelled a 10 day tour of Japan.

■ **The Dirty Three** are confirmed as a Lollapolooza act, with their own internet page on the Lollapolooza site that contains a glowing bio. Of course.

■ Brisbane's **Custard** are in San Francisco working on their next album with Eric Drew Feldman (of Frank Black & PJ Harvey fame).

■ **The Sharp** have decided to give up their edge and are embarking on a farewell tour and posthumous CD

■ **Henry Rollins** has co-directed a video clip for band Die Cheerlander for Modivation films, and has released a compilation album on his label 213CD.featuring Aussies Mark of Cain and a relic from the Birthday Party.....

■ British songstress de jour of the 80's **Sade** is being sued by her former drummer Paul Cook over royalties for 11 songs. The writ is against Sade, 3 band members and Sony Music Entertainment UK. If successful, Cook is in the running for receiving up to 1 million pounds.

■ Legal action is being taken by **Richard Clapton** against his former label Festival Records. He claims that his 1972 contract was unfair and signed under duress.

■ **Niggers With Attitude** rapper Eazy E(Eric Wright) has died of an AIDS related illness. Aged 31.

■ Irish blues and rock guitarist **Rory Gallagher** has died after complications after a liver transplant

■ **Jimmy Barnes** played at the European Fleadh Festival(June10) , alongside Van Morrison, Sinead O'Conner and Michelle Shocked.

■ British pop demi-Gods **Take That** are taking their assault on the US very seriously, committing to a deal with **Arista US** worth 1 m. pounds, but that wasn't enough to keep the dark haired spunk in the band.

■ **Blur** have switched labels in the US due to lack of response, going from EMI to Virgin

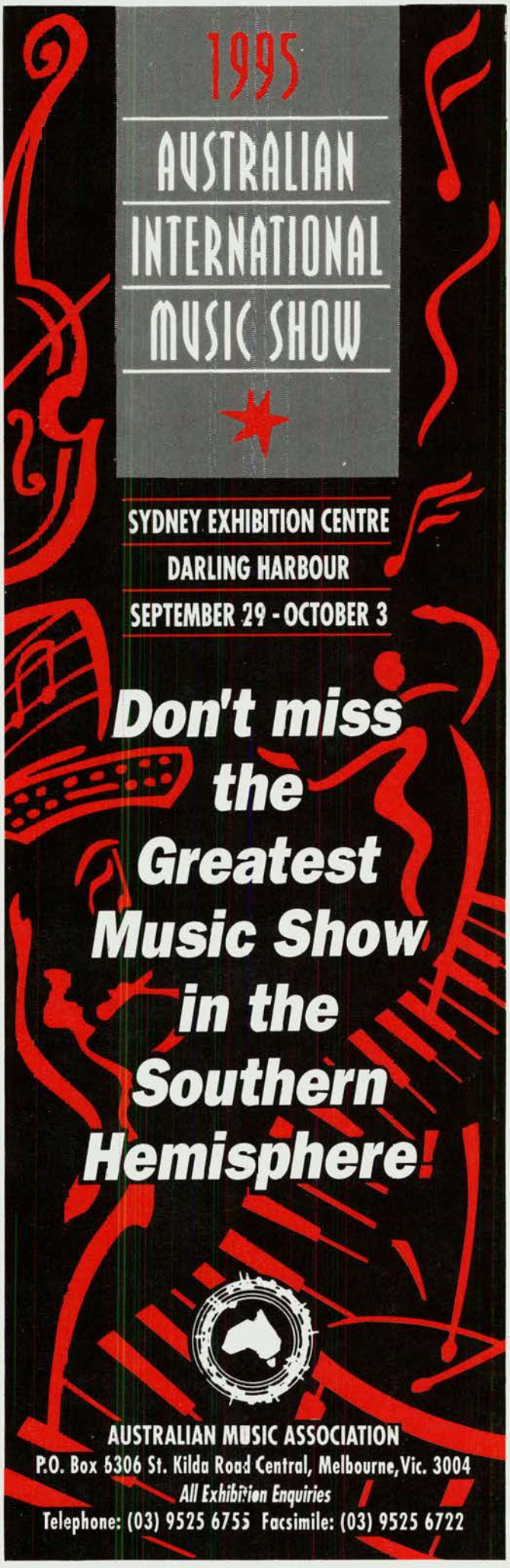
■ Fellaheen Records have just signed Perth rockers **Diolene**

■ **Murmur** may have signed Melbourne's Automatic

■ After 13 years of being part of **Depeche Mode**, Alan Wilder has parted ways with the lads.

■ **Tina Arena** was a featured artist in Britains National Music Day celebrations, performing in front of 30,000 people.

■ The plans for summer festivals are in the pipeline; Brisbane's **Livid Festival** is rumoured to be hitting Sydney and Melbourne this year featuring Sonic Youth, Beastie Boys and The Foo Fighters (Nov/Dec); The **BDO** seems to have poached Green Day, PJ Harvey and The Orb; and **Alternative Nation** is mooted for March.



Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH

YAMAHA 02R MIXER

WILL BURSTON REPORTS ON A DIGITAL CONSOLE THAT REDEFINES STUDIO MIXING– AND IT'S INEXPENSIVE!

With the proliferation of low cost mixing consoles aimed at the semi-pro market, Yamaha have released a new offering with redefines all standards in relation to value for money. 44 inputs; all with dynamics, two internal stereo in place FX sends connected to dedicated SPX 990 processors, 6 further mono auxiliaries which may be paired as SIP sends, 4 bands of full parametric EQ on each channel, direct digital connection of 32 inputs from ADAT, DA88, and AES/EBU or analogue and full automation of all 3000+ desk parameters including moving faders.

The desk was first previewed in London during June. In Sydney for SMPTE it over shadowed everything on the Yamaha stand, and was accompanied by its creator, Mr. Eddie Kudo from Yamaha Japan. Responsible for the desks design, which is an evolutionary step from the ProMix 01, he spent his time walking people through the enormous specification list and operating procedures for the desk.

Complete with the 100mm moving faders, the internal automation system allows any of the 3000 internal parameters of the desk to be altered against any incoming time code source. Stored in internal battery backed RAM, it can be manipulated from outside the desk only via SysEx commands. The automation system is based on a tactile control surface topology, with the results displayed on the internal, graphical LCD display.

Connection to external sources is via balanced XLR's or TRS sockets on the first eight channels, and TRS sockets on the other 16 analogue input channels. The first 16 of these are Mic / Line selectable, the final eight being line level only. The first eight channels also feature phantom powering and insert points.

Tape machines are connected via optional dedicated eight channel cards, (pictured right) of which up to four are catered for. These are either analogue, ADAT, DA88, Yamaha digital or AES/EBU format signals.

All analogue input is sampled at 20 bits with 64 times over sampling at a variable frequency of 30kHz to 50kHz. Output is 20 bit with 8 times over sampling for master and control room outputs, and 18 bit at 8 times over sampling for the Studio Monitor and Aux Out sends. With a 32 bit internal data path, the headroom available is over a quoted figure of 190db for signal processing. Master output is either on balanced XLR's or AES/EBU or SP/DIF digital.

Each channel, buss master and stereo master has its own dynamics section offering a choice of either gating, ducking, limiting or compression. Two internal effects processors are based on the SPX 990, offering a choice from ten effect families. All auxiliaries can be pre or post fader, and the six independent auxiliaries can be paired at will to create further stereo sends.

The specifications are phenomenally impressive, and hopefully the desk sounds OK too. What I heard standing in the middle of SMPTE through a pair of average monitors is nothing to base an opinion on. The world will have to wait until Christmas time when a simultaneous global launch is planned. The expected release price is around A$15,000.

The meterbridge, wooden ends and digital cards will cost extra.

•Details– (03) 9699-2388.

WRITE IN 200 ON READER SERVICE CARD FOR MORE INFO

SALES

✔ **Fairlight** is enjoying continued sales success of MFX3 systems, with recent sales to TVC Yamamoto in Osaka and Tokyo; and Media 21 in Fukuoka. Further mainframes have been delivered to Tokyon facilities Imagica and Tokyo Sound Production.

✔ 2 Midas XL200 mixing consoles have been chosen for the musical 'The Secret Garden', fully loaded with stereo inputs and MIDI mutes in a 48ch frame. Supplied by **Coda Audio Services** of Sydney.

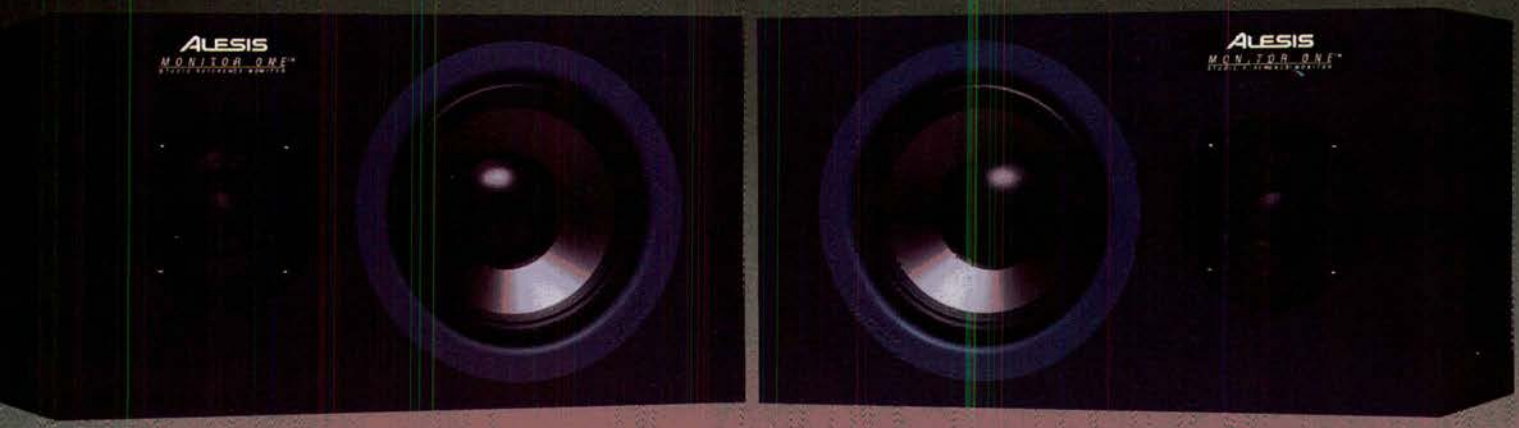
✔ **Total Concept Productions** has supplied 10 x EV MS2500 Wireless Microphone Systems to the new State Conference Centre in Sydney. This new centre is used for political conferences.

WIN '95

We've been Beta running Windows '95 for some months now, because we plan to participate in the Microsoft Network (MSN) from next month. So what does this new operating system mean to you?

We think mostly that NEW PC installations will go with Win '95, because to retrofit it onto a machine already running Windows is a major experience. As devoted Mac users we are stuck by the *SIMILAR* approach on Win '95, and first time users, including the 9 year old, report it is easy stuff. Of course you need more RAM, we suggest 12MB minimum. A brave new world! **-JG**

SEE ALSO LIGHTING SECTION, from page 68

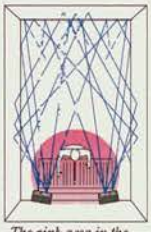


The Truth From Left To Right

The truth...you can't expect to find it everywhere you look, or *listen*. But when mixing music, hearing the truth from your monitors will make the difference between success and failure. You'll get the truth from the **Alesis Monitor One™ Studio Reference Monitor**.

Room For Improvement

Fact: most real-world mixing rooms have severe acoustical defects, with parallel walls, floors and ceilings that reflect sound in every direction. These reflections can mislead you, making it impossible to create a mix that translates to other playback systems. But in the near field reverberant sound waves have little impact, as shown in the illustration. The Monitor One takes advantage of this fact and is built from the ground up specifically for near field reference monitoring.



The pink area in the illustration shows where direct sound energy overpowers reflected waves in a typical mixing room. The Monitor One helps eliminate such complex acoustic problems by focusing direct sound energy toward the mixing position.

The Truth From Top To Bottom

The Monitor One's proprietary soft-dome pure silk tweeter design delivers natural, incredibly accurate frequency response while avoiding high frequency stridency and listener fatigue–typical of metal-dome tweeter designs. The Monitor One overcomes wimpy, inaccurate bass response–the sad truth about most small speakers–with our exclusive SuperPort™ speaker venting technology. The design formula of the SuperPort eliminates the choking effect of small diameter ports, typical in other speakers, enabling the Monitor One to deliver incomparable low frequency transient response in spite of its size.

Alesis SuperPort™ technology gives you the one thing that other small monitors can't: incredibly accurate bass transient response. No, the SuperPort doesn't have a blue light, but it makes the picture look cool.

The result? A fully integrated speaker *system* that has no competition in its class. You'll get mixes that sound punchier and translate better no matter what speakers are used for playback. The Monitor One's top-to-bottom design philosophy is a true breakthrough for the serious recording engineer.

Power To The People

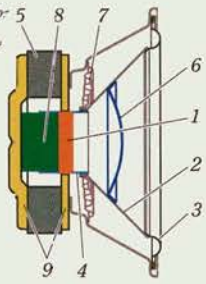
While most near field monitors average around 50 watt capability, the Monitor One handles 120 watts of continuous program and 200 watt peaks...over twice the power. The Monitor One provides higher output, more power handling capability, and sounds cleaner at high sound pressure levels. If you like to mix loud, you can.

The Engine

Our proprietary 6.5" low frequency driver has a special mineral-filled polypropylene cone for stability and a 1.5" voice coil wound on a high-temperature Kapton former, ensuring your woofer's longevity. Our highly durable 1" diameter high frequency driver is ferrofluid cooled. Combined, these two specially formulated drivers deliver an unhyped frequency response from 45 Hz to 18 kHz, ±3 dB. The five-way binding posts provide solid connection both electronic and mechanical. We even coated the Monitor One with a rubber textured laminate so when your studio starts rockin', the speakers stay put. Plus, it's fun to touch.

A cross section of the Monitor One's proprietary Alesis-designed 6.5" low frequency driver.

1. 1.5" voice coil.
2. Mineral-filled polypropylene cone.
3. Damped linear rubber surround.
4. Kapton former
5. Ceramic magnet.
6. Dust cap.
7. Spider.
8. Pole piece.
9. Front and back plates.



The New Alesis Monitor One™

You don't design good speakers by trying hard. It takes years and years of experience and special talents that only a few possess. Our acoustic engineers are the best in the business. With over forty years of combined experience, they've been responsible for some of the biggest breakthroughs in loudspeaker and system design. The Monitor One could be their crowning achievement. They're the only speakers we recommend to sit on top of the Alesis Dream Studio™.

See your Authorized Alesis Dealer and pick up a pair of Monitor Ones. Left to right, top to bottom, they're the only speakers you want in *your* field.

Electric factory
188 Plenty Road, Preston VIC 3072
Ph: (03) 9480 5988 Fax: (03) 9484 6706

ALESIS
STUDIO ELECTRONICS

Write in Reader Service number: 144

COLES RIBBON MICS

Audio Sound Centre has recently been appointed Australian importers of Coles Ribbon Microphones. The range is directed towards the pro studio/broadcast audio sector.

Three models are currently available; the 4038 Studio Ribbon Microphone, (A$1195 + tax) as used by BBC and Q Recording.

Second, the 4104 Commentators Ribbon Microphone (A$695 + tax), with up to 30dB discrimination between voice and background noise, is used in TV and Radio sport commentary.

4115 Broadcasters Ribbon Microphone (A$595 + tax) completes the range and is designed for use in high ambient noise locations requiring clear speech announcement. It comes complete with a fixed five metre cable.

• *Details: Audio Sound Centre, ph 02 901 4455*

INFO? WRITE IN 217 ON READER SERVICE CARD

EV Condensor Mic

The RE 2000 Studio Condensor is the first high-end recording microphone built by Electrovoice. Designed to appeal to both musicians and studio engineers the RE 2000 includes features such as; high sensitivity, low self-noise, wide dynamic range.

To maintain reliability for consistent use, it has an internal heater to maintain a constant temperature for the transducer. As well, it utilises a balanced transformer outlet.

The RE 2000 has a supercardioid pattern with 10dB pad and 130Hz roll off. The unit will handle 138dB as standard or 148dB with pad. The RE 2000 Microphone System comes complete with a hard case shell, external pop filter, shock mount system, stand adaptor and 20ft of StarQuad cable. Suggested List: A$2900.

• Mark IV Audio, ph o2 648 3455

INFO? WRITE IN 218 ON READER SERVICE CARD

East Coast Take On SADIE

East Coast Audio have been appointed the Australian distributors of SADIE Disc Editing Systems (UK).

Also new to East Coast is the Register Data Systems (RDS) radio automation system which with satellite control can run up to six stations on different time zones from one central location.

For more info call Gregg Joseph, East Coast Audio, (03) 9428-9797.

SUBSCRIPTIONS:
A$39.50 Call 1-800 635-514
NZ$65, call +61-2-876-3530

Insure your most prized possessions with Play Safe, the musical equipment insurance recommended by the Australian Musicians Union. Then you'll always have the rhythm and never the blues. Play Safe gives your musical equipment:

the Rhythm, not the BLUES.

- Accidental loss or damage cover
- 24 hour theft cover
- Personal liability cover
- Transit and worldwide cover
- Plus more all at an agreed replacement value
- Ring Toll Free now on 008 882 317

Hannan & Co. Pty. Ltd.
132 Greenhill Road, Unley SA 5061
Tel: (08) 373 2450 Fax: (08) 373 2474
Underwriter: QBE Insurance Ltd.

HANNAN PLAY SAFE

Limelight HA029

Write in Reader Service number: 139

Soundcraft K3

SOUNDCRAFT'S latest live mixing console is called the K3. The concept allows for a compact design with versatile options. It is available in 16, 24, 32, 40 and 48 channel frame sizes.

There are two versions of the K3 product, the *Standard*, and *Theatre* - designed for precise live applications featuring more EQ options such as 4 sweepable bands.

Soundcraft have a new MIDI-mute system standard on the K3, which gives 128 mute groups. The midi-mute module can transmit a MIDI program change on any channel when recalling a scene, to change an effects program, or select a new preset on an external device. MIDI control can also work the other way around, using an external unit to select mute scenes or individual channel cuts.

In addition, a DataFader on the MIDI module gives external control over effects units parametres.

Standard on K3 are eight auxiliary sends, one of which has a direct out. EQ on the standard unit is four way with 2 mid sweeps.

The Theatre version has a different input module with four sweepable EQ's and extra routing.

Both variants can have module mix and matching and an optional matrix output.

The Standard version (16 channel) starts at RRP A$22, 000.

• *Contact Jands on ph 02 516 3622 or NZ (09) 366-7021.*

INFO? WRITE IN 216 ON READER SERVICE CARD

A New Mackie Console

Mackie designs have released a new 24 channel Audio Mixer. The new SR24-4 includes features such as; a 3 band EQ (sweepable mid), 6 Aux sends, 4 stereo Aux returns, double bussed sub outs for multitrack recording. This is all within a low impedance design.

The SR24-4 continues Mackie's well known lineage of compact mixers, catering to both live sound and studio applications.

Suggested retail price is $3995.

• *Contact Australian Audio Supplies, phone 02 879 6124.*

INFO? WRITE IN 215 ON READER SERVICE CARD

Symetrix

Compressors Noise Sensing Volume Controls Sound Delays Parametric Equalisers Limiters

DYNAMICS PROCESSORS

AUDIO TELEX COMMUNICATIONS PTY LTD • SYDNEY: (02) 647 1411 • MELBOURNE: (03) 562 8566
BRISBANE: (07) 852 1312 • PERTH: (09) 356 2761 • ADELAIDE: (08) 234 9444 • HOBART: (002) 28 6373 • NEW ZEALAND (09) 415 9426

Write in Reader Service number: 163

AVID open office, debut system

Power Mac Video

Desktop video is taking hold faster than a lot of traditionalists realise. From basement level programs for PC and Mac, through to systems on offer from the likes of AVID, the revolution is here today.

AVID have had extremely fast and huge growth as a company, to the extent that their recently launched Australian operation is larger than many existing, long established product distribution firms featured in these pages. Turnover of the USA headquartered firm has doubled each year to around A$250 million in 1994.

At SMPTE '95 AVID announced they are now shipping Media Suite Pro on the Power Mac 8100. It provides corporate communicators and multimedia developers with a powerful tool for cost-effectively producing professional-quality videos and multimedia presentations.

With Media Suite Pro, you can create high quality training tapes, corporate presentations, interactive multimedia productions and sales videos directly on your Mac. You may cut/copy/paste video, audio, graphic animations and titles similar to the way you use a word processor.

Key features for Media Suite Pro for the Power Mac include:

-Batch digitising for auto recreation of media files;

-Support for CMX, Grass Valley and Sony EDL list formats;

-QuickTime codec for easy integration of animation sand effects;

-Full library of Avid VideoShop effects.

The system is available from ISM&T throughout Australia, QuazerCorp and Amber Technology in New Zealand. The package sells for a recommended A$39,900.

WRITE IN 201 ON READER SERVICE CARD FOR MORE INFO

DIAL 1-800 635-514 (freecall) for SUBSCRIPTIONS

AZDEN Wireless Microphone System

Azden say their 311 True Diversity wireless mic system delivers drop out free RF performance even under the most adverse conditions, with image rejection better than 60dB.

A working range of up to 100m is claimed under average conditions. The 311 series is available in six high band VHF frequencies from 171.045 to 185.125MHz.

The 311DR True Diversity receiver houses two receivers on the same frequency with transparent switching for the best reception. The 311DR features a 6.35mm unbalanced line level output socket with level adjustment.

Transmitters include a 31HT handheld wire-free transmitter/microphone; a 31LT bodypack transmitter with tie- clip microphone; and a 31IT instrument bodypack unit with fixed 6.35mm plug. Price of a complete system comprising one 311DR receiver and one transmitter unit is under $800.00 excluding sales tax.

Contact Ace Edit, (02) 398-9039.

WRITE IN 205 ON READER SERVICE CARD FOR MORE INFO

OUTLETS

Daniel Cole visits Audio Sound Centre

Audio Services Corporation Australia are now known as Audio Sound Centre.

They have been supplying the film and television industry with audio product for a number of years. Located in Artarmon, Sydney, Audio Sound Centre provides sales, technical support, hire and service/repair for a discerning niche market—broadcast and film audio.

"It is a small yet active market," says Geoff Grist, Managing Director. "For instance, there are four brands of portable DAT recorders available in Australia; Fostex, Sony, HHB, StellaDAT—of these we import half—HHB and StellaDAT, and sell all four."

According to Mr Grist, he began the business as a basic hire company after working for 15 years in TV.

"After visiting the US and dealing with Audio Services Corporation US as customer, I realised there was no equivalent service in Australia—now we actually send product to America, as well Korea and New Zealand." he said.

ASC are well known in the incustry, providing equipment and technical support to freelance sound recordists and to large organisations. The hire department has a full compliment of equipment which according to Mr Grist "most hire gear is not older than 18 months."

The repair and service area currently employs four full-time technicians, this will soon increase to a staff of five

"This has been a growth area for us, not only supporting our own hire stock but it is attracting outside work. This is because most of the good technicians are tied to organisations like Sony, and AlphaTech. The Opera House send their RF equipment to us to repair, also AWA have appointed us repair centre for AKG and TOA microphones".

According to Mr Grist, two recent trends in pro-audio equipment are doing well: time code DAT and Radio Links, "Television stations seem to be moving towards radio links—which are used for cameras to eliminate excess cabling. TCN 9 has ordered a range of these; to link camera and sound operators."

And regarding timecode DAT, "analogue recorders are dinosaus and freelancers are trading them in to upgrade. It is a competitive profession and timecode recorders are more in demand." he said.

This is evident by a range of second hand equipment for sale including some second hand analog Nagra recorders. (Audio Sound Centre have an impressive range of antique microphones which are available for hire as props...)

"This is an exciting time to be involved in audio, sales and supply with the changes that have been occurring.

"The future may see us opening a branch in Melbourne to acknowledge the work prospects there, also at end of year we will release a 100 page information catalogue, so it's worth keeping in touch with us."

•**Audio Sound Centre**, 32 Punch Street, Artarmon, NSW ph: (02) 901 4455, fax: (02) 901 4229

The New MACKIE SR24•4 Has Arrived

Same Mackie Value Same Mackie Quality

Mackie's latest design is a 24-channel, 4-bus board with a phenomenal feature list at an outrageously low price. The SR24•4 console integrates the best features from Mackie's 8•Bus and compact mixers: superb audio quality, 3-band EQ with swept mids, and smooth custom faders.

The SR24•4 is a true 24 x 4 x 2 x 1 console featuring the high headroom, low noise mic preamps (with phantom power) now commonly associated with Mackie mixers. Also included are channel mutes and soloing, 6 independent, balanced AUX sends with masters, sweepable MID (100Hz - 8kHz), tape assign to Monitor or L/R mix (only) switch, and double bussing to feed 8 tracks at once. Equally adept for front-of-house and monitor mixing, or multi-track recording, the SR24•4 packs every conceivable feature into a compact console. The Mackie Designs SR24•4 - hot off the the production line and shipping to a retailer near you.

MACKIE.

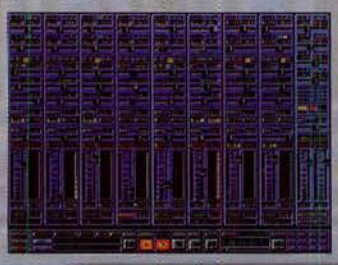
Write in Reader Service number: 131

For more information on MACKIE and SPECTRAL products...
Australian Audio Supplies • iNFO-HotLine (043) 291 711

DIGITAL AUDIO WORKSTATIONS

AUDIO PRISMA

Spectral's AUDIO PRISMA is a powerful PC-based hard disk recording and editing package. It comes with the newly released and highly acclaimed PRISMA MUSIC and PRISMATICA software interfaces. The package has full on-board synchronisation and can be configured to suit your needs. Apart from its stand-alone features, Audio Prisma allows you to download audio from ADAT and DA-88, 8 tracks at a time! You can bounce, automix, EQ and edit on a system specifically designed for music production. Prisma Music doesn't feel like a computer, it feels like a studio. Designed to run fast, there's no pull-down menus! A mixer panel recreates the console look and functions that you already use in recording studios. Editing is made simple by allowing you to pre-arm the cursor for super-fast cut, copy and paste functions. Full DSP includes time compression, expansion and pitch shift. Think of the possibilities. Bounce down multiple tapes. Add an extra 8 real-time digital tracks to your studio. Mix and EQ in the digital domain. Audio Prisma is simply one of the most powerful and fully featured Digital Audio Workstations available today.


The Prisma Music Mixer Window

THE TRANSLATOR

With the spread of low and medium cost 8-channel digital multitracks, like ADAT and DA-38, the audio recording industry has been transformed. But until now, there was no easy way to connect all eight channels between different products without converting to and from analog. The Translator™ lets you transfer digital audio directly between the popular formats. You can make all-digital dubs in either direction between an ADAT, DA-88 or Yamaha 8-track digital recorders. All format conversions are completely digital. There is no analog conversion and no generation loss. You can also import projects from 8-channel digital recorders into your Spectral workstation, all 8 channels at a time for editing.

AUDIO PRISMA

The Digital Audio Workstation & ADAT/DA-88 Editor

SPECTRAL

Write in Reader Service number: 158

gemini
SOUND PRODUCTS WITH SOUND IDEAS
MIX WITH THE BEST

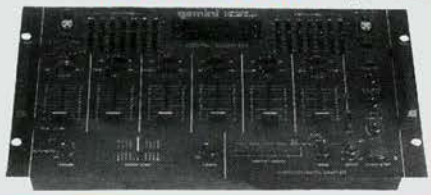
U.S.A.

CD - 9000 $1,059

Professional dual work horse double CD Player with variable Pitch control.

MIXER
PMX - 1000 $449
- 2 Phono
- 4 Line
- 2 Mic
- Auto Mute Talkover
- Assignable & Removable Cross Fader

MIXER
PDM - 6008 $866
- 2 Phono
- 5 Line
- 14 Band EQ
- Peak Hold LED Meters
- Built in 8 Second Digital Sampler



AMPLIFIER
PVX - 160 $819
- Fan Cooled
- Level Controls
- Power Protection Circuitry
- 160 Watts per Channel into 8 Ω

EQUALIZER
EQX - 30 $319
- ±12dB Boost/Cut
- Gain Control
- LED Level Indicators
- Two Channel Graphic EQ
- 15 x 2/3 Octave Bands Each Channel

STEREO PREAMPLIFIER
PVX - 20 $327
- Bass & Treble
- Low Cut
- Aux
- Tuner
- Mute
- Tape Monitor • CD & Phono Inputs
- Mono & Loudness Buttons

DISCO WORLD PTY LTD
Ph: (03) 9735 0588
20 Cave Hill Rd. or PO Box 509,
Lilydale, Melbourne VIC. 3140
Fax: (03) 9739 5255

ALLPRICES ARE EXCLUSIVE OF SALES TAX AND SUBJECT TO CHANGE WITHOUT NOTICE.

Write in reader service number 102

Technology

NEW, UPGRADED & MORE:

■ **Lexicon** have released Version 2.00 software for the Lexicon LXP-15 with enhancements that include; presets (128), enhanced reverb algorithms, revised program layout, new MIDI capabilities, improved user interface, faster program loads. The update kit includes the new system ROM chip, and IC extractor tool plus installation instructions and new manual. Retail: A$295. • Studio Connections ph (03) 9646 0544.

■ Surgeon's in Oklahoma City's South Community Hospital apparently like to listen to background music during operations, but the acoustics of the operating theatre makes for difficult listening—all those reflective stainless steel surfaces. To counter this, **BBE Sound** have supplied a Sonic Maximiser. It works by applying phase compensation to the low, mid and high bands as well as controlling the amplitude relationship between same frequencies. This restores clarity lost due to inherent characteristics of loudspeakers. Available in Australia from F. Payton & Son. (02) 439-1822.

■ **Canon Audio** have advised new prices effective from the 1st July 1995. This makes the V100 series speakers—used in installation, contract work—A$729 a pair, including tax. Canon have also released the SV15 Mini Corner Speaker and the V200, a high powered version of V100s. • Further Information, Horwood Australia, ph (02) 585 1011

■ Targetting the cinema and home entertainment market, **ARX Systems** have announced the release of the CP32, a three Channel, 2-way electronic Crossover. As well as 24dB Linkwitz-Riley filter performance, other features of the CP32 include; user variable crossover frequencies, definable low frequency EQ, tamper-proof High Frequency Level and EQ for constant directivity HF Units and/or Screen Compensation, plus electronically balanced XLR inputs and outputs. R.R.P: A$875
• Contact: ARX Systems, (03) 9555 7859

■ For those running Computer Aided Design (CAD) software, the release of **AutoCAD** Release 13 is news. Providing an object-oriented database, customisable Windows interface and multi-platform functions, CAD also supplies tools to draw, edit and visualise designs. Overview features include; re-organised screen layout, multi-platform versatility, 3D modelling capacity, text editing, file sharing across all AutoCAD releases. A CD-ROM platform is available.

AutoCAD Release 13 operates on DOS, Windows 3.1, Windows NT, and Windows 95. R.R.P: AutoCAD Release 13 — A$5,495 CD-ROM
• Contact Autodesk (02) 844 8000

■ **Electrovoice** have released the S60a and S80a speakers to compliment the S40 range. They are a 100w system with 6" and 8" drivers with 1" tweeter on integral flares, dual protection across both the bass driver and tweeter provided on Poly Switches. Mounting hardware is available and 100v line versions are forthcoming. R.R.P: S60a A$1,199 (pair); S80a A$1,399 (pair). • Contact: Mark IV Audio, (02) 648 3455

■ New speakers from **REDBACK** are now available in either Coaxial or Triaxial configuration. Directed towards high power, high performance applications, other features include; Polypropylene cone, Provision for 100v line transformer, High power 50w RMS.

Both models fit into a custom ceiling grill for installing.

RRP: C 2005 Coaxial—A$59.95
C 2007 Triaxial—A$69.95
C 0805 Ceiling grill—A$4.95
• Contact Altronic, (09) 328 2199.

PowerLight.

Uncompromised Performance In A Light Amp.

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

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

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

LOAD IMPEDENCE	PowerLight 1.0	PowerLight 1.4	PowerLight 1.8
2 OHM*	500 Watts	700 Watts	940 Watts
4 OHM**	300 Watts	500 Watts	730 Watts

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

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

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

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

Your wait will be rewarded.

QSC®
AUDIO

AR AUDIO ENGINEERING
A.R. Audio Engineering Pty. Limited
Level 4, 140 Sussex Street,
Sydney NSW 2000 Australia
Fax (02) 299-2240
Phone (02) 299-3566

WRITE IN 129 ON READER SERVICE CARD FOR INFO

NuMark add DJ mixers

Numark are the USA makers of disco mixers and audio products. They have just added to their range of mixers, starting with the DM1000X.

This $389 mixer joins the DM 1100X, and is designed by one of the US's leading scratch DJs - DJ Shortkut. Two channel, 5 inputs and a replaceable crossfader, 2 way EQ on each input, and 'transformers' on each side of the crossfader are the features. A 'Transformer' is a talk-over switch. This mixer is the same height as an industry standard Technics SL1200 turntable.

Also joining the NuMark line is the DM1425, a full feature mixer. It has 6 line, 2 phono and 2 mic inputs, replaceable crossfader, dual 6 band EQ, BNC 12v light connector, Neutrik 'combo' DJ mic connector, talk over control, monitor level control, push button cueing and is 19" rack mount width. It also has an 8 second, 12-bit sampler.

Finally the DM 1675 is the same except it also has a four bank 16 second sampler.

•More from ULA 075 290-688

WRITE IN 202 ON READER SERVICE CARD FOR MORE INFO

5 Ch, 4 Zone Mixer

Peaveys' Architectural Acoustics PZS series and a combination of mixer and assignment switcher. They have zone assignment switching capability to four independent output zones.

Two versions; the PZS have line outputs for each zone, while the PZS80 has a 20 watt 100 volt line transformer isolated, 8Ω output plus line level output to each zone.

Otherwise both models are identical, with: 5 balanced input channels; channel level, EQ and zone assignment switching for each input; channels 1 & 2 have front panel controls for trigger and paging release, for mic or music muting; and 4 output zones with master level controls.

• Details from Audio Telex, call (02) 647-1411.

WRITE IN 206 ON READER SERVICE CARD FOR MORE INFO

EXPORT INNOVATION

STATUS SCENERY FLYING CONTROL

Bytecraft have followed up on the success of their STATE flying control system with the new Status family of consoles (pictured above). With the STATE system installed in numerous leading theatres worldwide, a smaller version has been in hot demand from medium sized theatres.

Enter the Status 600, Status 900 and Status 900+ models, smaller in profile and mass, yet still providing many of the features of the State system.

High speed industrial power is provided via VME computers running realtime multi-tasking Unix based software. The Graphical User Interface (GUI) is used primarily for programming preset actions and cues, and operates via an external video monitor, and trackball or mouse. A keyboard is incorporated in the console, which can be hidden from view.

The Status communicates with Wincons (winch controllers) via a serial Ethernet link, duplicated by a duplex multidrop EIA/RS-485. The Wincons can control any combination of drives (hydraulic, electric, pneumatic, etc) in the same installation.

The same software is used for all systems, and remote control is possible using a hand-held ROVER control unit.

Bytecraft has State systems installed in many leading productions, including Phantom. A Status system is in use on Beauty and the Beast.

•More details from Bytecraft call (03) 9587-2555.

WRITE IN 203 ON READER SERVICE CARD FOR MORE INFO

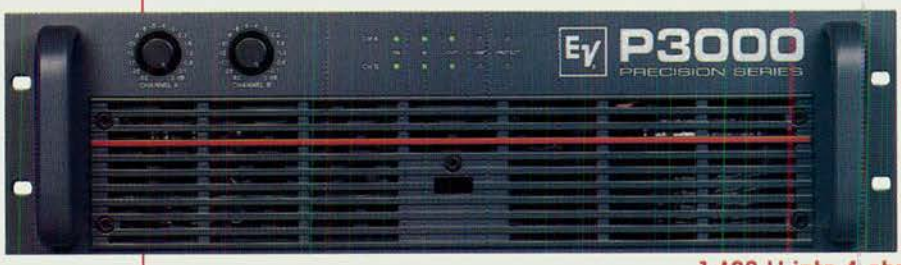
ARX AMP

The SX300 is a new addition to the range for ARX. It boasts 150 watts/ch into 4Ω, and 100 watts/ch into 8Ω. Weighing in at 10kgs, it has ARX's Ultrafin heatsink, dual fan cooling, and balanced inputs.

• Details: ARX (03) 9555-7859.

WRITE IN 204 ON READER SERVICE CARD FOR MORE INFO

Precision Series™ Power Amplifiers



1,400 W into 4 ohms

900 W into 4 ohms

550 W into 4 ohms

Dynamic Signal Processing™

The Electro-Voice Precision Series™ power amplifiers were engineered to maximize the performance of the best, most powerful speaker systems in the world—our own.

So we didn't compromise.

Precision Series™ amplifiers feature the most innovative performance and protection circuitry available.

And they're built to last...long after other amps have been recycled.

To ensure this level of performance and reliability, we subject every circuit in every amplifier to the most demanding test parameters in the industry...

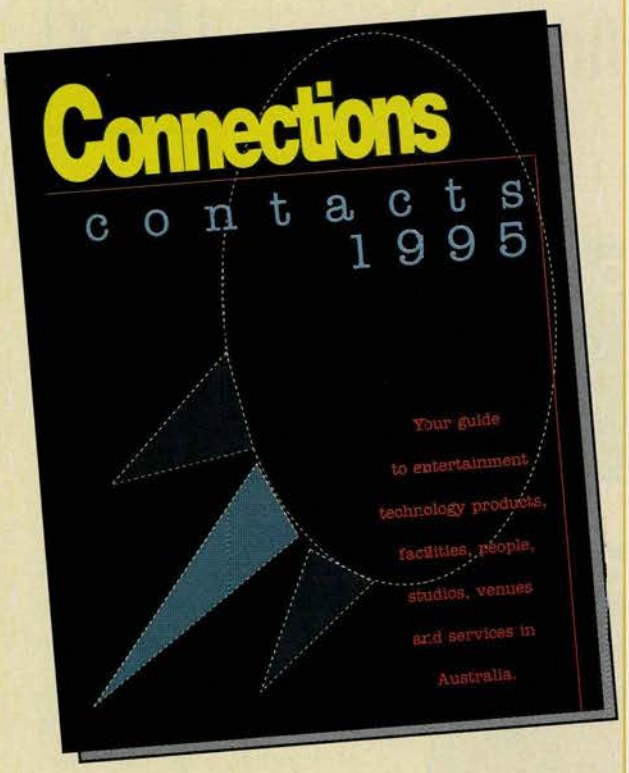
but the most important test can only be provided by you.

Call now for more information and the name of your nearest EV dealer/stockist.

Designed to Please the Two Most Stringent Testing Devices...

Electro-Voice Inc., a Mark IV company Unit 24, Block C, Slough Business Park, Silverwater NSW 2128 Tel: 02 648 3455 Mark IV Audio QLD Tel: 07 854 1963

Write in Reader Service number: 128



OUT NOW

$9.00

Available at Newsagents and good outlets everywhere. Contains thousands of names and phone numbers!

Order by phone:
1-800-635-514

Technology

Media Vault for Superhighway Services

StorageTek has announced MediaVault, a digital storage server for rapid retrieval of large quantities of music, video and multi-media material. Bandwidth Servers, Video, Post and Broadcast users can store data on StorageTek's 'RedWood' SD3 cartridge drive, each RedWood can store up to 50Gb of uncompressed data, and up to 6,000 of these carts may be stored in a single MediaVault!

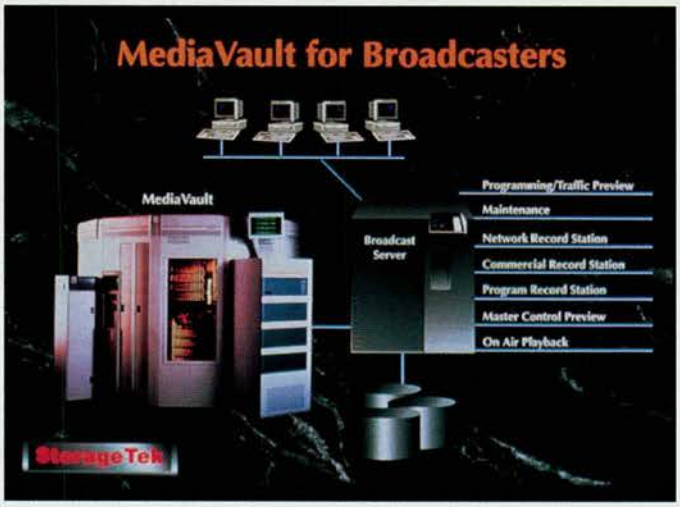
(The 2Gb drive on my Mac just fluttered when I keyed this in!)

If you think this is just something for broadcast, consider this: at least one major record company is currently in the process of digitising its entire catalogue with the intention of making it possible for consumers to order up a copy of their album of choice from MediaVault across high-bandwidth networks, once these are in place.

MediaVault is based on StorageTek Automated Cartridge Systems (often referred to as 'silos'), a circuit design where the cartridges are stored around the walls of each library module.

At the heart of each library is a high speed robot which is used to select and transport tapes to and from high speed drives.

• Storage Technology distribute StorageTek, call (02) 438-4844 in Australia, or 0800 734-400 in New Zealand.



Novation

A new Australian digital production and on-air assist package for radio stations has been developed by Novation.

It offers 400 minutes of stereo sound (upgradable) and an On Air Console and Production Console.

The ON AIR ASSIST program replaces cart machines in the studio, every commercial, station ID and pointer is given a file number (like a cart number) for selection. They can be stacked in sequence and the announcer can play one or play all.

The PRODUCTION STUDIO CONSOLE uses the Turtle Beach Wave SE II editing program. The NOVATION system will be on show at FARB. **•Call (03) 9563-7117.**

Current measurement

Sydney tech Phil Allison has long bemoaned the fact that there was no safe and readily available device to interface mains current and his CRO. Some rather dangerous lash ups were tried but all proved unsatisfactory. Necessity being the mother of invention, Phil has come up with what he believes to be the ultimate device for doing just this.

The Current Monitor CM100 is a diagnostic instrument for everyday electronic workshop use.

Many serious faults and problems with 240v operated equipment are revealed by noting the mains current draw and making comparisons with previously established values. The CM 100

JAMO PA

PA loudspeaker manufacturers sometimes branch out into HiFi, but to my recollection it's uncommon the other way around. JAMO of Denmark are a hi-fi giant; their annual production in domestic listening is more than 800,000 units. JAMO have recently entered the PA market.

"We designed the PA line the way we develop all our other loudspeakers - by listening" says Soren Moller, JAMO's Development Manager. This would make their product worthy of a listen, because as anyone who has auditioned professional products will be quick to tell you, hi-fi speakers sound quite *different*.

1- Knock proof plastic; 2- 15" woofer; 3- Bass reflex 4- 1" horn 5- Plastic laminated PDF board. 6- Snapon star pattern. 7- stand adaptor. 8- 1" driver. 9- grille. 10- Band pass filter. 11- inside supports. 12- handles. 13- inside foam dampening.

The listening part also included listening to pro-users, who not surprisingly told JAMO they wanted reliability, a high rate of return, and top sound quality. The firm launched their line at the Frankfurt Mussik Messe, and have since done reasonably well in their Europe heartland.

Scan Audio of Richmond Victoria now offer JAMO pro PA products alongside the hi-fi range. Scan offer:

•PA4008 foldback monitor, 12" woofer and twin h/f components. A$1195 each.

•PA5001, 15" woofer and 1" throat compression driver. A$2195 each.

•PA6000, subwoofer with 2 x 15" woofers, 500w. A$2400 each.

Also on offer are electronics packages, brackets, spacers and tripods. The cabinet finish offers built in shock absorbers and a rugged plastic coating.

Details: Scan Audio, call (03) 429-2199.

WRITE IN 208 ON READER SERVICE CARD FOR MORE INFO

makes this possible without even taking the covers off the equipment in question.

Using the CM 100, equipment and power supply transformers likely to overheat can be immediately detected by higher than normal current readings and corrective action taken before there are any signs of smoke!

It is a fully isolated current interface from DC to over 100KHz for your CRO as well as an accurate, true RMS 3.5 digit LED meter, with 1mA resolution. Because a separate lead supplies the metering, a Variac can be used, or any source of AC or DC current. Transient free range switching selects 2A and 20A ranges.

Phil says the CM 100 is ideal for detecting thermal and intermittent faults that cause mains load variation. He also uses the 1mA precision to check and adjust valve and transistor amp bias settings. Triac controlled equipment is another area where the CM 100 is a winner. The fact that the current reading is true RMS establishes the Heat Load in transformers and ratings for fuses, wiring and resistors.

•**Details: (02) 799-8242.**

Lexicon

HEARD IN ALL THE RIGHT PLACES

ALEX

■ 7 Algorithms ■ 16 Presets ■ 16 User Registers ■ Adjustable Effects Parameters ■ Stereo In & Out ■ Footswitch Remote

$1095.00 RRP

REFLEX

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

$1295.00 RRP

VORTEX

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

$1195.00 RRP

JAM MAN

■ Digital Delay/Looper ■ Tap Tempo Echo ■ Sampler ■ Looping ■ Creativity in a Box for Composers Performers & Mixers

$1395.00 RRP

LXP-15 MKII

■ Multi Effects with Legendary Lexicor Sound ■ Dynamic MIDI Control ■ 128 User Registers ■ 27 Variable Parameters ■ Full Bi-Directional Communication with MRC

$2895.00 RRP

STUDIO CONNECTIONS AUSTRALIA

FOR YOUR NEAREST RETAILER

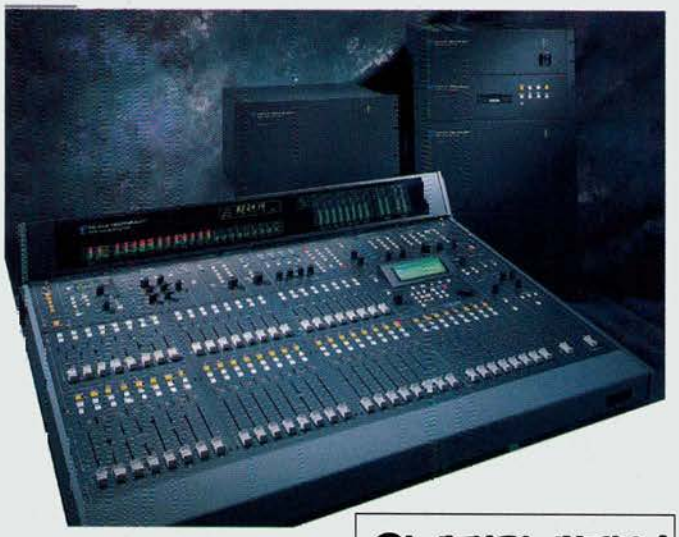
MELBOURNE
PH: (03) 9 646 0544
FAX: (03) 9 646 0533

SYDNEY
PH: (02) 873 3994
FAX: (02) 873 3995

Allen & Heath ■ ASL ■ Audiolab ■ C Audio ■ Euphonix ■ Genelec ■ XTA ■ Lexicon ■ Signex ■ Stucer Editech ■ Studio Techniques ■ 12 Gauge

Write in Reader Service number: 104

TACTILE TECHNOLOGY M4000 MIXING SYSTEM



OVERVIEW

By Howard Jones

The Tactile Technology M4000 mixing system has been around for a while, but has only lately made its debut in Australia. Connections attended a recent product introduction hosted by the distributor in Sydney and discovered something that is a lot more than simply a mixer.

The M4000 is distinguished by the fact that it is a digitally controlled analogue mixer, hence the term 'mixing system'. This makes it one of the forerunners of the next generation of mixing consoles where the control functions of the traditional mixer are separated from the analogue signal flows being controlled.

In the case of the M4000, what looks like a normal mixer with faders, knobs etc is actually a digital control surface with a comms link via a simple data cable back to a rack housing the processing circuitry. This outboard rack is actually performing the usual EQ, mixing and routing functions by responding to commands issued from the control surface.

Let's take a closer look at the hardware involved.

The outboard rack comprises the M490 power supply, the M420 input frame (TT call it an APC), the M430 Group Monitor Unit and the M440 computer and altogether these items take up 24 units of rack space. The power supply feeds power to the other 3 modules (the control surface has it's own built-in power supply) and the computer unit records data generated by the control surface. The APC could be considered the heart of the system, as this where the bulk of the normal mix functions are occurring.

The control surface looks deceptively like any high class mixer. There are 3 banks of 8 input faders, 3 banks of 8 tape return faders, a bank of 8 output faders and a single "channel strip". There is an angled LCD display with associated keypad, a mix strip and a meter bridge. Because the controller is a virtual mixer, you first call up the channel you wish to address and then make your EQ, group assign etc changes. Such an architecture automatically implies the ability to automate the console and the M4000 offers 3 levels of automation. It also allows for a very different ergonomic design: since the electronics are separated from the control surface, the desk can be designed to better suit the engineer.

As well as allowing for 24 inputs and 24 returns, the M4000 also has a connection for either an AES or SPDIF input. Furthermore, this input can be digitally mixed with the mix signal from the M4000 and sent to an AES/SPDIF output. The M4000 can generate and respond to time code and MIDI commands, so would be at home in a wide variety of environments.

The benefits of the design approach used in the M4000 are manifold, although not without some drawbacks. In it's basic kit, you have a 48-8 "mixer" with a very small footprint and very light weight. However, the control surface can address more than one input frame and group module: by installing these extra modules in the rack, you have created, say, a 96-16 "mixer" without subtracting one square centimetre from your control room area.

The benefits for live and theatre usage are equally obvious: the outboard components can be situated backstage with the control surface connected by it's umbilical which may be up to 100 metres long. This very flexibility, however, means that it could be hard to know quickly and instinctively which instrument you are adjusting. If the control surface was being used to address 3 APCs, then virtual channel 5 can control physical channels 5, 29 or 53. With the current software, the LCD does not allow you to name the channel, which would help. There is nothing to prevent you, however, from using more than one control surface to get around this.

This is a small quibble regarding an otherwise excellent concept with many design features which space does not allow me to mention now. A serious contender.

SUITS: Studio & Post.

PRICED from $57,000 retail (VCA automation) and $67,000 with fader automation.

•FROM: Syntec (02) 417-4700.

WRITE IN 225 ON READER SERVICE CARD FOR MORE INFO

SALES

• **Mark IV Audio**, c/o dealer Trevan Johns & Associates, have sold the RAAF in Sydney 4 Electrovoice R-Series radio mics and 2 x SX100's for parade duty.

• **DSP** have sold a Postation audio-for-video suite to Media Plaza in Osaka, Japan. The sale was negotiated by Time Lord, DSP's Japanese distributor. Media Plaza will run the 16 track Postation with a Euponix console.

• Tom Misner's **School Of Audio Engineering** has concluded a deal with Alesis which will see ADAT machines installed in every school (and there are 18 at last count) around the world. SAE's new schools in Zurich and Cologne are first to take delivery.

• **8 NEVE LOGIC** consoles now live in Australia, with the imminent installation of a second Logic 3 digital mixer at HSV Channel 7 in Melbourne.

This latest Logic 3/16 output AudioFile Spectra combination will go into Control 5 for use on short form work including commercials, station idents and sports promotions. Syncrotech Systems Design are Neve distributors.

• **Entertainment Installations** on the NSW Central Coast have been busy with a full PA and paging system installed at Ourimbah Uni, video at Gosford RSL, and neon signage at all kinds of places. Versatility rules? Call Neil Mace, (043) 243-873.

• **2MMM** are refitting their Sydney studio, and have chosen Connectronics MP28 multicore - Mark IV Audio dealer Audio Oz have supplied 140 metres.

DIAL
1-800-635-514
(freecall) for
Subscriptions A$39.50
or +61-2-876-3530 from o/s

SR SERIES II, THINK OF IT AS FREEDOM OF CHOICE.

There's a little something for everyone in SR Series II™. From small combo vocal reinforcement to large club systems from mobile DJ and recorded music reproduction to stage monitoring, front fills and main PA stacks in concert applications. SR Series II has evolved to be the first choice of musicians and sound engineers world wide. Here's what this evolution has produced.

MORE MODELS

You have a greater number of configurations from which to choose. With more systems containing large format compression drivers plus a dual 18-inch subwoofer system, SR Series II is sure to have the loudspeaker systems to fit your needs.

OPTIMIZED APERTURE™ TECHNOLOGY

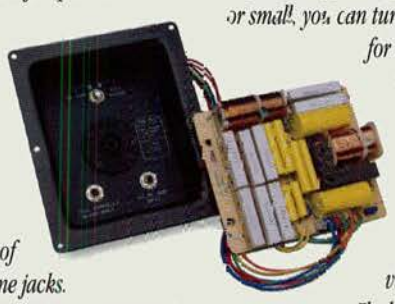
Our newest born technology, available in five models, yields outstanding pattern control (90° X 50°) and exhibits the lowest midband distortion we have ever achieved in large format systems. Equally important, the 2447J compression driver extends high frequency response well above 18 kHz, virtually eliminating the need for a separate tweeter.

INNOVATIVE COMPONENT DESIGNS

Many of the models incorporate recent breakthroughs in component design. The 2119H has been engineered for extra output power capability in dedicated midrange applications. Our 2417H small format compression driver incorporates the lightest diaphragm we have ever made, resulting in exceptional transient response, enhanced high frequency clarity and crisp, clear vocals.

ROADWORTHY CONNECTORS & CROSSOVER NETWORKS

You now have the choice of Speak-On® connectors or phone jacks. Speak-On's permit the use of multi-conductor cable for quick and reliable set-ups. Or you can choose the simplicity and convenience of 1/4-inch phone jacks. The input terminal cup is made of heavy gauge steel to endure years of road use and abuse. A heavy-duty rotary switch makes selecting Passive or Bi-amp operational modes quick, easy and reliable. Crossover networks have been re-engineered to survive years of road work and offer outstanding acoustic performance. Highest quality close tolerance capacitors, high power resistors and low insertion-loss inductors assure the smoothest possible acoustic response. Regardless of your application, large or small, you can turn to SR Series II for the most reliable sound reinforcement solutions. For complete technical information via fax, call the FlashFax number below. Better yet, stop by your local JBL Professional dealer for a personal demonstration.



JBL

SR II DEALERS		
WA	Music Park (Perth)	09 470 1020
SA	Beringers Music (Adelaide)	08 371 1884
VIC	CC's Stage & Studio (Melbourne)	039 690 3999
	Warehouse Sound (Melbourne)	039 417 4274
	Tony Boon (Albury)	060 59 1652
NSW	SOS Communications (Sydney)	02 281 0077
	Custom Audio & Lighting (Newcastle)	049 29 4996
QLD	Musicians Pro Shop (Brisbane)	07 854 1577
	Musicians Pro Shop (Goldcoast)	075 75 3955
TAS	McCullochs (Hobart)	002 28 6373
	McCullochs (Launceston)	003 43 1034
NT	Top End Sound (Darwin)	089 81 7744
ACT	Pro Audio Supplies (Canberra)	06 249 7766

Jands Electronics Pty Ltd
ACN001 187 837
578 Princes Hwy, St Peters NSW 2044, Aust.
Tel: +61 2 516 3622, Fax: +61 2 517 1045.

Write in Reader Service number: 117

THEATRE LISTINGS for AUGUST

SHOW	THEATRE	COMPANY	STATUS
New South Wales			
Three Tall Women	Wharf 1, STC, ***S***	Sydney Theatre Co	Until August 12
Les Parents Terribles	Drama Theatre OH ***S***	Sydney Theatre Co	Until September 2
Blackrock	Wharf 1, STC ***S***	Sydney Theatre Co.	Opens August 25
Miranda	Wharf 2, STC ***S***	East Coast Th Co.	From July 19
Phantom of the Opera	Theatre Royal ***S***	Cam Mac	Indefinite run
The Barber of Seville	SOH ***S***	Australian Opera	August 18,22,26,31
The Marriage of Figaro	SOH ***S***	Australian Opera	August 2,5
Rigoletto	SOH ***S***	Australian Opera	August 8,10,16,19,21,24
Aida	SOH ***S***	Australian Opera	August 4,7,11,14,17,25,30
Nabucco	SOH ***S***	Australian Opera	August 12,15,19,23,26,29
The Shoe-Horn Sonata	Ensemble Theatre ***S***	-	August 5 - August 26
Miss Saigon	Capitol Theatre ***S***	Cam Mac	Indefinite run
The Mikado	State Theatre ***S***	-	July 26 for 4 weeks
Hot Shoe Shuffle	Her Majesty's Theatre ***S***	David Atkins	Opens August 10
Hotel Sorrento	Chester St Theatre ***S***	Chester St Theatre	Until August 19
Who's Afraid of Virginia Woolf?	Glen St Theatre ***S***	Sydney Theatre Co	August 15 - September 2
Shakespeare in the Sex Shop	Belvoir St Theatre ***S***	-	Until August 6
Girl's Night Out	Belvoir St Theatre ***S***	-	August 1 - August 6
Divinely Irresistable	Stables Theatre ***S***	-	August 4 - Sept 3
A Connubial Couple	Pilgrim Theatre ***S***	Cicada Theatre	From July 27
End Game	Lookout Theatre ***S***	Lookout Theatre	From August 1
South Australia			
Songs With Mara	Playhouse ***A***	Meryl Tankard	August 10 - August 19
Gigibori	The Space ***A***	Restless Dance Co	August 16 - August 19
Pulcinella	The Space ***A***	Doppio Teatro	August 24 - Spetember 2
Joyful & Triumphant	Playhouse ***A***	NZ Circa Theatre	Until August 5
Schippel the Plumber	Theatre 62 ***A***	Independant Th	July 28 - August 12
Don's Party	Odeon Theatre ***A***	-	Until August 5
Mixed Emotions	Arts Theatre ***A***	-	August 21 - September 2
Its My Party	Arts Theatre ***A***	-	Until August 5
ACT			
Dead White Males	Canberra Theatre	Sydney theatre Co	August 16 - August 19
Hooked	The Street Theatre ***C***	Leigh Warren	August 3,4,5

SHOW	THEATRE	COMPANY	STATUS
Tasmania			
Freedom of the Heart	Peacock Theatre ***H***	Terrapin Puppet Th	August 22 - August 26
Sadness	Peacock Theatre ***H***	Salamanca Arts	Until August 5
Queensland			
The Secret Garden	Lyric Theatre ***B***	Gordon Frost	July 27 - August 26
A Midsummer Nights Dream	Suncorp ***B***	Queensland Ballet	Until August 5
Mixed Emotions	Twelfth Night Theatre ***B***	-	Until August 12 3
Antony & Cleopatra	Van Gogh's Earlobe ***B***	Grin & Tonic	Until August 5
Cutting a Rug	City Hall ***B***	-	August 15 - August 19
English, Places/Faces	Cremorne Theatre ***B***	QPAT	August 28 - September 1
Rock Eistddfod	QPAC ***B***	-	July 31 - August 4
The Last Yankee	Cremorne Theatre ***B***	-	Until August 19
Lovepuke	Cremorne Theatre ***B***	-	August 2 - August 19
Please No More Plams	Cairns Civic Theatre	Dance North	August 10 - August 13
Inside Dry Water	Cairns Civic Theatre	Company Skylark	August 3,4 6
Inside Dry Water	Townsville Civic Theatre	Company Skylark	August 8,9
Inside Dry Water	Pilbeam, Rockhampton	Company Skylark	August 11,12
Victoria			
Lady Windamere's Fan	Playhouse, VAC ***M***	Melbourne Th. Co.	August 5 - September 9
Aftershocks	The Fairfax, VAC ***M***	-	July 20 - August 19
Three Tall Women	Fairfax, VAC ***M***	MTC/STC	August 24 - Sept 30
The Burrow	National Th. St Kilda ***M***	Chamber Made Op	August 10,12,14,16,18,19
Anna Karenina	State, VAC ***M***	Australain Ballet	August 31 - September 11
Beauty & The Beast	Princess Theatre ***M***	Disney	Indefinite run
The Mikado	Her Majesty's Theatre ***M***	-	Opens August 30
Don Quixote	State Theatre, VAC ***M***	VSO	August 3.7.11
Dead White Males	Alexander Theatre ***M***	Sydney Theatre Co	August 3 - August 12
The Incorruptable	Monash Uni Theatre ***M***	Playbox	August 15 - August 19
VCA Festival	Cub Malthouse ***M***	VCA	August 28 - September 9
Bharatam Dance	Merlyn ***M***	-	August 16 - August 26
Behind The Play	Barassi's Hotel ***M***	-	July 26 - August 26
Farmyard & Ghost Train	Napier St Theatre ***M***	-	Until August 6
The Incorruptable	Geelong PAC	Playbox	August 9, 10
The Incorruptable	Bendigo RAC	Playbox	August 12

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

Submit show details, fax (02) 876-5715, PO Box 439, Epping NSW 2121

TOURING ITINERARIES

BAND	DATE	VENUE
INTERNATIONAL ACTS		
Brownie McGhee	October 5	Sydney Town Hall
Dick Dale/Fireballs	August 2/3	The Metro Sydney
	August 4	Brisbane The Roxy
	August 5	Playroom Gold Coast
	August 10	The Tivoli Adelaide
	August 11	ANU Canberra
Dionne Warwick	August 14-19	The Sydney Hilton
	August 29	Twin Towns Tweed Heads
Eagles/ Melissa Etheridge	Nov 29/30+Dec2	Flinders Park ***M***
Frontier Touring	December 6/7	Brisbane Ent Centre
Faith No More	August 8	Brisbane Festival Hall
Frontier Touring	August 10/11	Hordern Pavillion ***S***
	August 12/14	Festival Hall ***M***
	August 15	Adelaide Ent Centre
	August 17	Perth Ent Centre
Graham Parker	August 3	Tiley's Cafe Canberra
Adrian Bohm	August 4	Central Club ***M***
	August 5	Van Gough's Earlobe ***B***
	August 6	The Metro Sydney
	August 8	The Office Adelaide
	August 10	Fly By Night Freemantle
Jeff Buckley	August 28	The Metro Sydney
Frontier Touring	August 31	The Lounge Melbourne
	September 2	Prince Patrick ***M***
	September 3	Athenaeum ***M***
	September 5	Phoenician Club ***S***
Joshua Kadison	December 4	Palais Theatre ***M***
Michael Coppel	December 8	Festival Theatre ***A***
	December 9	Concert Hall Perth
	December 12/13	State Theatre Sydney
	December 17	Concert Hall Brisbane
Take That	September 19	Brisbane Ent Centre
Paul Dainty	September 21	Sydney Ent Centre
	September 26	Flinders Park ***M***
	September 29	Adelaide Ent Centre
	October 3	Perth Ent Centre
Elmer Lee Thomas Blues	October 10	Festival Hall Brisbane
Revue/Brownie McGhee	October 11	Lismore Workers Club

BAND	DATE	VENUE
The Greatest Hits of the	October 17	Brisbane Ent Centre
Who Tour	October 20	Sydney Ent Centre
John Whale Productions	October 24	Perth Ent Centre
	October 27	Adelaide Ent Centre
	October 29	Flinders Park ***M***
The Village People &	September 8	Sports/Ent Centre ***M***
Alicia Bridges	September 9	Perth Ent Centre
John Whale Productions	September 12	Adelaide Ent Centre
	September 15	Sydney Ent Centre
	September 16	Brisbane Festival Hall
	September 20	Townsville Ent Centre
Tom Jones	November 24	Flinders Park ***M***
	November 26	Adelaide Ent Centre
	December 1	Newcastle Ent Centre
	December 2	Sydney Ent Centre
	December 5	Brisbane Ent Centre
Urge Overkill	Sept 6	The Roxy ***B***
	Sept 7/8	The Metro Sydney
Wet Wet Wet	September 9	Canberra Royal Theatre
	September 10	Newcastle Ent Centre
	September 11	SydneyEnt Centre
	September 14	Brisbane Ent Centre
	September 16	Sports/Ent Centre ***M***
	September 19	Adelaide Ent Centre
Local		
Ed Kuepper	August 18	The Metro Sydney
Header	August 1	RMIT Tafe Carlton
	August 9	Uni of QLD
	August 10	QUT
	August 13	Gt Northern H Byron Bay
Kim Salmon & Surrealists	Sept 29	The Zoo Brisbane
Lee Kernaghan	Sept 8/9/10	Twin Towns Tweed Heads
Livid Festival	Nov 25	Davies Park Brisbane
Margaret Urlich	August16	Sport/Ent Centre (early)
		The Continental (late) ***M***
	August 17	The Continental ***M***
Mental As Anything	August 3	The Gig Brisbane
	August 4/5	Seagulls Tweed Heads
Quadbox	August 4	PuntersClub/Arthouse***C***

BAND	DATE	VENUE
Quadbox	August 5	Central Club Richmond/ Public Bar(late)
	August 6	Esplanade Hotel St Kilda
Renee Geyer	August 17	Grand Orbit Brisbane
Silverchair	August 4/5	The Metro Sydney
	August 12	Newcastle
Skunkhour	August 4	Prince of Wales ***M***
	August 5	Armadale Hotel
	August 18	The Roxy ***B***
	August 19	The Metro Sydney
Stephen Cummings	August 10	Grand Orbit Brisbane
The Choirboys	August 17	Rose & Crown Surfers
The Church	August 5	The Zoo Brisbane
	August 7	Grand Orbit Brisbane
	August 8	Bangalow Bowls Byron Bay
	August 11	The Metro Sydney
Things of Stone and Wood	September 1/2	The Continental Prahan
Tina Arena	October 6/7	State Theatre Melbourne
Frontier Touring	October 17	Royal Theatre Canberra
	October 20	Dame Joan Sutherland Theatre Penrith
	October 22	Newcastle Civic Centre
	October 26	Brisbane Concert Hall
	October 27	Seagulls Gold Coast
	October 31	Enmore Theatre Sydney
	November 3	Princess Th Launceston
	November 4	Wrest Point Casino Theatre Hobart
	November 5	Burnie Civic Centre
	November 7	Festival Theatre ***A***
	November 10	Concert Hall Perth
Underground Lovers	August 4/5	Punters Club Fitzroy
White Man Can't Reggae	August 2	Transformers Victoria
	August 4	Manhattan Ringwood
	August 5	Grand Orbit Brisbane
	August 6	Knox Tavern Watirna Sth
	August 9	Transformers Victoria

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

Submit tour details to Natalie Apostolou, Fax (02) 876-5715, Phone (02) 876 3530, PO Box 439, Epping NSW 2121.

We'll give you 45 days to discover why these are the best headset mics available.

"We went through every head mic we could get our hands on. The CM-311 solved a lot of our problems by keeping the drums and monitors out of the vocals. It's the most natural sounding headset mic we've ever used."

David Baker, Monitor Engineer
Restless Heart

"The 311 gave us as good a performance as a regular hand mic for sound quality and rejection. They're reliable, comfortable and sound great."

Patrick Hamp, Sales Engineer
Systems Wireless
Herdon, Virginia

"The CM-311s give us the best rejection of crowd and car noise of any microphone we've ever used. They're very rugged. Our race announcers use them at all four turns of the track."

John Royer, Assistant Technical Director
Indianapolis Motor Speedway Radio Network

Our headset mics are making an impression on audio pro's and performers worldwide. And now, we're giving you the opportunity to try them yourself - risk free!

The CM-311 is simply the best mic you'll hear for gain-before-feedback and rejection - it virtually eliminates bleed-through from on-stage instruments and hot stage monitors. It's rugged too - to handle life on the road - yet lightweight and comfortable enough for hours of use. And, it's small profile lets you put your best face face forward.

The new CM-312 provides outstanding performance with an even less obtrusive profile and lighter weight, making it perfect for aerobics, sports broadcasting and live entertainment.

And now, with our *Trail Offer Program*, you can use a CM mic for 45 days to actually hear for yourself how well it performs. After the trial period, if you don't agree that it's the best headset mic you've heard, simply return it for a full refund
No questions. No hassles.

For more information on the CM Crown Mics Call David Gable on **(02) 684 1022.**

The Adaptapack™ belt pack lets you access an internal 9 volt battery or external phantom power.

crown®
Guaranteed Excellence

Distributed locally by Bose Australia Inc.
11 Muriel Avenue, Rydalmere NSW 2116.
Tel (02) 684 1022. Fax (02) 684 1665.

BEAUTY AND THE *BEAST*

Will Burston investigates the staging of the mega Disney Musical at the Princess Theatre in Melbourne.

Michael Gilders, head of pyrotechnics

The internal electronics of a moving set piece

Beauty and the Beast marks The Walt Disney Companies first foray into the world of theatre, expanding the groups already extensive portfolio of entertainment. Originally conceived as an animated cartoon, the transition to stage was never going to be simple. Summed up neatly by Malcolm White, Technical Supervisor, "**basically it's the cartoon on stage, everything happens fast and furious.**" Utilising some of the most progressive staging concepts and systems available, the show's producers Kevin Jacobsen and Michael Edgley have aimed to recreate the cartoon, without losing sight of its original intention to provide broad based general entertainment.

Work began in October 1994 on the design, with the production team visiting the existing American shows and meeting with the Disney producers. Their brief was to recreate the show as it existed on Broadway in the best manner appropriate. "**The amount of technical input from overseas was negligible, but the end product is comparable with what exists in New York and Los Angeles.**" Undergoing a complete technical redesign, the main constraint for the technical designers was the show had to look and feel exactly the same as the US productions.

"**It's gone quite smoothly, in actual fact for the amount of time it was put together in, it's gone very smoothly.**" The stage was built in fourteen weeks, starting life in an aircraft hanger at Essendon, before being disassembled and moved to the Princess Theatre. "**All the Americans seem quite amazed at what we've come up with in some of the areas, and the speed it has come together.**" Due to the lack of time, much of the staging was built in the actual theatre as set pieces and modifications became available. Summed up by Malcolm White, "**the design is fantastic, we've had very few problems. There hasn't been anything that hasn't been able to be solved.**"

Automation

Most productions have static sets which are flown in and out during blackouts. Beauty and the Beast brings the set alive through automation, with the set as much part of the action as the cast. Running 45 axis of movement under the control of a Bytecraft Status 900 system, in one cue during the show twenty-seven pieces of set are in motion.

Designed by Paul Kominsky of Hypac in Adelaide, electronic and computer design by Murray Rodgers of Bytecraft, mechanical design by John Bick and fitted by Paul Stanick of Natwide Hydraulics the system is a mixture of hyraulics, pneumatics and AC motors. Initially constructed in the Essendon hanger, basic tuning and testing took place before the show deck was reassembled in the theatre.

Carl Sorger, the Head of Automation, is quick to point out the advances made in the Australian design. Based on a show deck half the height and containing all mechanical drive, he compares his setup to "**the American system where it was all variable speed drives and filled a basement with electric motors. By using hydraulics here we've been able to place it all in the show deck, the only things in the basement are cable retractors and a pump room.**"

Chosen for its programming flexibility, the Status system is based on a distributed processing architecture. The desk is a tactile control surface with graphical interface, based around a VME Unix computer sending operational commands to Wincon remotes located around the stage. These remotes then operate the individual drives, utilising a dedicated Motorola 68040 for each unit, housed in winch racks at three locations.

The Status communicates via an optical fibre link to a network hub sub-stage, preventing electrical noise from corrupting the data stream, which then distributes data to the three controller racks via Ethernet. Linear winch controllers are used for moving set pieces, and Binary controllers act as switches for contact closure

MIXER & POWER AMPLIFIERS

AUDIO TELEX COMMUNICATIONS PTY LTD

>>> Balanced Inputs & Outputs
>> Short Circuit & Overload protection
> Australias' most popular range of PA amplifiers

AUDIO TELEX COMMUNICATIONS PTY LTD • SYDNEY: (02) 647 1411 • MELBOURNE: (03) 562 8566
BRISBANE: (07) 852 1312 • PERTH: (09) 356 2761 • ADELAIDE: (08) 234 9444 • HOBART: (002) 28 6373 • NEW ZEALAND (09) 415 9426

Write in Reader Service number: 164

operations. The control system is mirrored by a backup during the show, which can be swapped in transparently.

The fourteen main tracks on stage are driven by 300cc hydraulic motors in the show deck. These are operated by a proportional valve, controlled with a -12v to +12v signal from a Wincon to generate movement in both directions. Energy transfer is via a toothed Kevlar belt to the Rabbit, which can achieve velocities of 600mm per second. The motors operation is monitored by encoder feedback, proving velocity and positional information accurate to within millimetres. **"What you program is either you want to go to a certain position at a speed, or you can set it as a time to go from a to b and the system calculates the speeds and rampings it needs to achieve."**

These motors are draw from a hydraulic ring main circling the stage, fed by the substage pump room. Drawing from a non-pressurised storage return tank, two compressors pressurise a bank of four accumulators to 20 mPa. The accumulators are a pressure vessel containing a nitrogen filled bladder, into which oil is pumped, as a method of energy storage. These then feed the ring main as a single unit at 10 mPa via a pressure reduction valve.

The show contains over 1000 automation cues, and with up to fifteen axis of movement in the larger cues, there are two automation staff on stage, and video monitoring including infra-red, for the operators to watch set changes. Eight emergency stop buttons bring the whole system to a dead halt, **"not that you would ever want to do it."**

"To get it all together, and get it all together with the flying, it gets pretty hairy down on the floor, trying to get pieces of scenery attached to rabbits. Things occasionally get missed, especially early on in the piece, people trying to attach a piece of scenery to a rabbit while it is taking off across the stage. A lot of things were changed (in the programming) **as we got cast on stage and discovered traffic problems and that kind of thing."**

Programming was slow as **"it takes a lot longer than lighting, for instance, but is a lot quicker than doing it any other** (than the Status) **way."** The original design was followed closely, with only minor modifications to optimise the system. The end result is very quiet, fast and accurate system, with set pieces gliding across the stage, making for otherwise impossible rolling set changes.

Lighting

Containing 800 lamps split between Leko and Selecon fixtures, 65 Varilights, 1000 budlights, 500 festoons, 250 strobe tubes, 12 Dataflash and 12 Bowen strobes, 120 birdies, 120 Lee colour scrollers, 30 Gobo rotators, 2 follow spots, a DHA light curtain and 5k Aparne projector it is a vast light show. Yet with a continually evolving set the rig has a lot to illuminate.

Bringing together scenery and costumes, the intense and over-saturated colours are used to highlight the fantastical nature of the pro

Lighting board operator Andrew Branda-Paulaczyk at the Obsession

TURRAMURRA MUSIC CENTRE

NOW YOU CAN HAVE IT ALL

ALL AT THE ONE STORE WITH THE LARGEST RANGE OF DIGITAL HARD DISK RECORDERS ANALOGUE TAPE RECORDERS MIXING CONSOLES MICROPHONES COMPUTER SOFTWARE KEYBOARDS AND ALL YOUR STUDIO REQUIREMENTS

GIVE US A CALL

Turramurra Music Centre
1267 Pacific Hwy.
TURRAMURRA
Phone: 02 449 8487
Fax: 02 449 3293

duction. The lighting rig is a recreation of the American shows, overseen by Trudy Dalgleish. The main changes were to accommodate the small size of the Princess Theatre, and the substitution of Selecons for the Shakespears used in America.

Space is extremely tight on the small stage at the Princess, with fixtures ringing the proscenium arch and the front of the Circle, Balcony and roof above. Two lighting ladders immediately behind the proscenium arch are under control of the automation system, which flies them into the roof during scene changes to allow for set movements. Standing on stage and looking up you realise just how tight the tolerances are, with millimetres between most of the sets and lighting bars.

Head Electrician Mark Allan makes clear the complexity of the rig and associated set electrics which took six months to design and fabricate. "**It was a lot of stuff, a lot of lamps, a lot of wiring. I think we spent about two months in the workshop prepping set electric's to go into the sets. We had a lot of money, a huge amount of money. One scene which is just littered with lights, is about $35,000 of globes and wiring. It's just endless, P-Lamps, neon and bulbs, festoons for days. Having said this I think we did the show for around half the American budget.**"

During the show the Varilights run from their dedicated controller, with an Obsession desk controlling the remaining 500 dimmer channels. 400 of these are in-house Bytecraft racks, and the rest Jands 12 channel dimmers. The design was originally by Natasha Katts but plotted by Greg Cohen, Natasha's associate. Operated by Andre Branda-Pawlaczyk, who being used to Galaxies was "**worried about it** (the Obsession) **at first, but after a while it is just like a normal computer. I mean if you can run a 386 IBM you can get your head around it pretty quickly. It's just like any other board really. The lighting designer from America was really good. He knew the thing inside out. All you needed to know was where the buttons were and he told you exactly what she wanted.**"

"**In the first week when he was plotting, I learnt so much it was unbelievable. His tricks that he used made me completely familiar with the desk. There are only a couple of things I'm not happy with. The main one is when the rigger** (remote programmer) **is in cue mode and I'm in blind he'll change things where as with the Galaxy you had to confirm by double pushing the record button. A great thing is the Obsession has macro's for multiple crossfades, one cue can have eight separate cross fades. Greg knew all about it and went haywire, so some cues have eight parts to them. There are 300 or so cues on this show already, without the stacked cues there would probably be over 500.**"

Audio

Designed by Peter Ratcliff and (as was the lighting) supplied by Jands Production Services, the audio reinforcement system was chosen with a philosophy of aiming to be still technically up to date in two years time. The selection criteria for equipment was based on leading edge design that actually existed in other than prototype form. After considering many combinations, the list contains Sanken and Neumann microphones, Midas consoles and Meyer cabinets.

"**The choice of mixing consoles, once we saw the show and realised the complexity of it, was limited straight away.** " Two 48 channel Midas XL4 mixing consoles dominate the front of house 'bunker', one for submixing the orchestra and the other handling vocal mixes. It is through these consoles 100 inputs are mixed to feed nine separate output systems in the building.

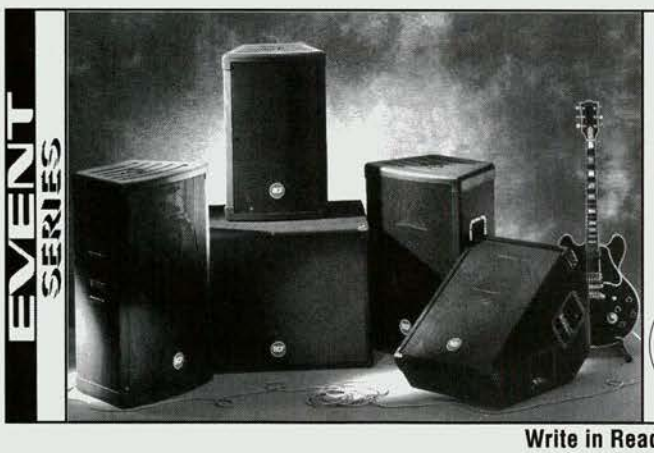
"**We looked at the current mixers available, the only theatre boards that had any degree of automation at all were the CADAC's. They work rather well, they are very quiet boards, but there automation is limited to 12 VCA's and some switching functions. We wanted to go a step further and go into full automation, especially on the vocal board because there were to many moves to keep it quiet. We ordered and got the first two Midas XL4's with fully automated input channels, with 48 input and 12 VCA moving faders on each of these mixers. The Midas is one of the best sounding boards around at the moment. Now the operation and control of them is so much better.**"

With 60 moving faders on the input channels and VCA masters, the XL4 automation is run as a manually triggered series of cue states under ProShow software linking both Midas's and the Octopus SFX system. The Midas automation also covers EQ bypass, auxiliary muting, the ability reroute any channel to and VCA, subgroup or mute group, Channel Muting, switching the insert point in or out and reversing the phase of the input.

The most useful feature of this automation for Wyn Milsom, FOH engineer of the show, is the control over phase state of an input. "**The main thing is I can change the phase of the channel, which we do. We found out very early in the piece that the microphones behave one way when they are upstage of the proscenium arch and different downstage. In very early rehearsals we asked the actors to stand in their specific locations for specific scenes, bought the system up to a point where problems with acoustic gain before feedback began to occur, and tried different phase arrangements. We locked these into memory, so when actors appear in certain positions the phase of their microphone changes.** "

Wyn's console is providing nine separate mix feeds; Vocals only, Music only, delay music + vocals + SFX, onstage SFX speakers, SFX speakers to the rear and sides of the auditorium, on stage monitors, off stage monitoring, chorus booth monitoring and orchestra pit monitoring. These are then relayed through headphones for orchestra and sub-stage chorus singers, and Meyer boxes for all ambient reinforcement.

The front of house system is enormous with a total of 78 UPM2's, 30 UPA2C's and four 650R2 sub cabinets. "**Why Meyers? We needed a small compact speaker that would do efficiently for delays and rear surround. Most of the things we listened to we were in two minds about but this UPM2 we were immediately impressed with, and**



The Event Series Professional Speaker Systems

Event 1000 & 3000 - High definition/efficiency, 2-way speaker systems.
Event 4000 - High definition/efficiency, 3-way speaker systems.
Event SM 3000 - High definition/efficiency, 2-way stage monitor speaker systems.
Event ESW 1018 Subwoofer - Compact high output subwoofer.

RCF

For full technical specifications please contact our Australian distributor,
Mustitronics Australia 139 Richmond Road Richmond S.A. 5033
Ph: +61 (0) 8 234 2789 or 234 2790 Fax: +61 (0) 8 234 2791

Write in Reader Service number: 145

Toughest loudspeakers in the world!

Technomad™

THE TOUGHEST LOUDSPEAKERS IN THE WORLD.

EM Audio

EXCELLENCE IN AUDIO ENGINEERING

703 Heatherton Road, Clayton South 3169 Ph: (03) 95-62-4605 Fax: (03) 95-47-6683 Mobile: 019 665 829 / 015 520 228

Write in reader service number 160

Carl Sorger at master winch rack

I'm still growing more impressed with. They sound good close up, they don't sound like a little box."

"Our main system is UPA2C, we wanted a box that had really tight horn dispers on and out of all of the boxes around this one seemed to fit the bill better. The other advantages of Meyers was we could use their CF10S equalisers, and we could take advantage of the Meyer SIM system. "

"The Meyer SIM system does a total analysis of both time delay, EQ and distortion characteristics and effectively reads the whole system, not just your speakers, from the mixer right through to the amplifiers. So once the system is set up with SIM, you know the system is at its optimum as a whole."

In the drive system there are 13 DN728 Klark Technics delay lines coupled to Meyer CM10S equalisers. **"We can get 26 inputs of information which we are doing, and we can up to 78 outputs of delay information which we are almost doing. A lot of these speakers are delayed in singles and pairs, with no more than four on any delay channel. It is correct to 0.02ms anywhere in the room. I heard it in its rough state, and compared to after being aligned the difference is breathtaking. "**

"The Octopus is an automated mixer, that normally comes in an 8in 8out frame. Beauty and the Beast's was supplied in a 4 in 12 out, as there are only four channels of Digicart information, but it is driving 12 separate outputs."

"All sound effects are on Digicart, there's a very complex method by which the Octopus talks to the Digicarts, with an AMX interpreting all commands for the system. A lot of money, and more importantly time and programming, was spent on making this the fastest reaction time SFX system available in the world."

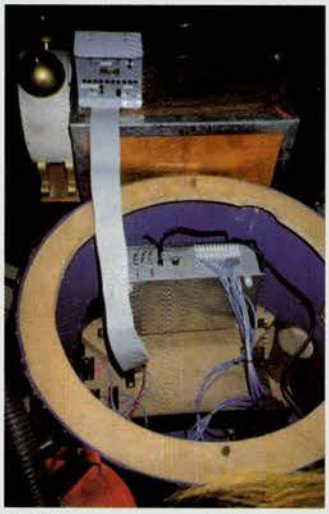
" The outputs are 8 matrix outputs from each Midas and another Midas XL88 matrix controller to give 24 matrix outputs. I'm generating 10 group outputs as well, the Octopus is driving several groups directly, driving speakers on stage. So we've got almost as many outputs as most people have inputs."

Microphones used on the show are a combination of Neumann U89's, KM84's, B&K 2001's and a lone Beyer M88 dynamic for all off stage sources. On stage each actor wears a Sanken omni-direction lapel mic in their wig, or behind their ear. The Sanken's were chosen after blind testing all contenders, and won unanimously. They have the smallest condenser capsule on the market, around twice the size of a match in diameter. The capsule is mounted vertically, with three layers of mesh over the top to protect it. Rob Baumanis, Radio Mic Technician, has found that they reject moisture better than Sony or Sennheiser capsules, with few suffering sweat death. Then usually they only have to be hung to dry for 24 hours and before returning to specification.

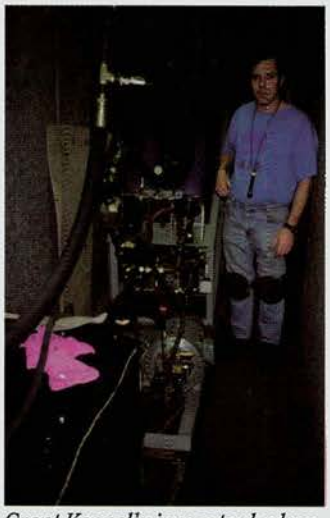
These are coupled to Sennheiser SK 50 UHF transmitter packs broadcasting to Sennheiser EM 1046 RX receiver racks, allowing 33 simultaneous channels of radio mics to be used in the 700 Mhz band. Added to this are another 12 channels for Clearcom intercoms and pyrotechnics triggers, made possible only by the Sennheiser system and frequency selection performed at the factory in Germany. To ensure trouble free reception the show has been allotted its own frequency band, taking up television channels 65 to 68 UHF.

Around the stage and at FOH monitors show RF levels for both sides of the diversity system, the audio output from each transmitter, and an indication of battery life left in minutes for each transmitter at all times. The system also warns of distortion in the audio signal, dangerously low RF reception and can display a plot of the position of every transmitter on stage.

The entire audio crew is amazed by the radio system, and is best summarised by Rob Baumanis. **"They've been fantastic, we basically put them together and ran them up in the factory when they arrived from Germany and then put them in here. They've worked, which is phenomenal. I've never seen it happen before, it's quite amazing. No problems reception or break in wise, just wear and tear on the mics and transmitters themselves. The whole radio system is just going for it, it is absolutely beautiful to use. I was more impressed with these than anything else I've ever seen, it's just beautiful." •**



Mobile remote controlled pyro detonation system



Grant Kennelly in master hydraulics plant room

Restoring and Archiving Sound

In Canberra, the staff of the National Film and Sound Archive handle some of the most precious items of Australian sound and image history. Without the Archive, documentation of Australian creative and cultural history would be lost. Report from ***Daniel Cole.***

The statement of duty: *To increase knowledge, appreciation, use and enjoyment of Australia's screen and recorded sound heritage by acquiring, preserving, and providing access to a national collection of film, television, video, radio and recorded sound materials. (1993/4 Annual Report, p.vii.)*

The archiving of history is a difficult issue. What becomes *memory* ? What is proscribed to a forgotten past?

A tour of the audio aspect of the organisation made the issue a little clearer.

"It is involved. Once the material meets the initial archive guidelines, it then is subject to a committee system," says Matthew Davies, Acting Manager of Sound Preservation. "This is a group that meets with representatives from each department including two from Sound Preservation."

"The committee knows the shape of the collection so it is here decisions are made and technical guidelines set for each project. Sound Preservation will advise what needs urgent attention, possible sound quality after preservation, cost involved."

Matthew Davies, acting manager of sound preservation, with preservation officer Cathy Bromley

Criteria

The criteria is based on "enduring Australian cultural significance", with priority given to rare, heritage value items and "materials not acquired by other institutions"; such as libraries, universities.

The item must *at least* have Australian "origin or association". This immediately invites a plethora donations to the collection.

"We acquire a lot of material which is not outstanding but nonetheless meets our criteria. In this situation we *passively* preserve them. This means they are cleaned, packaged, stored and accessioned into the computer system. If some items need critical attention we will put time into it." Mr Davies said.

If an item or collection of audio material is deemed worthy of preservation it is then passed on to the preservation section.

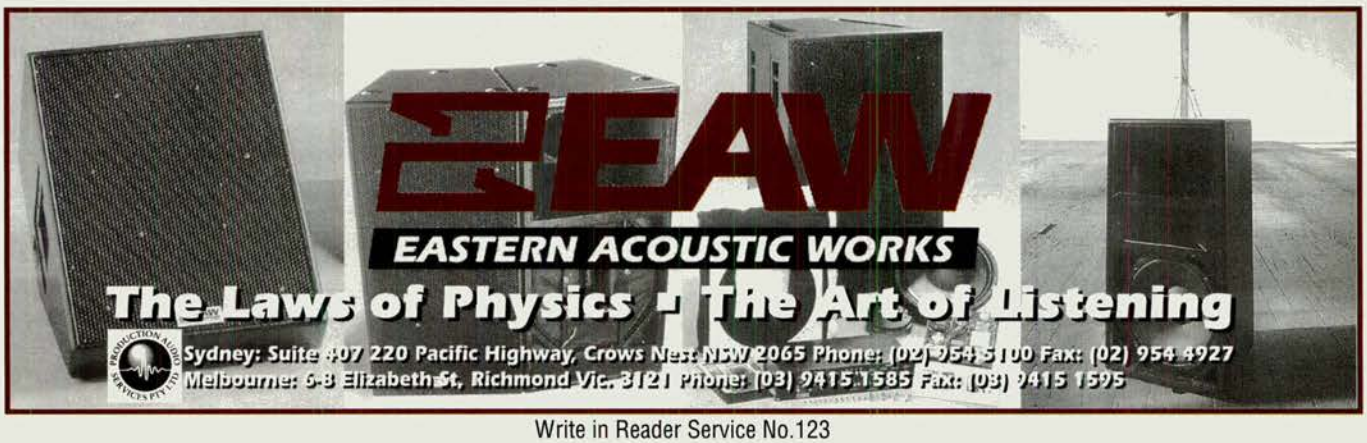
"There are six officers who work here. Each has a leaning towards different formats, processes. They have to be diverse; the section handles basically any format of recording technology, from cylinder, tape, wire, disc, and digital. Each preservation job deals with chemistry, physics of sound, and technical operation skills."

Matthew Davies came to the Archive after working at ABC Radio in both production and in the archive/library. He has been at the archive a little over two years.

The Archive has a number of locations; there are regional offices in Melbourne and Sydney and access offices in Adelaide, Perth, Hobart, Brisbane. The head office in Canberra is where administrative and technical preservation occurs. The Archive's collection is stored in the Canberra suburb of Mitchell.

The Archive is part of the Federal Department of Communication and the Arts and it is to the Minister that the Archive must report to. For the amount of preservation and other services it provides, it does well with its allocated resources yet it is a struggle. Unfortunately, important historical documents could still be neglected due to economic pres

Preservation officer Angelo O'Reilly, auditioning 3MBS tapes.



Write in Reader Service No.123

EVENTS • TOURS • EQUIPMENT • STUDIOS

LIABILITY • PROPS • MUSICAL EQUIPMENT • RETAILERS • WHOLESALERS • SOUND & LIGHTING STUDIOS

RETAILERS • WHOLESALERS • SOUND & LIGHTING STUDIOS • LIABILITY • PROPS • MUSICAL EQUIPMENT

Before you renew your Equipment and/or Business Insurance Policies..... Call us.

AIBA Group are market leaders in the entertainment industry and have won "Best Insurance Broker" at the Australian Music Industry Awards for the last two years.

Call us to discuss all your insurance needs.

North Sydney –

Tel: (02) 954 3420

AIBA GROUP

YOUR PROFESSIONAL INSURANCE ADVISORS

EVENTS • TOURS • EQUIPMENT • STUDIOS

Write in Reader Service number: 100

(continued from previous page)

sures.

There are in excess of one million items in the collection. Audio-wise, the collection consists of (approximately) :

Cylinders :11,700
Lacquer Discs : 11,000
78s : 27,500
LPs : 35,000 plus
Radio Transcriptions : 24,328
Tape : 56,000
Plus a growing collection of CDs and other digital media

It is likely with a collection this large that duplicate material will appear. Part of the operator's job is to also be aware of this and deselect redundant material—that is, take it out of the preservation process.

"If it is deselected it is offered back to the donor or we will dispose of them."

A Preservation Copy on DAT Tape?

The aim of the restoration process is to create an "access copy" on a medium that is accepted, currently this is CD.

"An analog recording is taken at the first playing of an item. This safeguards the potential of the tape or medium not being re-playable so there will be at least a version of it. Because the standard of equipment is high, an analog version is easily brought up to scratch.

"The 'duping copy' is on DAT. A preservation copy is either the original or a copy on 1/4" tape" he says. (The version on CD is *not* a preservation copy, it is an *access* copy)

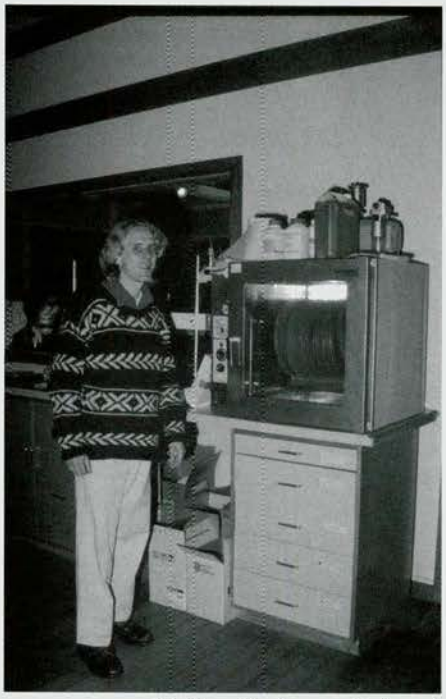
The issue of tape as a storage/preservation medium is ongoing. DAT tape and CD are obvious choices yet there are reservations.

"At this stage, we find that there is no digital medium that we are confident in as a preservation format. We're quite certain that we are going to have to copy our DATs' at some future stage." he says.

"One of the crucial things with DAT is keeping the machines up to spec. To do this we have a full time technician attached to the department ."

"The strategy with digital is to make sure that you have redundant copies. Much of the problem is not due to a failure of the magnetic medium—in most cases the signal is there—it is often the tape housing that causes the problem.

"Usually, this can be helped by tweaking the replay/record machine or using a winding technique." [A survey of DAT tape can be found in August and September issues of *Studio Sound 1993*].



Matthew Davies next to 'oven' for restoring tape.

Audio Archive Formats

I asked Matthew Davies about other potential archive formats such as hard disc recording, video, or even the consumer-oriented MiniDisc.

"With other formats such as hard disc recording you're looking at terra-bites which is impractical here. Some financial institutions use them [for data storage] but they can afford to."

"There are other formats available; Sony's Century disc system; also a range of recorders based on D1 video cassettes. magneto-optical recorders are available too, but none have yet to become industry standards."

"There will always be some form of tape-base in Audio archiving. One of the ideal situations would be to do a small run of pressed CDs, but it's prohibitively expensive."

The use of MiniDisc or hard disc recording raises another interesting point. The Sound Preservation section has a policy of avoiding data compression which rules out such formats.

"Data compression is discernible to the ear, and it limits options for later processing." Mr

A home movie partially melted in a bushfire. Salvaged by the Archive.

The laboratory

custom equipment. They also trial new technology and the choice of monitoring was a result of this research.

"We decided to go with the Genelec speakers (with built in amplifiers) because they are not as fatiguing to listen to over long periods. With a ribbon tweeter, they are very quick in response which is crucial for critical listening." says Audio Engineering Officer, Greg Moss.

Davies says.

"When you get rid of redundant information you are effectively increasing data density which makes the signal or information more fragile."

The aim is to keep an archive copy in original or near original condition, without additional effects or compression.

New Archival Technologies

"Over the past few years we've seen a revolution in audio recovery. The Packburn Noise Suppressor was once state of the art."[1]

Sound preservation uses the CEDAR DC-1 Series 2 as it operates without introducing extraneous information.[2] The Archive also use Sonic Solutions (with No Noise).

Sound Preservation has a research and technical division that looks after maintenance and repairs, and builds

In House Technology

There are a total of seven technical areas, a tape dedicated room, a digital work station facility, a disc oriented studio, a laboratory and audition spaces.

Each working space has some high-end precision equipment. Some of the equipment used in Sound Preservation include: (precis)

A wire recorder

RTR Tape Recorders

Studer A-820

Studer A-810

Nagra T

DAT Recorders:

Sony PCM 7010

Sony PCM 2700

Tascam DA-30

Analog Processing Gear

Rane parametrics (PE-15 and PE-17)

Klark Technic graphics

Dynamic Filters - Orban, Behringer, Burmen, Symetrix

Digital Processing Gear

Cedar DC-1 Series 2

Sonic Solutions System with No Noise

A+D CD recorder (with smart box)

Monitors

Genelec S-30c

Meyer HD-1

Restoring Tape, Wire, and Lacquer Discs

According to Mr Davies, the section is yet to see any terrible examples of "oxide lift" with incoming tape items.

"We find that it usually occurs in sections

MC AUSTRALIA

Multi-Contact Australia Pty Ltd

M.C.I^{S}.

Multi-Contact Single Pole Locking Connectors - up to 300 amps at 500 volts.

If you're not already using M.C.I^{S}. for your power connections, you should be.
Why?..... Because those in the know have used them for years.

Sole Australian Agents:

53-55 Whiting Street
Artarmon NSW 2064
Phone: (02) 438 3600
Fax: (02) 438 4737

3/1904 Beach Road
Malaga WA 6062
Phone: (09) 249 3003
Fax: (09) 249 4912

3/80 Webster Road
Stafford QLD 4053
Phone: (07) 856 4200
Fax: (07) 856 4681

10 Nicholson Street
Coburg VIC 3058
Phone: (03) 383 3733
Fax: (03) 383 4526

New Zealand Agent :
Multi Contact Technology Ltd
609 Mt. Eden Road, Mt. Eden, Auckland.
Phone: (9) 623 4366
Fax: (9) 623 4155

Write in Reader Service number: 127

where the sub-strate becomes separated from the backing".

They do have to deal with another problem with tape: *hydrolysis*.

"This is a common problem where the binder that holds the oxide onto the sub-strate reacts with moisture in the air. This occurs with more recent tape (1/4"), 1970s, particularly with American brands." said Mr Davies.

"The restoration process involves placing the tapes in a very dry environment to reverse the process. We have an 'oven' for this purpose. Briefly, the elevation of temperature increases the rate of reversal." The archive is not alone in this practice,

"They have convection ovens at the Sony disc mastering plant in Sydney—they 'bake' the tape in one room and play in the next. These are generally '70s masters. The fix is quick but it doesn't last."

Even if tape doesn't suffer hydrolysis, it is still important to handle them gently, and some replay machines have been modified accordingly,

"It is crucial to have tape machines with gentle tape paths. We use three types of machines for fragile tapes, the best is the A-820. Apart from a simple tape path, it has a number of features including operator-control over tape tension. You can reduce the tension on the supply spool to zero and it will still play through.." [By the way a new Studer two track will cost you 41,000 plus tax]

"We have problems with some acetate tapes from the '60s which become brittle—again you need a machine that can give good tape to head contact on play though. The Studer A-810 or Nagra Ts' are good for these."

One of the larger tape projects at the moment involves cataloguing a number of two track masters' from 2MBS.

"Much of the material is poorly documented but their may be some unique Australian music peformances in the collection." said Mr Davies.

The Archive has an impressive display of antique audio equipment in it's museum, and some are used in preservation such as a wire recorder. (circa early 20th C)

"Wire recordings are pretty stable; the big danger is re-spooling, if they catch or the tension goes you can end up with a very tangled wire recording."

Another large project involves a collection of lacquer disks from the early 1940s (on contract from the Australian War Memorial). Each disc has to be played—if possible—then assessed according to criteria outlined above.

"Lacquer discs make up a large part of the *fragile* component of our collection. Australian lacquer is fairly unstable and a lot of high heritage material was recorded on lacquer discs. Virtually all the Archive's pre-1955 sound material is on lacquer."

"A lacquer disc often comes apart in flakes, so in an attempt to play them they have to be re-assembled—like a jigsaw puzzle. Much of the finer preservation work goes on preserving them. We do a lot of reconstruction under the microscope."

"Aluminium, cardboard, and glass were also used in disc manufacture. During the war, steel was used—they can be very bad as the steel oxidises under the surface like erupting volcanos."

Currently, Sound Preservation is also targeting items from the Archive's disc collection that may be "useful to the access collection", either for research or film soundtracks.

"We are finding more and more requests for CD ROM and other multi media applications. The subsequent change in client base is interesting."

The archive is open to the public by appointment. There is a museum at the Archive which is open to the general public seven days and an abridged display in the Old Parliament House, Canberra.

Staff in the Sound Preservation Section include;
Cathy Bromley, David Boyle, Damien Cassidy, Matthew Davies, Viktor Fumic, Greg Moss, Angelo O'Reilly, Ben Whitten.

For more information contact the nearest Archive office in your state or contact head office in Canberra.

The National Film and Sound Archive;
Mc Coy Circuit, Acton ACT 2601.
Tel 06 209 3178 Fax 06 209 3165

1 An analog machine, "It used a primitive model of what sound and noise was. It had a basic transient detector, a 'blanker'. When it detected anything above a preset level it would mute the output momentarily, removing the really big clicks." said Mr Davies.

2 CEDAR uses a modelling system that constructs a second signal using incoming information and rules based on the 'characteristics' of undegraded audio. If CEDAR detects an anomaly between the source signal and it's model, it activates the restoration process—removes either click, scratch or buzz, and regenerates the signal using interpolation.

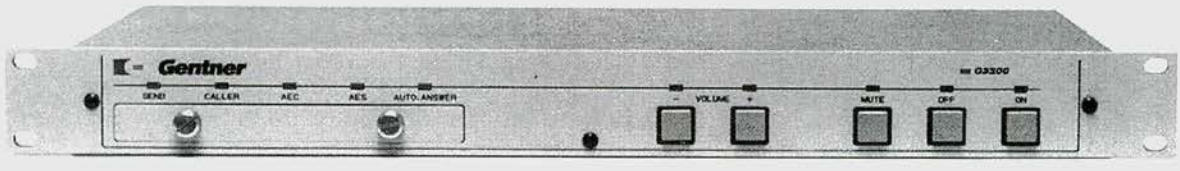
Gentner Teleconferencing Products
TELEPHONE HYBRID
Fully Austel Approved
G3200 Superhybrid

Bringing telephone calls to a live audience can present a technical challenge - how do you make the caller and announcer heard by everyone without generating feedback?

The answer is Gentner' s G3200 Superhybrid. Designed for telephone calls with a live audience or in-studio guests, the G3200 provides both advanced telephone nulling and acoustic echo cancellation.

No matter how good the room acoustics, some of the caller audio appearing on the speakers will work its way back to the microphones. This audio is then retransmitted on the telephone line, creating everything from distortion to an actual "echo" for the caller.

The G3200's DSP Acoustic Echo Canceller (AEC) recognizes caller audio received at the mics, even audio that is delayed by room size, and digitally subtracts it from its "send" audio path. The result is clean, intelligible audio on both sides of the telephone call... plus the ability to turn up the studio speakers as loud as you like!



PRODUCTION AUDIO SERVICES PTY LTD

SYDNEY: Suite 407, 220 Pacific Hwy., Crows Nest, NSW 2065 Ph: (02) 954 5100 Fax: (02) 954 4927
MELBOURNE: 6 - 8 Elizabeth St., Richmond, Vic. 3107 Ph: (03) 9415 1585 Fax: (03) 9415 1595

Write in Reader Service number: 122

Trade Events

- **NAB,** New Orleans Convention Centre. Call +1-202-429-5350
  Broadcast nirvana.
- **PLASA,** London, Sept 10 -13. Call +44-171-370-8179
  UK's biggest sound, lighting and staging show.
- **AIMS '95,** Sydney September 30 - Oct 3. Call (03) 535-0144
  Biannual, Australia's international music show
- **SHOWBIZ EUROPE,** Munich Sept 22 - 24. Call +49-89-470-2399
- **AES 99th,** New York, October 6th - 9th. Call +1-212-586-5989
  USA's leading pro audio show.
- **REPLItech Asia,** Singapore, Oct 24th -26th. Call +1-212-643-0620
- **Audiovideo '95,** St Petersburg (Russia) Call +7-812-119-6245
- **LDI** Miami USA Nov 18 - 20 1995. Call +1-212-229-2965
  Worlds largest lighting trade show.
- **NAMM** Los Angeles Jan 18-21 1995. Call +1-619-438-8001
  USA's leading music show.
- **Musikmesse,** Frankfurt March 13 - 17. Call +49-69-7575-6662
  Largest music show in the universe!
- **ENTECH' 96:** Sydney April 23-25, 1996. Call (02) 876-3530
  Australia's annual Entertainment Technology show
- **AES 100th.** Denmark May 11-14. Call +45-9785-1122
  Europe's leading pro audio show.
- **NSCA** St Louis (USA), May 13 - 15.
  Best contracting and AV presentation gear show there is!
- **World Lighting Fair** Tokyo, June 20-22nd. Call +81-3-3706-5687
- **AES 101st.** Los Angeles, Nov. 7-10, 1996. Call +1-415-558-0391.
- **ENTECH '97:** Melbourne Exhibition Centre, April 1997.
  Annual show, at Sydney Exhibition Centre on even years.
- **SMPTE,** Sydney July 11-14, 1997.
  Biannual TV/Film equipment trade show and convention.

Student Free Library Copy

INITIATIVE

Connections Magazine is available free to School and Further Education Libraries. Students should show this advertisement to their Librarian, who can then write or fax us a request to receive this magazine for free for one year in NZ or Australia.

This is a small part of our commitment to training the bright stars of tomorrow, today.

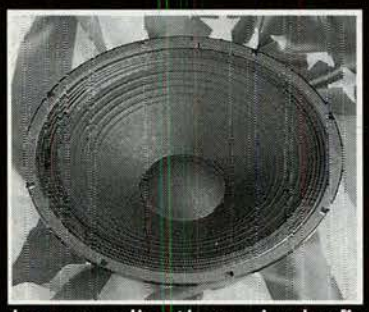
Connections Publishing,
Fax (02) 876-5715.
Write to: PO Box 439, Epping
NSW 2121 Australia.

THE WORLDS NO.1 LOUDSPEAKER

EMINENCE

Eminence of America is the leading supplier of loudspeakers to the worlds major cabinet & musical instrument manufacturers.
These same loudspeakers which are behind some of the biggest names in the music industry are now AVAILABLE IN AUSTRALIA.

ME10-100
$119 R/R
10" 100w RMS
70Hz to 7kHz
Optimised for Club Music Systems,
Stage Monitors, Keyboard and Guitar.



ME15-200
$185 R/R
15" 200w RMS
45Hz to 5kHz
Optimised for
bass applications, including Bass Guitar.

PS15-500
$499 R/R
15" 500w RMS
35Hz to 2kHz
Optimised for use with Professional
PA Rigs & Sound Reinforcement applications.

PERFORMANCE ★ PRICE ★ RANGE ★ RELIABILITY
Please write, phone or fax for a free brochure

Distributed in Australia by: Central Musical Instruments
PO Box 232 Yarraville VIC 3013 Ph: (03) 315 2244 Fax: (03) 315 2115

Write in Reader Service number: 106

LETTERS *#!@%XX -?!

Twartz Wrong

Re : Peter Twartz letter, Issue 24, "Pow Bang - You're Dead".
I read with concern Mr Twartz's advice on curing earth loop hums by removing the chassis links inside professional audio equipment. My concern turned to alarm when I realised he was suggesting persons like myself should be happy to modify units in this way for customers. Mr. Twartz is oblivious that this practice is just as illegal and potentially unsafe as the one he abhors, i.e. removing the mains plug earth.

If it is unsafe to de-earth the chassis of equipment then it is also unsafe to de-earth the internal circuits since they invariably go to input/output connectors made from metal and accessible to the fingers of a user.

Faults with the modified equipment could render all the circuitry, de-earthed a la Twartz, live at 240v AC as well as any other units linked which have been similarly modified. A person touching the metal parts of a connector involved may receive a fatal shock!

The rule book (AS3100, 5.3.1) says that in the case of earthed appliances, any exposed metal parts must be securely tied to the mains earth point. Connectors must be included in this as any lead makes the terminals exposed.

Those equipment suppliers who have fitted earth lift switches to mains earthed equipment, may have their own consciences to examine. They are breaking the safety rules.

Also, do not be misled into thinking that Double Insulation is the answer, interconnecting such equipment with normally earthed gear is forbidden by all international standards. "DOUBLE INSULATED - DO NOT EARTH" appears on every such piece of equipment by law.

Finally, disconnecting (internal) earths.....Don't do it. Never. Ever.
-Phil Allison, Sydney.
**It is true that Connections does NOT have an on-staff technician reading every word, so letters like this help clarify complex subjects.*

Studio Tax Rates

Your lead story on recording studio woes caught my interest (June/July). I've always wondered why a studio pays tax on equipment when a manufacturer doesn't, but the sales tax rates quoted in your story are a little off the mark. The 31% rate applies to mixers, speakers and tape machines only, effectors and microphones stay at 21%.. Anyway, hopefully your story may help influence some change.
-Ralph Berridge, Strathfield NSW
•Worse still, the rate has increased by 1% in the budget. You now pay 22 or 32%. -Ed.

Privacy and Data

Thanks for the great new 'Connections Contacts' and I especially like a couple of the entries in the 'General' section on pages 86 and 87.

With regards to your 'about data and your privacy' note opposite the index .... congratulations! You are neither old fashioned nor are you mad, you simply have what used to be called 'scruples'.

If there are other readers out there who are annoyed by the selling of data and private details that you refer to, perhaps they could try the following experiment:

When giving your name and address to a company write the details slightly differently each time and keep a list. When you detect who is selling your details you can demand your name be removed from these lists.
-Bruce Waite, Mt Kuringai NSW

The Right Choice

✔ RELIABILITY ✔ PERFORMANCE
✔ FEATURES ✔ QUALITY

THE INKEL PA4000 MIXER AMPLIFIER

- 5 Zone Speaker Selector
- 5 Band Graphic Equalizer
- 120W att RMS
- Chime & Siren
- Mic Mute Priority
- 70/100V Line
- 6 Balanced XLR (Switchable Line or Mic)

MAGNA SYSTEMS distribute a wide range of INKEL Contracting and PA Audio Products.

INKEL P.A

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

MAGNA SYSTEMS AND ENGINEERING

Australia:
Magna Systems & Engineering
A trading division of Silklore P/L. ACN 004 004 997
7 Gibbes Street, Chatswood, NSW 2067.
Phone: (02) 417 1111 Fax: (02) 417 2394

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

Write in Reader Service number: 143

20 Years Ago

Julius Grafton reflects on business in 1975

Fear is a wonderful thing for sharpening the memory, six huge skinheads rushing your lighting desk at a gig is something you remember longer than 20 years! Violence at dances was a large problem in 1975, car loads of toughs would drink outside after the pubs closed at 10pm, and barge in looking for an audience.

My brush with death was caused by intervention in a scene whereby a small skinhead was groping an unwilling girl at the side of the stage. It was easy to haul him off her, but he ran outside and came back with the six bruisers from hell. Lucky for me the window wasn't locked so out I went, the car door slamming on the fastest pug as I zoomed off. I waited till everyone had long gone home and re-entered the hall to quickly reclaim my lighting gear, mercifully all intact.

Since then I've seen plenty of grief at shows, but I keep reflecting that back then, a Hall somewhere usually was remote from most other establishments open after hours, and of course there was never a telephone anywhere near with which to call for help. Mobile phones were featured on Get Smart, where Don Adams was universally panned for speaking into his shoe. "Not in my lifetime" I thought!

DENIS BRAHAM

The sad passing of Denis Braham last month brings to mind a problem he had in Albury during 1975 on tour with Sherbet. During a gig at the Civic Centre he was pushed, shoved, punched and kicked, losing his glasses in the brawl. Afterwards he was treated at hospital for cuts to the forehead and lips. Bouncers were unable to control the crowd, and the band had to threaten to stop before calm was restored.

What often happened was that after a show the promoter's bouncers would go home leaving the crew alone at the load out. Then the town louts would come along for a hassle, and this sometimes turned into an all in brawl. The Dingoes had a police escort out of Bega during July 1995 after this same kind of incident.

Denis I recall being very intense and very professional about his job, which helped the Sherbet machine cope with what was then, and still is today, a marathon touring schedule taking in every whistlestop across Australia. Their 'around Australia in 80 days' tour was only bettered by Ted Mulry for miles travelled.

ROGER BARRATT

1975 was the year I met Roger, whose passing last month leaves me very sad. He was extremely busy lighting the Australian Opera and needed someone to look after his equipment. He had decided to build his future beyond his role as an LD and so was amassing equipment. He bought 20 Strand Patt 743 1000w fresnels from Jands, who has decided the newly discovered Par Can was the thing for concert work.

Roger arrived at my house in his clapped out 1962 Falcon, loaded to the roof with the 743's. He was direct and open to deal with, "you look after these, hire them out and give me half. I'll trust you". That relationship built to more than a hundred lights in 1975, and then eventually in 1977 he took over Zapco Lightshows (as my business was known) to start Barratt Lighting Mk. I.

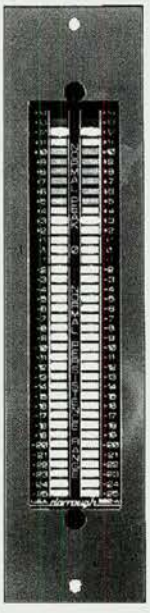
For my part I spent five years in business with Roger, and learned a great deal about lighting and about business - but mostly about ethics. Roger was true to his word, which was just as well because he was so dammed busy that he was often un-contactable for a week at a time! He lost his beloved mother in 1975 and threw himself back into work just a few days later to put the loss into a private place.

When the headset your wearing now is worn out, why not buy the most WORN Headphones in the world!!
FOSTEX T-5 & T-7 HEADPHONES are now available, in addition to the already famous **FOSTEX T-20 &T-40 HEADPHONES.**

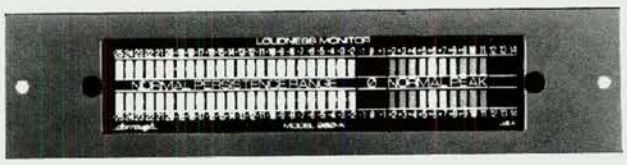
FOSTEX MICROPHONES
for Stage & Broadcast
M221, M321, M521,
M505 & M115
Priced from $80 to $258 RRP

We also represent:
SONIFEX UK - *Digicart*
AUDI-CORD USA - *Cart Machines*
and more!!!

Write in Reader Service number: 134



Every.....DORROUGH
AUDIO LEVEL METER
simultaneously profiles
3 DIMENSIONS
of programme content.
• PEAK
• AVERAGE POWER &
• COMPRESSION
are displayed on a
COLOR-CODED
40 SEGMENT LED SCALE.
Ask for DORROUGH - USA
AUDIO & VIDEO METERS.



For more information please contact: NEWPORT BROADCAST CONSULTANTS PTY. LTD.
Ph: (02) 9997 6689 Fax: (02) 9997 8745 P.O. Box 266 Newport NSW 2106.

Write in Reader Service number: 135

DISTRIBUTOR / AGENT WANTED

Scan audio Pty. Ltd. A.C.N. 006 412 728

As a leading distributor in the area of Consumer Electronics, *Scan Audio* is well placed to branch out into the Professional Audio Market.

Our leading brand *JAMO* offers a full range of PA Speakers & Accessories and we will commence distributing these in the near future.

To this end we seek an enthusiastic Distributor /Agent to help us in this venture.

Please address your replies in the first instance to:

Scan Audio Pty. Ltd.
C/- Michael Vogel
52 Greenhaven Drive
Pennant Hills NSW 2120
Ph: 02 980 7922
Fx: 02 980 6211

ACP BUY FLASHLIGHT

Mick Privitera managed to keep secret his million dollar upgrade, but sightings of the Brisbane based identity at the APRS show in London during June confirmed something was brewing. Particularly as he was in the presence of Turbosound's Australian distributor, Frank Hinton of ATT Audio Controls.

Australian Concert Productions has now taken delivery of a concert sized Floodlight/ Flashlight system, driven by new Crown MA5000VZ and 3600VZ amplifiers. The system, which includes all flying hardware and the just-released BSS Omnidrive system management controllers, was ordered in March.

After a long evaluation process the decision to purchase Turbo again was cemented upon hearing Cliff Richard at the Boondall Entertainment Centre with what Mick describes as "the best sound reproduction I have ever heard". The Cliff Richard organisation hired Oceania Audio of Auckland New Zealand for their Australasian tour, Oceania had earlier this year commissioned their own Floodlight/ Flashlight system.

The Cliff Richard tour was notable for the large numbers of Australian hire company bosses who went to soundchecks and concerts to hear the system. Connections editor Julius Grafton attended a show in Sydney where the actual impact of the system became apparent. The high frequencies projected to the top of the rear row, and the appreciably small system maintained a good SPL and pushed plenty of bass. It didn't use the actual Turbo subwoofers, however, as Oceania opted to run their own design woofers down on the deck. ACP have, however, ordered Turbo subs for their system,

Oceania and ACP are repeat Turbo buyers, both firms have operated TMS-3 concert sized systems for some years. ACP state they intend retaining their TMS-3 system.

Oceania mainly use the Floodlight variant, which offers 50° dispersion, using a smaller number of Flashlight's (with 25° dispersion) for long throw. ACP are believed to have followed this thinking.

Turbo have a policy that all Flashlight cabinets must be driven by their BSS proprietary amplifier racks, whereas Floodlight cabinets may be purchased without amplifiers. Because of this, Oceania and ACP - and indeed many other users - must mix amplifier types, with different racks for Floodlight and Flashlights.

As Oceania pointed out on the Cliff Richard tour, trucking costs can be substantially reduced using the new rig, they estimated Cliff Richard saved $25,000 on his tour alone.

In-Ear Monitors

The Radio Station in-ear monitor system is now available for rental in Sydney from Grant Pudig. In Your Ear Monitors is the name of Grant's business, which offers systems with or without custom moulded ear pieces.

A typical system comprises a stereo UHF transmitter, 2 stereo pocket receivers, generic in-ear monitors, and an Aphex Dominator II multiband peak limiter. This ensures the system will not deafen the user in the unlikely (if not impossible!) event it somehow feeds back.

Contact Grant: (02) 360-2200, 019 929700.

LAVA buy EV Manifold Rig

Lights Audio Visual Australia of Melbourne have purchased an EV MT2 system for large Rave productions.

Adam Nevzat ordered 16 EV MTH-2/94 mid-high cabinets and 16 EV MTL-2B dual 18" sub cabinets - with a further 16 of each scheduled for later this year.

LAVA have a lot of EV in stock, utilising Mongoose, Deltamax, S1500, SX200 and MTH subs. They have more than 20 permanent hire installations in and around Melbourne. Some of their recent work has included Pure Flow 2, Land of the Giants and Ultrasonic.

•LAVA: Call (03) 9682-7000.

Hire *Point* Software

Features :-

❑ Advanced reservation system for Hire stock
❑ Plots equip & bookings ❑ Prints hire contracts, quotes, estimates, confirmations ❑ Multi-user
❑ Comprehensive reporting ❑ Optional Accounting

Enough said !
Phone now to place your order - **Tel (02) 824 1105**

BURKINSHAW CONSULTANTS PTY LTD
METAL FABRICATORS

THE STAGING SPECIALISTS

STAGING HIRE
SALES & SERVICE
DELIVERY & INSTALLATION
Contact PHIL BURKINSHAW

Head Office:
12 Budgeree Place
Hoppers Crossing
Vic 3030 Australia

Mobile 018 386 481
Pager 016 374 824
Office (03) 748 6864
Fax (03) 748 8193

You hire out equipment, you ponder (as did Julius Grafton).....

Whats a good return?

For 15 years I hired equipment out to people, either as complete productions or as loose items. That whole time I was preoccupied with the fine tuning of the inventory and the return. In America they call 'return' *profit*, and let's face it- without profit you are not in business.

First I hired lights to people. Then I hired complete productions with PA, lighting and trucking as a package. With the trend away from rock touring in the early 1980's I went into straight hire.

Every year I would ponder the outcome when my accountant presented the profit and loss statement, usually some months after the end of the financial year.

The problem with hire companies is that they use profit to expand inventory. So, cashflow can be lousy because you are buying new equipment, but in fact you are highly profitable. Then of course you must pay tax.

The stock in your business is usually valued at 'book value', ie: what you paid less depreciation. So a near-new amp purchased from Smithy for -say- $1000 was worth $950 two years later. Selling it for $950 produced a profit, because the book value was by then somewhat less.

So, return. We've just talked about the mystery of profit and why it is that you must pay tax even when your cashflow is shot.

The RETURN issue needs to be looked at carefully. When I was hiring out lights the things that gave the best return were those that didn't cost money to maintain and obviously didn't need replacement lamps. Mirrorballs, for example.

In audio, it was small powered mixing consoles because they went out more often than most other things. The speakers that plugged into them fared slightly worse because periodically they cost maintenance money when someone blew them up.

Microphones I decided were lousy profit centres because after a year they were trashed.

Anyway, with the introduction of Hire Point software in 1984 we suddenly had instant utilisation and return figures on everything.

The large mixing consoles and lighting desks were really bad news, but the new found ability to track inventory use meant we could fine tune over time.

When the end came upon our selling out in 1988, I had figured that a good return was 1.25%. This was my personal best across a year.

The 1.25% represents return per week on the value of your inventory, and it is the actual hire proceeds, before any extra charges like production setup and transport. If you have $500,000 tied up in hire stock, you should expect to gross $6,250 per week from it. You gross more money when you send a crew out in a truck to do a show, those production add-on's are not included in your 1.25%. It's gear return only. That's a good number!

STAGING RENTALS
"THE COMPLETE STAGING SERVICE"
- Concerts, Conferences, Catwalks.
- Productions, Exhibitions, Stages.
- Rental ofDrapes, Risers, Flats.
- Delivery and Installation.

Ph: (02) 519 - 6300
Fax: (02) 519 - 6489

The Big Box Builder is Back
For speaker enclosures and custom cases,
Call Ian Stewart.
Phone: (02) 798-6539, Fax: (02) 798-6571
Ramtek Industries Pty. Ltd.
34 Bartlett Street, Summer Hill, NSW 2130

Staging Manager

Australian Business Theatre, Australia's leading corporate communications company requires a Staging Manager.

This position entails input to early creative meetings, participation in venue selection, preparation and control of budgets, preparation of CAD drawings of event layouts, briefing of suppliers and venues, booking equipment and crew, scheduling bump-in and on-site rehearsals, running events and liasing with high level corporate clients.

A willingness to travel and work irregular hours is essential. Other desirable qualities are Macintosh literacy, and a more than passing familiarity with MiniCAD, Word and Excel. Fluency in Mandarin would be a bonus.

Please apply in writing to:

The Staging Director
Australian Business Theatre
3 Bond Street, South Yarra, Victoria 3141

AUSTRALIAN BUSINESS THEATRE

Australian Business Theatre is a division of the Workshop Group P/L A.C.N. 005 377 444

Audio Visual Courses

Taking your first step or upgrading your skills? Our five day courses will equip successful participants with all the practical and theoretical knowledge required to secure or advance their career in the *exciting* Audio Visual Industry.

Call now to have more information faxed or posted to you.OR...
Contact us about our OPEN NIGHT on Sept.1st., this event will give you an overview of
WHAT YOU DON'T KNOW!!!

AV Experience
Training College, Crewing & Placement

NEXT AVAILABLE COURSE 18th - 22nd Sept.'95.

PO Box 139 Burwood NSW 2134
Ph: (02) 744 8245 Fax: (02) 747 3579

Obituary

Robert Schenk

Bob died in the arms of the woman he loved on Thursday, June 29th, 1995. His last weeks were spent in his home surrounded by his mother, his children and his first grandchild, Christina.

Bob was born in The Hague to Jen and Chris Schenk just after the war in Europe had drawn to a close - April 17, 1946. He spent the first eight years of his life in Holland before his parents decided to start a new life in Australia. The family settled in Adelaide in 1954 where Bob received his schooling. After leaving Woodville High School he took a job with CMF while attending the Institute of Technology at night. In 1966 Bob moved to Melbourne. During this time he met Colleen Elsmore, who was in the cast of Fiddler on the Roof, touring Melbourne.

Bob and Colleen were married on the 12th October at St. Patrick's Church, Bondi in the same year. Within three years of their marriage, he and Col were a family of four. Christian was born in 1969 and Lyndall in 1971. In 1976, Col and Bob made a decision to move to Woy Woy on the Central Coast.

Bob never really seemed to age; the energy of the man was incredible - he was in every sense of the word - dynamic. His dynamism infected every facet of his life - some would have called him a workaholic...not so, Bob put as much energy into his family life and leisure, as he did into his work. It was just in his nature.

During his life, Bob became a very successful businessman with exceptional creativity. He was one of the few businessmen to give capitalism a good name. When he first joined Bose in 1980 as the junior accountant, it was a small Australian subsidiary of its American parent company. Bob saw its potential and rose to become its General Manager. His dynamism and leadership made the company one of the leaders in its field in this country. No easy task. Bob believed in the outstanding quality of Bose and his innovative marketing and dedication put Bose where it is today in the Australian market. Bob recently travelled to the States to receive the Bose President's Award for Marketing - his marketing strategy sold more Lifestyle Systems per capita in Australia than anywhere else in the world - a record that still stands today. A letter dated June 22, 1995 from Dr Amar Bose, gives special recognition for his unique and innovative ideas regarding marketing and his dedication to the company.

His life was full of love and excitement and he had no regrets about what he did in that life. His final battle with cancer was marked by his stoicism and refusal to let it change the person he was. May he Rest in Peace.

Bob is survived by his wife Colleen, two children Christian and Lyndall, and Grandchild Christina. He will be sadly missed by all.

Roger Barratt

Five hundred people shuffle towards the cold windy pavement outside the Christ Church St Laurence and no word is spoken. The life of Roger Barratt, Lighting Designer, has been a vibrant spectacle, while his Requiem Eucharist was, as they say, a sell-out. Standing room only. And now it's over.

The formidable regard with which Roger Barratt is held is obvious in the rollcall, for attending this early Saturday finale is obligatory for anyone who knew Roger. There was simply too much goodwill out there for it to be anything less. The full weight and sacraments of this very formal funeral were emphasised by the swelling organ pipes, the choir, the pageant. It's been almost theatrical, but the crowd needed no manipulation because the grief was thick, the tears flowed.

It's rare to find someone capable of generating such feeling across such a wide spectrum, for although the performing arts industry was almost totally represented en masse, there were significant pockets of people there who didn't know each other, and who indeed remained unknown amongst the congregation. But they obviously knew Roger, and he them.

So this is Roger's Obituary.

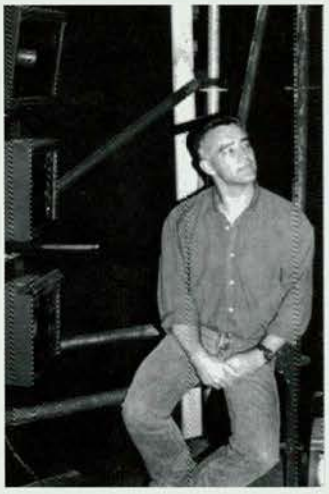
In February I leaned that Leukaemia had befallen Roger, who at 47 looked 30, and was one of the healthiest men I knew. While lighting Hot Shoe Shuffle in Brisbane, he collapsed and was diagnosed. He came to Sydney's St Vincent's Hospital where before Chemotherapy started he hosted a room full of visitors every day.

Chemo failed, as did a bone marrow transplant from his brother. Ravaged, he went a second round of Chemo and had a marrow top-up. This worked, he was in remission by June but his body gave up. He died on June 13th after a six month fight which he was determined to win.

Roger William Creke-Barratt was Australia's foremost lighting designer, a formidable technician and an artist. His strength of character, lack of pretension and remarkable gift for friendship saw him quickly succeed from an early start. He spent most of the 1970's in residence with the Australian Opera, where he devised the systems that they still use today for reparatory opera.

In 1977 he started Barratt Lighting while still at the Opera, that company went on to become the first distributor of Winchup stands, trussing and Par Cans in Australia. It developed quickly into a large enterprise, joined together with another business venture of Roger's, a half interest in Theatrecraft Pty Ltd. Under Roger's ownership these ventures were very successful, he sold out in 1981.

Through the 1980's Roger built his freelance career, and built a collection of lighting inventory which, at his death, saw him as the owner of the largest number of theatrical lanterns in Australia. He formed a partnership with Tony Davis of Chameleon Touring which became a very strong business relationship until his death.



Roger had passion for theatre and his work. He was enormously practical, I'll never forget inspecting the Opera Theatre rig in 1978 where he pointed out the 5kw Fresnel at each end of the FOH bar. "For washing out the shadows!" he remarked happily. Then in 1992 I interviewed him for this magazine about Buddy, the musical. He had Her Majesty's house Patt 263's up there in the air, "they work so I use them", he said of those fixtures, the Edsel of the lighting industry.

He lit over 40 productions for Peter Williams, many at the Philip Street Theatre, small holiday pantomimes for kiddies. Peter and Roger made it work and made it pay because Roger would install his oldest lanterns which owed him nothing, and work the shows into his busy diary.

At the other end of the spectrum Roger could light anything, and with Tony Davis and Chameleon he had a formidable infrastructure behind him. Chameleon has extensive, state of the art stock of moving lights and control systems. For all his readiness to use lanterns which others would have junked years ago, Roger was pragmatic and ready to embrace technology. A memorable quote, when I asked him what he would say to young novice lighting people: "Light it for what it is".

In October last year Roger won an ENTECH Award as LD of the year for his work lighting "Into The Woods".

There is a huge hole in the business now, to go along with the hole in the hearts of many. Roger is survived by the true love of his life, his companion Andrew.

Written by a real admirer who will NEVER forget.

Obituary

Denis Braham with daughter Lucia and son Dominic. Photo taken on his 41st birthday, 27.9.94

Denis Braham

On June 7th Denis Braham passed on to the big rig in the sky. A leading figure in the production industry, Denis will be missed by many. Below is part of his Eulogy, written and delivered by Paul Haines. It says it all. Following are some memorials from his friends and co-workers.

"Denis had an extremely interesting and vibrant life. He was 41 when he passed away. He was fit, he never drank to excess, he didn't smoke - he led a very clean life. An unusually clean life for someone in the business in which he worked.

He was 17 when he first got into the entertainment business, a very impressionable age. Imagine starting out as a roadie with Sherbert. In keeping with that era, the antics of a touring rock'n'roll band were often enough to lead most of us off the rails, but not Big Den. His moral standards were impeccable and his morale fortitude unswathing. Standards which he maintained throughout his entire life. There are probably few of us here today who could boast such a record.

But Denis wasn't the sort of guy to push his philosophies onto others. He knew his God gave us the freedom to conduct our lives however we wished. Denis was devoutly religious, in fact in the old days he was known as the 'Tour Catholic'. No matter where in Australia Denis was on tour, he would never have missed mass on Sunday.

It was easy to scoff at the time, but I think Big Den's the one who laughs the loudest now because I have no doubt in my mind that Denis will be up there sitting on the makers right hand as I speak.

After Denis' stint with the 'Sherbs' his work led him to Sydney where he joined the production company Jands. It was early days and the technology was primitive but it was the beginning of a whole new industry that would sweep the world. Denis was one of the pioneers of this industry and Jands was up there with the best of them - designing new equipment, developing new ideas and overcoming logistical problems.

Denis became an expert. He was thorough. He didn't miss a trick. He had a great mind and his talents were in demand. He moved on to become a key figure in the entertainment industry.

He got the Sydney Entertainment Centre up and running with one of the biggest opening events Australia had ever seen. As Operational Manager he helped make it one of the most stream lined and profitable venues n the world. The operating company, Arena Management, were moving on to bigger and better things.

Denis commissioned the Darling Harbour Convention and Exhibition Centre, the first of its kind in Australia. By now he was becoming an expert at establishing the protocol and systems to get these world class entertainment complexes operational.

He moved on again, this time to oversee the completion and opening seasons of the historic Capitol Theatre.

Denis was never one to stagnate. He was always improving himself. He had recently completed courses in business management, total quality management and communications. He even did a St Johns Ambulance course, if only he could have used this to help himself.

Big Den was a complex man, some would say very private. In his own unassuming way Denis really was 'Mr Entertainment'.....

.....But he had a wonderful dry sense of humour as well. He was describing the other day how, in his role as the Theatre Manager for the Capitol, he was escorting the Governor General and his wife at the production of West Side Story.

After the curtain came down he took Bill and Dallas backstage to meet the cast where they bumped into Phil Collins who was in town. Bill and Phil were having a lengthy conversation about Switzerland where Phil Collins now lives, and is also a favourite destination for the Governor General. As Denis was taking him back to his car, Bill Hayden turned to Denis and said "He was a nice chap. What does he do for a living?"

Big Den could talk to anybody. He was great mates with the producers and stars. He was great mates with the front of house staff and the cleaners. But he wasn't a 'yes man', he gave a lot of thought to things, he never did anything lightly.

He was respected and loved even by his sparing partners.

Denis got respect because he gave it." •

"Denis Braham was one of the all time good guys, one of those people you were proud to call friend and colleague. His Industry background and experience, easy going manner and dry sense of humour made it a pleasure to work and play with him. The industry owes a lot to Denis and will miss him dearly. Rest in Peace Big Den." **-Colin Baldwin, Showcorp.**

"I first met Denis when he hired me at Jands in 1979. He again hired me when the Entertainment Centre opened in 1983. I am just one of the scores of people who have been given opportunities by D.B. and for that I will be forever grateful.

With is honesty and sense of fair play, he influenced the most important part of the venue, the people. We will miss D.B. We won't forget him"

- Arthur Carruthers. SEC.

I had known Denis for over 20 years, pre Sherbert days (Brian Cad and the Family) and over the years he never lost the qualities that first impressed me. His sense of enthusiasm for this industry, his honesty and sense of fair play. His thirst for knowledge and always wanting to help anyone who needed his help.

It saddens me deeply that he was to go so young with still so many ambitions and dreams to fulfill. We will miss you old friend, God bless, many good memories.

-Phil Burkinshaw, Melbourne.

Robert Stapledon

DSP founder Robert Stapledon passed away suddenly on Tuesday 4th July in Sydney, victim of a long illness.

Aged 34, Rob is survived by wife Linda.

DSP is poised to become a major player on the export scene with the new Postation, an integrated audio for video editing suite which was released to great acclaim earlier this year. Rob was involved in development of hardware, ergonomics and interface, and Postation is living testimony to his ability.

Originally from Victoria, Rob designed audiophile amplifiers, and was involved in some early development for Fairlight. He worked at OTC on digital data transmission hardware before starting DSP in 1990.

Rob was a creative person, incredibly focussed on his chosen task. He played piano socially, and was possessed with a dry humour appreciated by everyone. "Laid back visionary" and "driving force" are terms applied to Rob by those who knew him.

DSP is set to carry on Robert's work, courtesy of Joe Narai, Robert Peacock, Scott Ridley, Michael Reznik, Steven Fehir, Paul Dunn and Tony Corcoran.

It is a shame Robert will not be around to see the fruit of the team's labour develop and flourish, with the first PostStation due for installation in London as this magazine goes to print.

BUYERS GUIDE

Studio Mixing Consoles

<NOT in any order, because Elaine found it too hard this time!>

Fender Australia (02) 666 5077

MX5216 Series mixers are fully professional mixing platforms, equally at home in home project or commercial studios and various production applications as well as live P.A. use. 3 Way EQ with sweepable mids/2 mon. sends, pre or post EQ/4 aux sends with 4 stereo returns/peak, solo + mute on all channels/4 subs to stereo out or 6 subs to mono out. $5000.00

MX5224 As above but 24 Channel. As above but 24 Channel. $6500.00.

MX5232 As above but 32 Channel As above but 32 channel. $8500.00.

Ross from Central Music Instruments P/L (03) 93152244

RCS-802 Professional 8 Channel mixing console with loads of features. One of the quietest desks on the market. Rack mountable. 8 Channels, 3 band EQ, XLR + 1/4" inputs, individual channel inserts, 2 aux sends and 1 monitor send, PFL on all channels, monitor PFL, 1/4" + XLR SUM output jacks, 5UM Control. Phantom Power. $949.00.

RCS-1202. As above - 12 Channel version. As per RCS-802. $1229.00

RCS-1602. As above - 16 Channel version. As per RCS-802. $1599.00.

RCS-2842C. 28 Channel Stereo mixing console with 4 subgroups. Includes a moulded SKB Polyethylene road case. 20 XLR inputs with 4 Band EQ (sweepable Hi & Lo mids), 4 Stereo inputs, 8 aux sends, insert, PFL and Mute functions on all channels, 4 stereo subgroups. Phantom power, XLR Talkback MIC Jack, Lamp connection. $5999.00. All Prices incl. Tax.

DOD from Central Music Instruments P/L (03) 93152244

DR-822 Professional stereo 8 Channel compact mixer. Available in Rackmount (7 R.U.) and Table top versions. 8 Channels, 3 Band EQ, XLR & 1/4" inputs, 2 Aux sends, 1 Monitor send, Phantom Power, RCA tape ins and outs, 60mm dust shielded faders. $1149.00.

DR-122 Professional Stereo 12 Channel Compact mixer. Available in Rackmount (7 R.U.) and table top versions. 12 Channels, 3 band EQ, XLR and 1/4" inputs, 2 aux sends, 1 monitor send, phantom power, RCA tape ins and outs. 60mm dust shielded faders. $1499.00 All prices incl. sales tax.

TASCAM from TEAC Aust. P/L (03) 9 646 1733

M-108 Compact Rack Mount unit which will accommodate fairly complex recording or video post jobs. 8 Mic/Line inputs, plus 2 pairs of stereo line inputs, 4 Group outs, 2 FX sends, High & low EQ, 4 XLR mic connections, 8 tape ins. $2420.00. Incl. Tax

M-1500 Series. 2 Configurations available, the M1516 with 16in and 4 output groups and the 1508 8 in 4 out. Both feature Dual Mix inputs which double input capacity. 3 Aux sends, 3 band mid sweepable EQ, Direct outs on channels 1~8, PFL, XLR mic/line ins trim & overload indicator on each channel. Rack Mount optional on M1508. $3090.00/$4935.00. Inc. Tax

M-2600 Series. There are 3 models available, 32 input/8 group/32 monitor 24 input/8 group/24 monitor & 16/8/16. Compact high quality design & components used. Audiophile quality, full balanced switchable mic/line preamps. 6 independent aux. sends, 4 band split EQ on each channel/monitor strip, Phantom Power, Talk back microphone fitted as standard. In place Solo, ch/group inserts. $7064.00/10,836.00 Incl. Tax

M-5000. 32 To 48 (standard 32) input in line design console. Integral Patchbay, 24 Group routing, +-21V Power Supply, VCA Automation option using Macintosh platform. 8 Auxiliary sends, Solo function, 3 Group mutes, Independent Mic/Line gain controls, Fader reverse, Multiband split EQ fully balanced design. Optional stereo input modules. From $25,000.00. Plus Tax

OTARI from Amber Technology (02) 9975 1211

Concept 1. Digitally controlled analogue console with central computer control of all routing and switching functions, full console automation and optional dynamics. 32-48 Channels, 2 Paths per channel each with 4-band parametric EQ, 10 Aux busses, bantam patchbay, Hi-Res metering. From $100,000.

Status. Digitally controlled analogue console with central computer control of all routing and switching, console recall, full automation with optional moving faders & dynamics. 24-48 Channel with or without patchbay, dual inputs, 4-band parametric EQ, 8 aux busses, Hi-Res metering. From $59,000.00.

>Continues on page 57

We list FOUR consoles of each brand for indicative purposes. There are usually MANY more models and variants available. Prices correct @ 15 July.

Student Free Library Copy

INITIATIVE

Connections Magazine is available free to School and Further Education Libraries. Students should show this advertisement to their Librarian, who can then write or fax us a request to receive this magazine for free for one year in NZ or Australia.

This is a small part of our commitment to training the bright stars of tomorrow, today.

Connections Publishing,
Fax (02) 876-5715.
Write to: PO Box 439, Epping
NSW 2121 Australia.

a STAND for EVERY occasion...

Konig & Meyer produce the World's best range of microphone stands, from **massive** overhead booms to *tiny* desktop models.

Like to know more? *Call now* for our special microphone stand catalogue.

K&M

Distributed in Australia by
The Resource Corporation
PO Box 323 Balwyn Vic 3103
Tel 03 9888 6555 Fax 03 9888 6613

Write in Reader Service number: 161

STUDIOS MONTHLY
Incorporating the BASF National Tracking Guide
AUGUST 1995
Edited By Will Burston

An interview with Matt Thomas

Matt Thomas is the first in a series of Australian producers and engineers to be interviewed to explore the attitudes of Australian production personnel. I caught up with him the morning he began work on mixing album tracks for Melbourne act, The Jaynes.

Matt has always had a passion for music, start while still at school when he fronted a punk band as "**lead screamer**." The task of setting up the audio equipment was left to him, and this fostered a long term interest in the technical aspects of music production.

Upon leaving school he enrolled in an audio engineering course at the Victorian Audio Education Centre, now the Recording Technology Training Centre. This he found an excellent introduction to the industry, which lead him to three years of live audio work. Touring southern Australia with a variety of Country and Western acts he progressed from lighting, through a stint as foldback engineer to FOH operator.

It was at this stage, around 1987, he met and persuaded Ern Rose to employ him at the newly formed Metropolis Audio. Starting as lunch boy among his first tasks were to lay the floor in the live area of Studio 1. From this beginning he has worked his way through assisting, to hold his current position as a house engineer.

Who has had greatest influence on you as an engineer?

>to page 46

MDM Tapes:

What to feed your Digital Multitrack recorder

By Will Burston

Modular digital multitrack recorders (MDM's) have made high quality recording available to many home users. Providing many advantages over analogue recording, there is one major drawback. Analogue recordings degrade slowly and noticeably over time, warning you of problems with your master tapes. Digital systems use error correction to mask slight imperfections in the tape stock. Any failure with the recorded information is hidden until the audio output begins to mute, by which time it is too late to recover.

There are a few basic philosophies that can be followed to prevent this type of disaster from occurring, mainly to do with tape storage. Magnetic tape is an unstable medium, affected by the conditions in which it is kept. Manufacturers all recommend certain archival procedures, but for the average project studio many of these are difficult if not impossible to achieve. Not all of us have Hivac air conditioning systems to provide climate control 24 hours a day.

Tape stock should be stored at fairly constant temperature and humidity, large temperature variations cause magnetic tapes to shed the oxide layer. Tape is made by fixing a layer of magnetic material to a flexible base material, along with binders to hold it together. When subjected to extreme temperature swings the backing and oxide expand and contract at different rates, breaking down the bond between them. Extreme humidity also plays havoc with the binding materials, as they adsorb small amounts of moisture, causing it to swell and contract.

When using a tape for the first time after a period of storage, always allow a few hours for it to acclimatise to the room temperature where the recorder is located. If the tape is cold condensation may form, causing it to catch on the tape path and heads when played. This at worst will damage a small section of the tape surface, at worst wrap it around the heads destroying the entire tape

>to page 48.

STUDIO NEWS

- Damien Gerard studio's have been busy over the last month **Russel Pilling** has been hard at work with tracks for the **Gadfly's** European release, **Planet Pop** featuring members of the **New Christs**, and 26 tracks for local singer / songwriter **John Gibbs.** D.G.'s has also seen **The Poor** in pre-production with **Kevin Shirley.**

- **Pathway Studio** is in update mode, adding a PCM 70, an SSL stereo compressor and a Brook Value DI to their already extensive list of outboard gear. On top of this they have purchased thee Brook Audio amplifiers which Frank is raving about.

- **Charing Cross** is exceptionally busy, expecting to stay in lockout mode until years end. **Jim Hilburn** is currently producing the debut album for **Presto**, local Sydney four piece. Coming projects include **Steve Bilby's**, of **Electric Hippies** fame, solo project **Universe**, engineered by **Martin White.** He will also be working on mate-

>to page 46

New Studio Editor, Melbourne Bureau opens

Connections Publishing has appointed **Will Burston** *(pictured)* as Studio Editor, effective from this issue. Will is a working engineer. He brings a fresh perspective to Connections, and as an added bonus is now our Editorial contact for Melbourne.

Connections is expanding its editorial resources thanks to recent circulation gains!

Will Burston, Connections Melbourne: Ph 03) 9510-2479, Fax: (03) 9510-2659, Mobile (015) 520-148.

Matt Thomas

"Doug Roberts, Ern Rose and Terry David, an American I worked with on Mantissa's Album in 1992. He was great, a really cool guy, good fun to work with."

What have you learnt from working with these people?

"Lot's. Intangible things you really can't put your finger on. Techniques on how to handle people, and it's all about handling people. Not what microphone you use, just how you handle people. I've learnt to be cool, very relaxed as an engineer. Make sure that everything's aright so there is no worry for the client. No technical faults, and if there are don't let them see them, work your way around them."

What have been your most memorable sessions?

"Mantissa was good fun, it was great. Screaming Jets was good. That was with the producer Steve James, who started out with the Sex Pistols and the engineer was David Price. It went for three months. Working on Deborah Conway's String of Pearls. I learnt a lot about guitars, with Richard Pleasance and Michael Denelzan producing and Doug Roberts engineering. It was a fun session, it was very relaxed, it wasn't a time pressured gig, we just did it and it came out really well. Supermann is a fun band to work with, I've enjoyed the sessions. The Jaynes are great."

What is your modus operand when preparing for a session?

"I listen to stuff the bands recorded. What I'm listening for depends on my role. If eng/prod I'm listening for arrangements, if I'm engineering I listen to the sounds they've got, try and think of what other parts they are going to put down. If they're doing it live they can't layer and have a doubled rhythm section and a solo on top of that in terms of guitar. So I just listen to sonically where they're heading, what dynamic they put in the song."

"Songs always develop themselves in the studio, if you listen to a rehearsal tape compared to the studio there's always a vast difference."

Do you prefer live recording or overdub recording?

"Both. I like when recording to record it all live where possible, and then overdub where necessary. It's up to the client, if they want to overdub a vocal let's do it. If they like the vocal they have live that's fine."

Digital or analogue, what is your preference?

"Analogue, for most things. Some things are better off digital, for instance dance / techno music. I'll go digital because the sounds out of keyboards are very different, Techno somehow has this square sound and you can do some very interesting things to digital and you don't get any quality loss, whereas analogue you have tape hiss, saturation and compression where you mightn't want the compression. You might want this attack that's incredible where you'll get that off digital. If someone has a sample of this incredible kick drum you might want to get that back. So anything that's generally keyboard orientated I'll go digital."

Do you manipulate sounds a lot or are you faithful to the source material?

"I'm fairly faithful to a degree. What I do anyway as a job is paint a picture and create a perception. Even though instruments are in different rooms and at different angles I try and pull them into line from a set of speakers, so in that way I'm faithful. So generally speaking a I do like to get a faithful room sound using natural room ambience's and drums and guitars. I always look at in terms of a video, if you were watching the video it would be placed correctly. My stereo image of a drum kit is how you look at it. But I mess with sounds, I'll butcher sounds, I'll run them through lots of effects, or through a Leslie speaker or whatever. I'll do that kind of stuff, where warranted."

"The only thing I have about technical stuff is if it works I'll use it. I don't know what's inside it, I don't care to know what's inside it, grey microphones are sometimes better than silver ones, but sometimes silver ones are better than grey ones."

Monitoring, what do you look for in the speakers you are using?

"Something that I can work on all day that won't stuff my head up. I find NS10's are just to hard. I'm looking for something that's got really nice top end and good bottom end but that's not all boom and tiss. I've used a fair few monitors, Tannoys, NS10's and what not. KRK 6000's have got me at the minute. I've had a listen to ATC's, but I didn't really like them, they cost too much. I had a pair of Dynaudio M1's for a while, they were fantastic but they cost too much again. KRK's are nice, they go loud, they're tight, they don't change sonically too much."

What are your favourite styles of music?

"Pretty indiscriminate, the only thing I don't really get into is death metal. I've done some work with a band called Damaged, which was death metal but with a twist and I really enjoyed that, so I can't really discriminate."

How do you see the industry in Australia at the moment?

"It's tough, it's hard... bands are having a bit of a hard time getting what they need in terms of gigs, backing from companies. I'm not an expert in the industry outside the studio. From inside the studio is great, we still work all the time. Budgets have gone down slightly, everyone is doing budget albums. I remember doing albums that were two, three, four months long, that doesn't happen anymore... it's three to four weeks maximum."

What are your views on people recording at home?

"The advent of ADAT has taken a lot of work out of the studio, people can do their vocals at home which I think is great, great for the artist, it's important they have that facility. I've heard some great stuff recorded at home, The Truth did some great stuff at home. But people will always come back to the studio to do a production thing, it's the place to do it. Alesis ADAT, it's still a home thing, where as a professional studio is a work environment. Some people have the motivation to work at home, others don't."

How have you developed as an engineer over the years?

"Where's my psychologist, quick! I don't know, just getting older and more mature, a desire to do more and better work would be a major factor. A greater passion for music, I love a good song."

Your ambitions, how do they stand currently?

"My current goal is to live in America, that's where the action is. My ambition is for people to use me for what I am behind the console, respect me as an engineer because I do what I do. "

What do you see the future holding for you?

"Everything, the world is my oyster and I'm going out to conquer it. I'm going to America for the experience factor, see what the attitudes and studios are like over there in terms of music. I'll always come back here, its the best place in the world."

STUDIO NEWS

(continued)

rial for **Bellydance**'s next album, with **Paul McKercher** producing. McKercher will also be working with **Jody** from the **Clouds**. Charing Cross is also in the process of building up a second Neve console, with the aim of providing 64 channels of Neve feeding 48 tape tracks by Christmas.

• **Grevillea Mastering** have added the Weiss 102 series digital signal processor, making it the first installation in this country. Offering real time parametric EQ, dynamics, stereo image control and mixing at up to 24 bit resolution, it has been mated with Apogee UV22 converters and a Weiss Advanced Noiseshaping Redither in a custom installation.

• **Paul Bryant** has opened **Paul Bryant Mastering**, located in the **Audio Cassette Duplication Company**'s building. He is now in the position to offer a one stop mastering, duplication and artwork solution. Call (02) 748-6055/

• **Metropolis Audio** in Melbourne is coming to the end of an era. With rumors flying, it has just been confirmed that the facility will close half its rooms in the next two months. Studios 1 and 2 will close, with operations contracting to Studios 3, 4 and 5 remaining after the reshuffle.

• More moves afoot in Melbourne with **Paul Kosky** being appointed as **General Manager** and **Senior Music Producer-Engineer** of **Kiss Music Studios**. With plans to enlarge into nearby premises, the new **Kiss Music Studios** will undergo a complete transformation in the coming months, to be open in late September. Based around an E series SSL with G series computer, attached to a Sony 3348 48 track digital tape machine and a 24 track hard disc editor in Studio A, Studio B will offer 48 track analogue and a 24 track hard disk editor. The plan is to combine these facilities with existing Kiss Audio Visual broadcast edit suites, which run on Silicon Graphics workstations. Quote from Paul Kosky, **"We will have one of the most technically powerful music recording facilities in the world."** Watch this space!

• **AAV Australia** is also in expansion mode after examining their market. Offering four new serv-

CONNECTIONS SHOP

ALL ITEMS USUALLY EX-STOCK
OVERNIGHT FREIGHT
(AUST) AIR ELSEWHERE

ORDER **NOW** BY
PHONE (02) 876-3530

Or use the form at the end of this section >>>>

black t shirts

This one is a slow seller. Anyone know why???

SHORT SLEEVE: $14
LONG SLEEVE: $19

Printed with Connections Logo on the rear, on nice cotton shirts from the Bongo Print Works. All XL size, one size fits all up to XL.

Top Seller!

▲ See the light!
GREY XL Shirt printed in 6 colours

Hear the sound ▲
WHITE XL Shirt printed in 6 colours

▲ WHITE XL Shirt printed in 6 colours also available as GREY L Shirt

Save the beat

UNIQUE t shirts

PRINTED IN 6 COLOURS ON GREY OR WHITE COTTON T SHIRT **$24 ea**

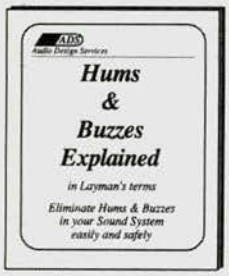
SUBSCRIBERS SAVE 10%!

Basic Stage Lighting $17

By Mark Carpenter.
Written in 1982, but a good introduction to the art of lighting the stage.
114 pages, illustrated. Covers everything except DMX and Moving Lights.

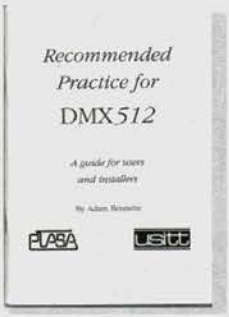
The CD

Very handy for audio people, this test CD has: Tape deck alignment tones,sine waves, 10kHz through 20kHz; 1/3 octave tones, (30 seconds of each); Square waves, (30 seconds of each); Frequency sweeps, 20Hz to 20kHz, sweeps down and up; Phase test at 250Hz, in phase and out of phase; Digital 'black', 1 minute of pure silence to find faults with; Dry instrumental performances, without ambience or reverb; and SMPTE/EBU time code. Produced by MIX Magazine. PRICE: $29



Hums & Buzzes Explained $9

By Laurie Nethercote. NORMALLY $12.95 - special price.
A small handbook written in plain english for sound engineers and musicians. Explains earth loops and magnetically induced noises.
No maths, no formulas, just down to earth trouble shooting tips!
INCLUDES: Project; Build your own transformer isolation unit.

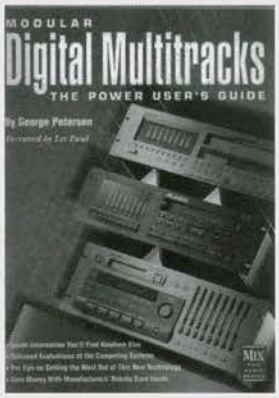


Recommended Practice For DMX 512

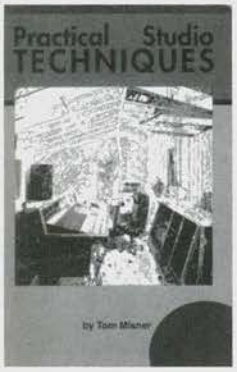
ALL ITEMS USUALLY EX-STOCK
OVERNIGHT FREIGHT
(AUST) AIR ELSEWHERE

By Adam Bennette. **$19**
A Guide for users & installers.
Explains the DMX512 specification and offers advice and professional advice on how to set up a successful DMX512 system. 80 pages, illustrations. An authoritive study of the standard Lighting Control protocol.

Modular Digital Multitracks



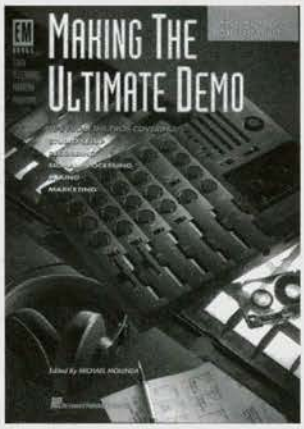
By George Petersen. **$49**
120 pages, written 1994.
This guy knows his chops, he is an editor at MIX, the world's greatest studio magazine. This book covers everything you need to know plus more. It details the ADAT, DA-88, RD-8, ADAM and DMR-8 systems, talks about tape, techniques and how to make your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



Practical Studio Techniques $40 with CD

By Tom Misner.
Down to business tips and hints for dummy's and pro's alike.
Recommended for anyone interested in, or practicing studio audio. Comes with a CD that is equal to a second book ... with easy to follow actual audio tips and lessons.
102 pages illustrated, **With unique CD!**

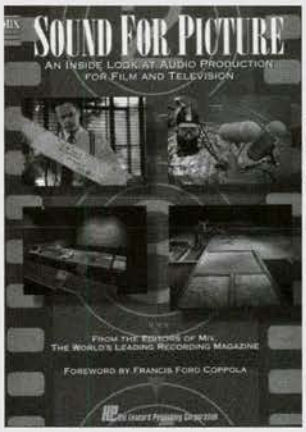
Making the Ultimate DEMO $32



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

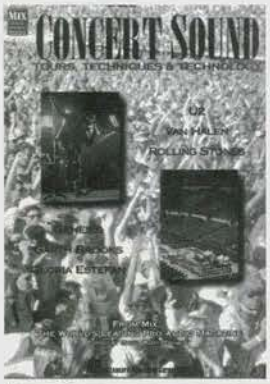
Live Sound Mixing

By Duncan Fry.
This Australian publication in in it's second edition and has sold well around the world, and has an easy style. It deals with everything PA in a matter-of-fact manner, and is a good reference work for those of us who forget what we know!
176 pages. **$35**



$32 Sound for Picture

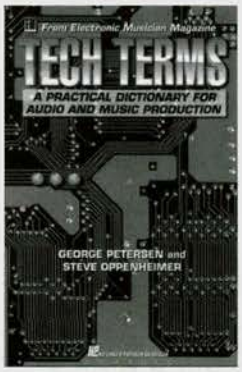
From the editors of MIX. 134 pages, 1993. An inside look at audio production for film and TV. Includes section on sound effects, with case studies.



Concert Sound

By David (Ruby) Trubitt
166 pages, written 1993.
This is a very useful book, **$44**
Connections say that if you are interested in, or work in, the live sound field, get it! details touring sound for bands like U2, Stones, Van Halen etc. Has gear tips, rigging, pix of major systems, and is well put together!
What more do you want?

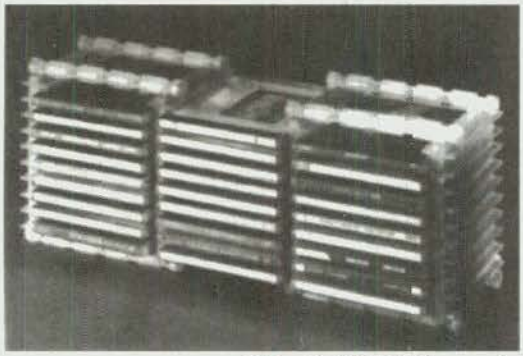
Tech Terms

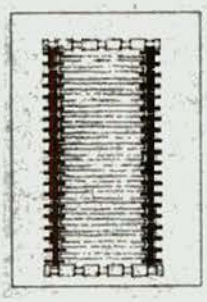


George Petersen and Steve Oppenheimer. 50 pages. 1993.
For a quick, accurate definition on using music technology, this is for you. The practical dictionary of audio and music production terminology, explaining 300 of the most commonly misunderstood words and phrases. Get savvy! **$18**

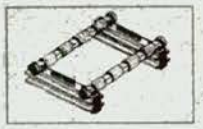
SUBSCRIBERS SAVE 10%!

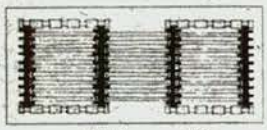
NEW FROM YOUR SHOP





CD GROOVES modular storage system





These modular gizmo's build up to store your CD's in many different ways. They offer therapy whilst constructing, they snap together. Designed and made in Australia.

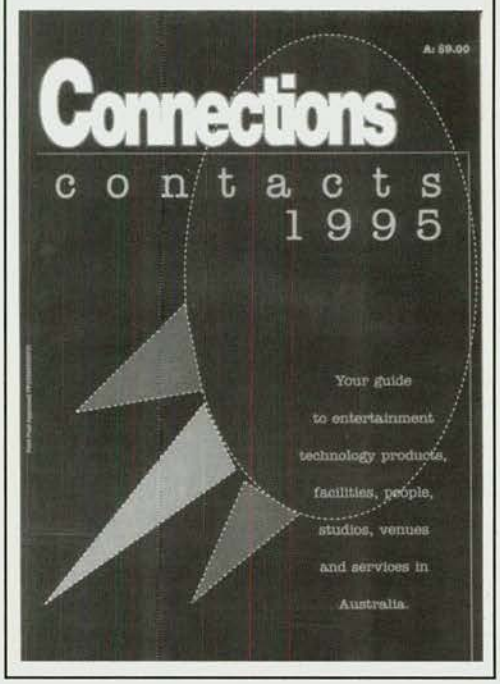
One unit (27 CD's) **$39**

Two units (63 CD's) **$36** each

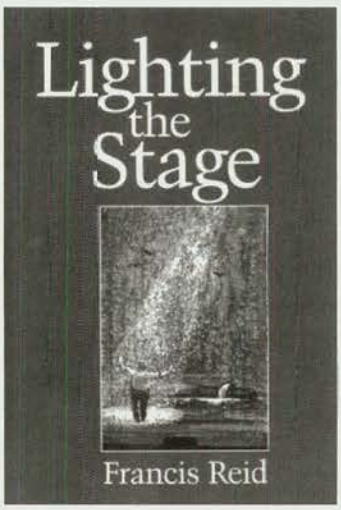
Three units (99 CD's) **$33** each

Connections Contacts 1995

WHO IS WHO?
Lists more Studios, Outlets, Distributors, Hire & Production firms than anything else! Find who distributes and repairs key brands. Venues listed with production available and stage sizes. Technical Crew listed, Retail Outlets, and MUCH MORE! 130 pages, released July 1995.
AUSTRALIA'S INDUSTRY RESOURCE BOOK **$9**



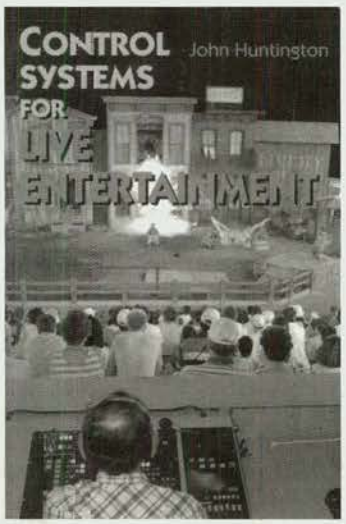
ALL ITEMS USUALLY EX-STOCK
OVERNIGHT FREIGHT (AUST) AIR ELSEWHERE



Lighting The Stage

FRANCIS REID

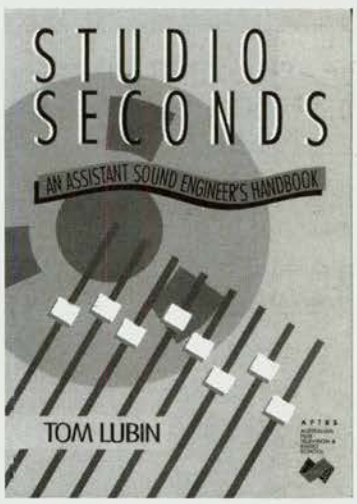
Previous books on stage lighting have tended to concentrate on the factual aspects of design and technology. But for young lighting designers and all those concerned with lighting - directors, choreographers, set designers, costume designers, stage managers and specialist technicians - the equipment and the design processes are only the start.
Lighting the Stage approaches stage lighting from the human angle. It is concerned with the relationships between the people involved in lighting and how they fit into the creative team. A stage lighting designers experiences. 114 pages, 1995. **$36**



Control Systems For Live Entertainment

John Huntington
Walk into most large shows today and you see computers at work. All too often systems for lighting, sound, staging and machinery are not connected. This book discusses how different systems can be integrated, and details most different protocols in use today. Invaluable, says Connections editor. 292 pages, illustrated.

$79



Studio Seconds

Tom Lubin
The comprehensive guide for the assistant sound engineer, or anyone interested in music and sound recording. Master engineer Tom (an Aussie resident) takes us through the studio with a detailed account of the equipment and procedures in a modern studio. 154 pages. It looks at the working relationship with the studio client & is fun to read!

$19

PHONE ORDER NOW, (02) 876-3530 OR ORDER FORM ON NEXT PAGE>>>>

SUBSCRIBERS SAVE 10%!

CONNECTIONS SHOP

ORDER FROM CONNECTIONS PUBLISHING PTY LTD (ACN 058-443182)

A

WHAT do you WANT to order?

• BOOKS:
Write in Price

- ❑ Modular Digital Multitracks @ $49 _____
- ❑ Concert Sound @ $44 _____
- ❑ Basic Stage Lighting @ $17.00 _____
- ❑ Hums & Buzzes @ $9.00 _____
- ❑ DMX 512 @ $19.00 _____
- ❑ Practical Studio Techniques @ $40.00 _____
- ❑ Live Sound Mixing @ $35.00 _____
- ❑ Making the Ultimate demo @ $32.00 _____
- ❑ Sound for Picture @ $32.00 _____
- ❑ Tech Terms @ $18.00 _____
- ❑ Lighting The Stage @ $36.00 _____
- ❑ Control Systems for Live Ent. @ $79 _____
- ❑ Studio Seconds @ $19 _____
- ❑ Connections Contacts @ $9.00 _____

• TEST CD, CD STORAGE CUBES

- ❑ The AudioTest CD fromMIX, @ $29 _____
- ❑ CD Cubes, for 27 CD's @ $39 _____
- ❑ 2x CD Cubes, for 63 CD's @ $72 total _____
- ❑ 3x CD Cubes, for 99 CD's $99 total _____

• T-SHIRTS Superior, unique all-cotton, printed 6 colours PLEASE NOTE AVAILABLE SIZES BELOW!

- ❑ See The Light **Grey XL** @ $24.00 _____
- ❑ Hear The Sound **White XL** @ $24.00 _____
- ❑ Save The Beat **Grey L** @ $24.00 _____
- ❑ Save The Beat **White XL** @ $24.00 _____

•BLACK T-SHIRTS, SHORT or LONG sleeves. One size XL

- NOT the drummer ❑ T Shirt $14.00 _____
- NOT the drummer ❑ LONG Sleeve T/S $19.00 _____
- Digital Delighter ❑ T Shirt $14.00 _____
- Digital Delighter ❑ LONG Sleeve T/S $19.00 _____
- Sensitive Lighting.. ❑ T Shirt $14.00 _____
- Sensitive Lighting.. ❑ LONG Sleeve T/S $19.00 _____
- Equip. relocation ... ❑ T Shirt $14.00 _____
- Equip. relocation ... ❑ LONG Sleeve T/S $19.00 _____
- Get you Backstage ❑ T Shirt $14.00 _____
- Get you Backstage ❑ LONG Sleeve T/S $19.00 _____

• TOTAL GOODS AU$ _____

SAVE 10% **• LESS 10%** (Subscribers Only*) _____
**Discount for new and current Subscribers only.*

• TOTAL (NOW add freight) _____

go up and Subscribe (and save) and to Section B :add FREIGHT!

• SUBSCRIBE TO CONNECTIONS, save 10% on goods!

- ❑ 12 months subscription @ A$39.90 **(Aust)** _____
- ❑ 12 months subscription @ A$60 **(NZ, air)** _____
- ❑ 12 months subscription @ A$70 **(ASIA, air)** _____
- ❑ 12 months subscription @ A$95 **(USA, air)** _____
- ❑ 12 months subscription @ A$110 **(Eur ,air)** _____

B

FAST shipping *(within 48 hours)*

- ❑ ***WITHIN AUSTRALIA, any sized order***
  $5.00 Flat Charge, overnight
  Australia Post air express bag $5.00
- ❑ ***TO NEW ZEALAND, any sized order***
  A$10.00 Flat Charge, Australia Post
  air parcel post $10.00
- ❑ ***TO ASIA, by AIR MAIL*** $20.00
- ❑ ***TO USA, by AIR MAIL*** $30.00
- ❑ ***TO EUROPE, by AIR MAIL*** $35.00

C

• TOTAL ORDER AU$ _____

PAYMENT DETAILS

- ❑ Cheque/Moneyorder enclosed
  (in favour of Connections Publishing Pty Ltd, Aust. dollars only)
- ❑ Bankcard ❑ Visa ❑ Mastercard
- ❑ American Express

Card Number: Expiry date ☐☐ ☐☐

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Cardholders name

Signed

D

WHO are YOU?

name

address

suburb

state postcode/zip

COUNTRY

*If not Australia, see international shipping costs in **SECTION B**

my phone number is

THANK YOU we ship within 48 hours!

Fax this form to (+61-2) 876-5715; **or –**
Mail to: PO Box 439, Epping 2121 NSW Australia
Or: Phone orders, (+61-2) 876-3530.

Personal shoppers welcome, Mon-Fri 8.30>5pm : Level 2, Century Plaza, 41 Rawson St, Epping NSW.

ices, they have established; a commercial post production agency for commercial producers and agencies, a program post production agency for the specific requirements of program producers, an editing service based around the AVID 800 non-linear offline system and a visual effects service for working with special effects. To complement these AAV are running series of workshops as an introduction to the new services. Contact **Charles Hooper** on 03 9698 6306 for more details.

• The **Australian Film Television and Radio School** are also in training mode, having built a **New Media Studio**. From this they are running a re-skilling course for film and video practitioners, introducing them to the new technologies and working methods for multimedia. Contact **Simon Britton** on 03 9690 7111 for more details.

• For those who face too many distractions recording near population, **Mud Manor Studios** could be high on your list. Three hours from Sydney, the complex is a residential studio with accomodation featuring en-suite spa's, mountain pools and nearby rainforests for those who need to commune with nature. With a 32/16 series II custom Soundcraft desk feeding NS10's or Meyer MSL3's, those who like it loud can crank the volume to Warp Factor 9, without the fear of complaints. And when it all becomes too much, recreational activities include flying (yes, in a plane), waterskiing, horse riding and Byron Bay only 30 minutes away.

• After an unfortunate altercation with a freeway extension, the **Wooly Mammoth** has moved to the old **Newtown Public School** building, opposite Sydney Uni. Expanding on the traditional role of music studio, they have embraced multimedia, installing a full CD-ROM production studio. Currently hard at work on their first release for **&i**. The studio is based around a Soundtracks 32/8/2 console connected to 16 tracks of ADAT, with digital editing for preparing and editing master tapes. Coupled with a chroma-key capiable video studio next door, bands have the possibilty of recording their album tracks and videos, then preparing them for release them on CD-ROM.

Velvet

Velvet has appeared at Balmain (Sydney), and is as smooth as the name suggests. Based around a Mackie 32/8 and a rebuilt MCI 2" 24 track, the studio has an ample array of microphones and outboard. Purpose built from the ground up by Program Building Services, the building has been wired with only the best by Patchworks Communications, using 8761 Belden and Canare Quadstar cable terminating at Switchcraft and Neutrik connectors. The whole building is 'star earthed' which should ensure clean 240v power.

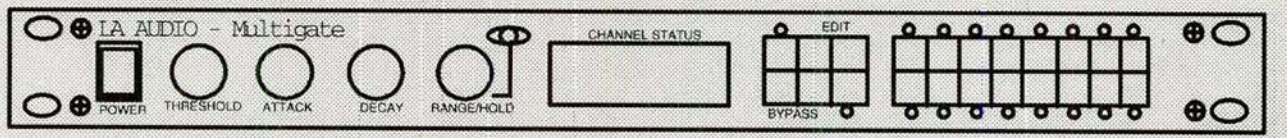
Although only open for a fortnight, the studio has already seen the act **Hammerhead**, produced by Aya Larkin of Skunkhour fame, recording demos and currently have **Cactus Child** in residence. With the Exchange Hotel only minutes away, 10 private parking spots and a plenitful supply of eateries close at hand, what more could a project need?

•Call Velvet Sound, (02) 264-3420

Audio oZ

The A to Z of Audio

122 Moray St, Sth Melb, Vic, 3205. Ph.03 - 9696 5690 Fax.03 - 9696 5691



Super Deal on LA AUDIO - MULTIGATE's.

LA AUDIO

16 Conventional noise gate's.
16 Programmable noise gate's.
16 Ducker's.
16 MIDI mute's.
8 Auto panner's.
16 Tremelo's.
16 MIDI level control's.
Or any mix of gate's, ducker's, mute's, panner's, tremelo's, level control's, you like.
Elaborate cross key switching.
Level 1 conventional controls = No need for menu type operation.
Individual rotary control's for Threshold, Attack, Decay, and Range/Hold.
Operate any selection of multiple gates at same time.
Super fast attack time.
FET "Valve like" superior sound quality.
1U high rack mount.
MIDI in and out.

Save $637 (off list price) this month only.

Write in Reader Service number: 121

MDM Tapes

(from page 45)

and possibly the MDM heads.

Any tape should be wound from head to tail and back again before use. This serves a number of purposes, one of which is to retension the pack of the tape in the hubs. Every recorder's tension is sightly different, and this allows a machine to tension the tape for itself. This should also be done if a large number of passes are made over one section of a tape. Although not as critical with digital machines using video transports, it makes for good recording practises. Rotary head machines also benefit as any loose oxides dislodge from the tape into the filters, rather than onto the tape heads themselves.

The major enemy with MDM's is dust. Both Tascam and Alesis recommended that their machines be housed in clean air, dust and smoke free enviroments. If this is not possible, then housed in a rack with a filtered air supply, especially in a live recording situation. Dust not only reduces head life by acting as an abrasive on the drums, but causes drop-outs if allowed to settle on the tape surface. Motto: Keep your machine and its surroundings CLEAN!

Head cleaning is vital to ensure long term, trouble free operation. Tascam supply a head cleaning cassette with all DA88's, and this should be used when the front panel error indicator is lit. Alesis, on the other hand, do not supply or even recommend a cleaning cassette, asking that ADAT's be returned to certified service agents for cleaning. ADAT heads should be cleaned when the Advanced Error Indication occurs, which is a trailing decimal point on the time display that flickers when the error count begins to rise.

Tape manufacturers are moving quickly to address all these areas, releasing new stocks to specifically meet the needs of MDM users. Tape surfaces are growing smoother as advances in technology allow more uniform oxide coatings to be applied, increasing both accuracy and reducing wear. Cassette shells are being developed that lock the tape away inside and repel dust, to stop contaminants reaching the tape surface.

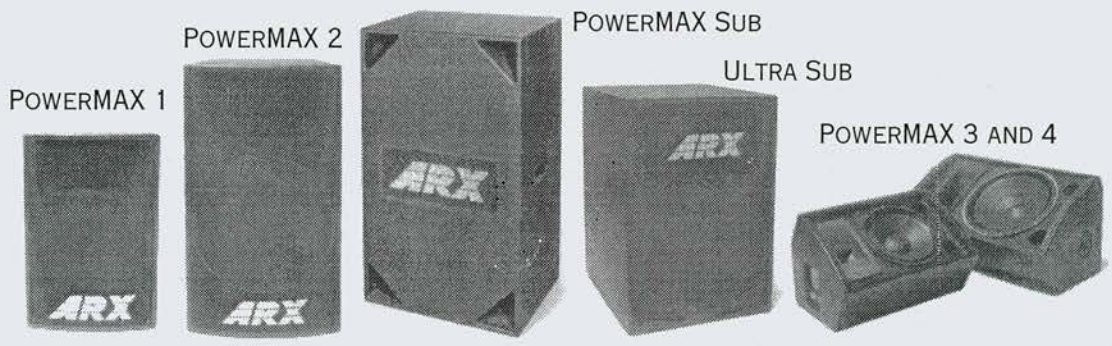
Ampex 489 is their ADAT tape stock, supplied in two lengths, 42 minutes and 60 minutes. 488 is the Hi8 digital audio tape stock, supplied in 30, 60 and 113 minute lengths. Maxell does not have a specific ADAT tape stock, but produce a S-VHS tape for video, the ST - BQ series, which has proven to be reliable for digital audio use. It comes in a range of lengths from 20 to 126 minutes of video time, although ADAT recording time will be 1/3rd of this figure.

Sony produce a Hi8 tape for digital audio, due to be released in Australia next month. The DARS 116 is a 116 minute cassette, which will be complemented by an ADAT S-VHS tape soon. BASF Digital Master 936 is their Hi8 digital audio stock supplied as 113 minute, Digital Master 938 is for the ADAT format.

What tape should you use?

Alesis recommends only Ampex 489 for the ADAT recorders, and the machines need System 4.0 or higher to take advantage of the extended play (62 minute) tape stocks. This software is a free upgrade for users wishing to take advantage of extended recording time. Tascam do not have any official recommendations for DA88 tape stocks, but suggest using BASF or Sony tape formulations as they have proven to be the most reliable. As tape quality does vary between batches, time and experience are the best indicators. •

Power - to the MAX!



The PowerMAX series is a new range of innovative processor controlled speaker systems from ARX.
Designed to fit your installation as well as your budget, the PowerMAX line features ultra efficient designs that install easily and neatly into any venue, yet deliver performance you'd expect from much larger speaker systems.
From the ultra compact PowerMAX 1 to the awesome PowerMAX SUB and the Ultra SUB, there's a PowerMAX series enclosure to suit your exact requirements.
The PowerMAX 1 and 2 provide breathtaking Highs and powerful Lows for front of house applications, while the PowerMAX 3 and 4 are low profile stage monitors, with frequency management tailored to the critical vocal range.
The PowerMAX SUB (2 x 12") and Ultra SUB (1 x 18") are unique Sub Bass cabinets that supply extra low end response in larger venues or when you need extended Low Frequency output.
All of this is controlled by the PowerPRO speaker processor, a unique multi channel control unit that supplies EQ trim, phase correction, sub crossover, and fail safe speaker protection to keep the PowerMAX sound happening, day after day, night after night.
And best of all, they're made right here in Australia. What could be better!
If you'd like a list of happy users from both around the country and around the world, contact one of these people:

ARX SYSTEMS P/L, 33 ADVANTAGE ROAD,
HIGHETT, VICTORIA 3190, AUSTRALIA.
PH: (03) 9555 7859 FAX: (03) 9555 6747
INTERNATIONAL FAX 61-3 9555 6747

ARX®

Vic and Tas: Tony Hosking 03-9888 6555;
NSW: 02-967 2922 Ian Everington;
WA: 09-354 3185 Ian Ross; **SA:** 08-356 6601
Peter Asztalos; **Qld:** 074-424 233 Rod Watts;
New Zealand: +64 (0)9 789 863 John Carter

Write in Reader Service number: 124

ENTECH AWARDS

NOMINATIONS NOW OPEN

The ENTECH AWARDS for technical brilliance recognises the best Equipment and Personnel within Entertainment Technology. These are Australia's only industry representative awards, and are delivered at a major industry dinner function to be held Wednesday April 24th at Sydney's Metro.

NOMINATIONS are open now to Connections Readers. You may nominate once only, and your nomination can include equipment and establishments you consider outstanding, along with people who excel at their chosen job. The field is open and can include Theatre, AV, Rock, Contracting, Studio etc.

An industry representative panel comprising Connections staff and practitioners will produce three final nominations in each award category.

Readers will then vote for these final nominations to produce the winners. The vote will be run by a returning officer for the ENTECH AWARDS.

✉ *WRITE/FAX US A LETTER OR USE THIS FORM.*

My Name _____

Phone (b/h) _____

Signed: _____

I nominate the following equipment as deserving an Award:

1 _____

2. _____

3 _____

4. _____

I nominate the following ESTABLISHMENT/S as deserving an Award: (and I understand you may contact me for more info)

_____

_____

I nominate the following person/s: (and I understand you may contact me for more information)

Name: _____ Employed by/worked at: _____

Nominated for: _____

Name: _____ Employed by/worked at: _____

Nominated for: _____

FAX THIS PAGE to (02) 876-5715 or mail: PO Box 439, Epping NSW 2121 Australia.

NOMINATIONS close on September 30th.

Sound Gear and the Divorce Rate

WORKBENCH

How long before your desk stops talking to you? Howard Jones investigates....

All equipment needs TLC at some stage in its working career, but how long can you reasonably expect your favourite toys to keep working? To begin with it helps to classify equipment in terms of function and use (or abuse).

Function: is it primarily mechanical or electronic? Everything could be said to be both as pots and switches are both, but let's define it in terms of major function. A tape machine is mechanical, with the electronics playing a support role to the transport mechanism. An effect unit is electronic with the mechanical knobs and dials playing the support role.

There is a grey area containing items such as mixing consoles, where the electronic signal path and mechanical pots and switches are inextorably linked, and the reliability of one directly influences the other (Penny and Giles faders anyone?). Speakers are included in this category, as both the condition of the drivers and the health of the crossover both influence their output.

Use: Does it sit quietly in the corner of a studio acting as a dust filter, or is it thrown around our fair country in a big black box? The chances are high that anything living a sheltered life will last longer than if it is abused by road crews for a living.

Anything mechanical in nature, and this includes cars which most of us have had experience with, needs regular maintainence. Cars don't travel for 100,000km without servicing, and neither do mechanical transports. Equipment that is part of a regular maintainence routine will last longer than equipment that is turned on with crossed fingers.

Tape Recorders - Mulitracks: Pro 2" 24 track multi's provide anywhere upto 50 years of service if well maintained. 1" 24 track, 1/2" 16 track and 1/4" 8 track should last up to 25 years if cared for, but analogue machines do need period rebuilding, head blocks wear down and bearings fail, but it does depend on build and design quality. You do get what you pay for.

Tape Recorders - Cassette: Useful service life is around 10 years. After this time parts become difficult or impossible to source. Cassette multitracks are usually superseeded by models that offer much uprated specs at the same price as rebuilding the exisiting machine. Format changes may also make older models obselete, for example only the newest machines are able to take advantage of Dolby S.

Tape Recorders - DAT: Expect a life from between 5 - 20 years with consumer models at the lower end. Head life is the basic fundamental, with a quoted MTBF of 2500 hours if cleaned regularily, and helical scan head replacement cost is around $650 (Tascam DA30). If a portable is dropped, it is quite often not worth rebuilding.

Speakers: Studio monitors will last up to ten years without being reconed, but their performance decays over time as drivers become tired. Tweeters need to be replaced about every two years (if in constant use) and cone drivers every five years. This ensures they are performing at their optimum and not producing a coloured reproduction.

Effect Units: The main fault with electronic equipment is power supply failure which, if contained, is feasible to repair. If this extends to rogue voltages entering the unit's processing usually costly repairs follow. Microphones: Have an almost indefinite lifespan, depending on the quality initially. The most common failure in high grade mics are tantalum capacitors crapping out. Condensor mics will almost certainly need capsule repairs during their lifetime, either from excessive SPL's or from being dropped, and generally are able to be rebuilt to spec. Dynamics and especially SM58's would probably be found to work after a direct nuclear strike!

Mixing Consoles: Their lifespan depends on the quality of the console, how often it is cleaned (yes, vacuuming the dirt and fluff out of the faders does mke a difference.) As they grow older pots, switches and faders will need replacing, and if done as required will extend the life almost indefinatly. The major consideration for a live console is its build architecture, ribbon cable bussing or rigid backplane. Ribbon cables simply work loose, rigid backplanes have a tendancy to crack circuit boards! Midrange consoles should last 15 - 25 years, and high end boards almost indefinatly. The two greatest factors in determining the expense of maintaing a mixer are whether it is a modular architecture and if it uses custom components.

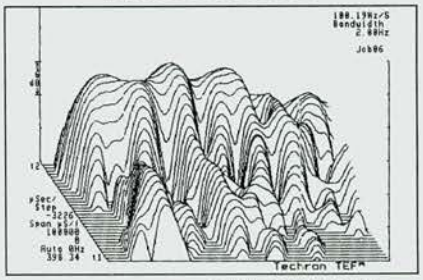
Many of the lifespan figures quoted are for studio equipment, around 1/3 to 1/2 of this is true for live equipment. As always, generally the more expensive equipment will last longer and prove easier to repair in the long run. We haven't discussed subjects like manufacturers of software dependant equipment going broke ceasing any update path and format war casualties. We at Connections are open to comments on this topic, and would love to hear your happy or horror gear experiences.

•Howard runs Studio Solutions, call (02) 906-4363.

MULTIMEDIA 2000
DIGITAL RECORDING & EDITING STUDIO
Spectral Digital Workstation
256 Tracks 16 I/O Capacity
Onboard DSP & Digital Patching
MIDI, Effects & Processing
MultiMedia 2000
91 Reservoir Street
Surry Hills NSW 2010
Tel: (02) 212 6358
Fax: (02) 211 3141
Enquire now! Our friendly team of experts are on hand to assess your requirements.

Mud Manor Forest Retreat Studio
are looking for an electronics technician (must be able to move to the area) who could also double as a Studio Engineer, to tighten up the studio and to begin a discrete business doing pre-production, songwriting and recording. ♣

Blackfeather Music Studios
(02) 909 2707
DIGITAL »» NON-LINEAR »» ANALOG RECORDING
Demos to Masters
MIDI Programming

Studio Acoustics

ARO TECHNOLOGY
• Advanced analysis, design and trouble shooting.
4 - 6 Star Avenue, Croydon Park S.A. 5008
Ph (08) 346 4199

STUDIOS

Hothouse - Melbourne

Offering high quality recording at affordable rates, this is a studio where the legacy of Bon Scott lives on!

Located in St. Kilda, Melbourne, Hothouse was built in 1988 by Craig Harnath and Bruce Johnston, FOH engineer for Diesel, Crowded House and the Divynals. Craig now owns the studio, which he established as a side project to Kids in the Kitchen. His philosophy was to open a studio which "**offered the cheapest way of recording that didn't compromise any sonic qualities. For me this was 24 track analogue, a reasonable array of outboard and a good console.**"

The console is a 24 channel Neve, with eight auxiliaries and two internal compressors. Bought in the mid 1980's when many people were dumping their 'old' consoles for modern SSL's, the desk is now much sought after for its classic sound. Starting life at Alberts in Sydney, where it recorded much of the early AC/DC, Dragon and Mental as Anything material, it spent time at Paradise before coming to Melbourne.

The MCI 24 track was partly chosen for reliability and that it was a known machine in Melbourne. "**The reason I went for the MCI that's what I had recorded on, I liked the sound of them. I actually got this from England and shipped it over, where it had been modified. You can drop in and out as fast as you can think, hit the button and it's in record, none of this pre-empting stuff.**"

Monitoring is provided by NS10's for nearfield and dual 15" Tannoys as mains. "**Big speakers are purely a vibe thing. I don't think anybody really uses them as a reference apart from engineers who have rooms built to their own specifications. The NS10's are here because they are the first thing people look for. I'm going to look at some mid-level nearfield monitors soon.**"

Outboard includes Lexicon, AMS and Yamaha reverbs, Orban, Urei and Nova EQ in addition to the desk, Drawmer gates, and DBX, Urei and Neve compression. "**To a degree I've been staying with classic equipment, waiting for it to establish itself. I'm not really diving on any of the new gear, but if enough people ask I'll act.**"

The microphone selection is designed to complement the existing equipment with a selection including Neumann U89's, KM83's, a 1956 U47, a TLM, AKG 441's, Sennheiser 451's and SM 57's "**for Marshall power. We've got the usual selection but none of the really high end stuff.**"

Motivated to keep the studio accessible to a wide range of clients, Craig sees his position as secure. "**I have a budgetary constraint to keep operating costs down. We get quite a few bands doing their own self financed EP's, which this place is perfect for.**" Recent cliental include Horsehead, Def Rhyme, Chocolate Starfish and Boom Crash Opera.

• **For bookings contact Craig Harnath on 03 9525 3703.**

HORWOOD AUSTRALIA

A.C.N. 058 825 951 Pty Ltd

EXCLUSIVE DISTRIBUTORS FOR:

ALCATEL — ✻ Full range AC3 / AXR3 connectors.

ASTATIC — ✻ Commercial range of gooseneck, conference and touch to talk microphones. ✻ Hand held microphones.

ATLAS soundolier — ✻ Commercial sound loudspeakers. ✻ Outdoor/ Indoor and environments resistant loudspeakers and compression drivers. ✻ Loudspeaker baffles & enclosures. ✻ Custom install loudspeakers, attenuators and communication system accessories. ✻ Cabinets ✻ Mic and speaker stands.

Canon — ✻ V100 wide dispersion loudspeaker systems.

EUROMODULE — ✻ EMS expandable modular rack systems.

FURMAN — ✻ Audio signal processing range. ✻ DJ production mixers. ✻ Power conditioning & distribution.

KDM SOUND ABOVE ALL — ✻ Indoor / Outdoor 360º central speaker systems for arenas, gymnasiums, swimming pools, halls, churches, shopping malls, department stores etc.

klipsch PROFESSIONAL — ✻ A wide range of professional loudspeaker systems for installation and touring applications.

PRO CO — ✻ A complete range of audio interface products. A/V interface units, direct boxes, mic splitters, mic combiners, isolation transformer units, headphone junction boxes plus the Kwik Fixer series.

UNYS TECHNOLOGY — ✻ Hotel guestroom control systems. ✻ Hotel energy saving key tag systems.

White instruments Division of C Var R, inc. — ✻ Digital audio signal processors. ✻ One third and one sixth octave equalisers and spectrum analysers. ✻ Audio distribution amplifiers.

OMNIMOUNT SYSTEMS — ✻ Full range of wall and ceiling mount brackets.

Horwood Australia Pty Ltd
Suite 1, 588 Railway Parade
Hurstville NSW 2220
Ph: (02) 585 1011 Fax: (02) 585 1317

The Robinson Files PART 3

In this continuing series, John Robinson turns his attention to the matters of Tape format

Porta-Studio's (cont)

At one point, Tascam released a stand-alone 8 track cassette recorder, but the problems with the 8 track cassette format wouldn't go away. Porta-studio's are great as sketch pads and movable studio's "in a box", but the small tape format problems preclude their use as a serious recording format.

Akai flirted with a semi-pro format using video-tape some years ago. The Akai 1412 had a 14 input mixer section with a 12 track analogue recorder. With the semi-pro specification came semi-pro pricing, unfortunately dooming the unit. As digital multi-track becomes cheaper, some enterprising company may develope a Porta-studio based on an Alesis ADAT transport. How about a Port-A-Dat???

Alternatives

Four track reel-to-reel machines are good value second hand, and provide good quality and reliability. Quarter-inch tape is under $20 for a 7 inch reel which lasts 15 minutes at 15 ips. Advantages include greater S/N ratio, less signal degregation after multiple passes and more accurate syncronisation.

Less economical but more flexible is 8 tracks on 1/2 inch tape. Track width is only slightly reduced from 1/4 four track but tape stock can get a tad expensive compared to 1/4 inch.

Reel to Reel formats also have the two major advantages over cassette based transports. SMPTE code allows syncing to video and music far more accurately than FSK or Midi Time Code. Also dbx type I NR is available, which is superior to the dbx type II found in many Porta-Studios.

All Tascam machines are recommended, look out for second hand Tascam 44 four track machines and the 80-8 eight track. Tascam's new TRS-8 is worth a look. Good value second hand is the 3440 four track, due to its good transport and the in-built Mic preamps.

The modern alternative is, of course, the ADAT. This uses S-VHS tape to give eight tracks of digital recording with CD quality sound at reasonable cost. Bouncing on digital multi-tracks results in fewer artefacts than on analogue, less noise and distortion are added to the source material.

The way of the future is random access disk based recording offering non-linear editing capibility.

Mastering Decks

The best analogue mastering format is 1/2 inch two track running at 15 ips (sometimes 30 ips) with or without Dolby SR, very nice but very pricey. Unless you own a Tandberg, Alpine or Nakamichi cassette deck, mastering quality is beyond most consumer cassette decks. Tascam make some rugged rack mount units at around $1500.

There are some features creeping into lower priced units that can assist. Auto-biasing helps achieve a flatter frequency response, manual biasing helps achieve optimum compatibility between tape stock and electronics. If your unit does not have manual biasing control, use the tape recommended by the manufacturer.

HX Pro headroom extension allows the tape to store more high frequency information, and transfers when the cassette is played on another machine. Noise reduction is generally Dolby B,C or S, with S being closest to the SR professional standard. Balanced I/O would be good, and discrete circuitry would help keep it all warm. Even if you have such an animal, you still have to contend with the condition of the other decks the master will be played on.

Sometimes I have mastered with no NR, instead compressing the master tape via an outboard unit. This optimises the headroom/ dynamics of the program to suit the particular tape you are using. Your master will be louder and punchier. Some form of spectral enhancer can be used when dubbing. Aphex and BBE make units that help to restore lost transients and sheen. Please don't use them on masters, as it can't be undone! Leave as an option when dubbing.

A superior mastering device is the video recorder. HiFi Stereo audio is available on most mid to upper priced VCRs: They allow you to record onto the area used for the stereo soundtrack, with no video. This format is the virtually silent and allows up to three hours at around $20. Be careful with levels as most inputs are between -20db and -10db and process through a stereo compressor/ limiter if possible.

Enter the DAT recorder. Originally intended as the tape equivalent to the CD, DAT has become the mastering medium for most serious minded project studios. The format is similar to VHS but using 4mm tape. Consumer DATs (under $2500 and without balanced inputs) generally have less rugged transports, which can be a problem if the unit is being used every day. Still, it is an economical solution at around $30 for two hours of recording.

Bongo®
• Promotional Products
Tel: (02) 560 7779
Fax: (02) 569 0995
• T-shirts • Caps • Vinyl Stickers • Screenprinting • Embroidery •

Write in Reader Service number: 112

ARTIST	PRODUCER	ENGINEER	PROJECT
New South Wales			
A# Sharp Studio Jeff Cripps (02) 534 4440 24 Track 1"			
T-Bang	J. Cripps	J. Cripps	CD
Cheetah	J. Cripps	J. Cripps	4 Track CD
Menai Anglic.Church	J. Cripps	J. Cripps	CD
Matt Tonkiss	J. Cripps	J. Cripps	Demo
Airmotion Studios (02) 5506576 Kristen Wolek 24 Track Recording			
DJ Bobo	Geoff Sturre	Paul Bryant	Mix Single
Incy Wincy	Grame Sattler	Guy Dickerson	Rec/Mix Childrens Album
Various	Wendy Notley	Guy Dickerson	Rec/Mix Childrens Album
Francis Williams	David Bridey	Guy Dickerson	Rec/Mix Single
Arirage Andy Mison (02) 564 2509 24 Track			
Caxophonous	Rasty/Band	Rasty Jovasevic	Demos
Collision	Nathan Kennedy	Rasty Jovasevic	EP
Ken Joyce	Ken Joyce	Buzz/Rasty	EP
John Perez	John Perez	Rasty Jovasevic	Live (Demos)
Tetrapod Prodn.	Adam/Felicity	Rasty Jovasevic	Movie S/Track
Blackfeather Music Studios John Robinson (02) 909 2707 8 Tk Digital Hard Disk/Multi Tk Analogue			
Les Baczi	Les	John Robinson	Ervircnmental Alb.
Tim Buc 2	Tim Bossheiter	John Robinson	CD
John Sator	John	John Robinson	Demo
Penny Aarts	Jenny	John Robinson	Demo
Robinsons Virt.Orch.	Karl Seglins	John Robinson	Demo
Bush Traks Recording Studio Ruth Miller (066) 89 1290 24 Track Rec. & Multi Media Studio			
Gumption	Band/D.Highet	Dave Highet	Album
The Bourkenbacks	Band/D.Highet	Dave Highet	Mix third album
Voiceworks	Green/Hopkins	Highet/Green	Demos
Diana Gosper/Band	Gaia Films	Dave Highet	Soundtrack item
Robbie Green	R. Green	Highet/Green	Demos
Charing Cross Studio David Sykes (02)387 8362 - 24 Trk Neve			
Pollyanna	Dave Trump	Dave Trump	Mixing album
Welcome Mat	Paul McKercher	Paul McKercher	Mixing album
Will Calhoun	Keith Cooper	Domonic Dupruche	Tracking
James Reyne	Keith Cooper	Keith Cooper	PreProdn.
Scarlet	Martin White	Keith Cooper	Album Mixing
Fauves	Wayne Connolly	Paul McKercher	EP Mixing
Cloud Studios (043) 532429 Parris Macleod 48 Tracks/DAT/CD Mastering			
Jason Jones	Band	Bruce Waite	Demo CD
Power Corporation	Patrick McNally	Paul Howard	Corporate
Class 1 Prodns.	P.Buckingham	Paul Howard	Corporate
SUBFUSC	Band	Kim Lemke	Demo CD
Jack Lord	Band	Bruce Waite	Demo CD
Crystal Clear Recordings (02) 975 3769 David Tozer 24 Tk Digital ADAT System & BRC 32			
Frown	D.Tozer/Band	Dave Tozer	EP Mixing
Soundend	Ben/Band/Dave	Dave/B.Southers	EP Track Mix
CAGE	Dave/Band	Dave Tozer	EP
Accts.With Attitude	Dave/Band	Dave Tozer	Demo
Paul Mulhearn	Dave/Paul	Dave Tozer	Demos
Joe Brookes	Joanne	Dave Tozer	Demos

BASF NATIONAL TRACKING GUIDE

Damien Gerard Studios Contact Marshall (02) 660-8776 2 x 16/32 Track			
Sunshine Crowd	Jim Hilburn	Russ Pilling	Album
Ammonia	K.Shirley	Phil Drew	PreProdn.
The Poor	Kevin Shirley	Phil Drew	Pre Prodn.
Stoneyard	Iva Davis	Michael Woods	Album
Texas Rattlers	John Hemans	Russ Pilling	EP
Thief of Hearts	John Holland	Russ Pilling	Demo
Eclipse Music Studios (02) 264 7734 Jodie Sharp 24 Tk Anal/32 Trk Digital			
Renegade Funk Train	Band	Ramesh Sathiah	Mixing
Silverchair	Kevin Shirley	Kevin Shirley	Mixing Live Tracks
Ammonia	Band	Kevin Shirley	Mixing
Bellydance	Band	Martin White	Mixing
Dave Warner	Dave	Michael Ward	Mixing
Danielle Spencer	D.Lumsdaine/J.Carter	Lumsdaine/Carter	Mixing
Enrec (049) 347844 Steve Newton 8 Trk. Demo - 24/32 Trk. Fro.			
John Williamson	Phil Mathews	S. Newton	Live Recording
W.Saunders/C.Beuman	Band	S.Newton	Demo/Promo
Chris Doyal	Chris Doyal	S. Newton	Boot Scoot Album
Garth Leary	Garth	S. Newton	Demo
Julia Starr	Julia	S. Newton	Demos
Festival Studio (02) 660 4022 Catherine Knapman 2 x 24 Trk & 32 Trk Digital			
Ammonia	Kevin Shirley	Kevin Shirley	Album
Noiseaddict	Brad Wood	Brad Wood	Album
Fresh Productions	Carter/Lumsdaine	Carter/Lumsdaine	Single
Mother Hubbard	Louie Shelton	Mark Thomas	Album Tracks
Louie Shelton	Louie Shelton	Mark Thomas	Album Tracks
Martin Cilia	Martin Cilia	Matthew Lovell	Vocal Tracking
JMF Sound Studio Fran Esther (02) 790 4097			
Sanctus	Band	Ralph Esther	Demo
Tony Martin	Tony	Ralph Esther	CD
Grace Tabernacle	Camillo	Ralph Esther	CD
Colin Khury	Colin	Ralph Esther	Demo
Lindsay Butler Studios 067 675 010. Shaza-Leigh 16, 24 & 32 Track			
Rex Dallas	Lindsay Butler	Lindsay Butler	Album
Shaza-Leigh	Lindsay Butler	Lindsay Butler	Album
Various	Lindsay Butler	Lindsay/D.Byrnes	Album
Brian Letton	Lindsay Butler	Lindsay/D.Byrnes	Album
Reg Poole	Lindsay Butler	Lindsay Butler	Album
Peter Salata	Lindsay Butler	Lindsay Butler	Album
Main Street Studio Rob Specogna 042 834 515 16 Track			
Tornadoes	Maloney/Specogna	R.Specogna	CD Dance Single

BASF

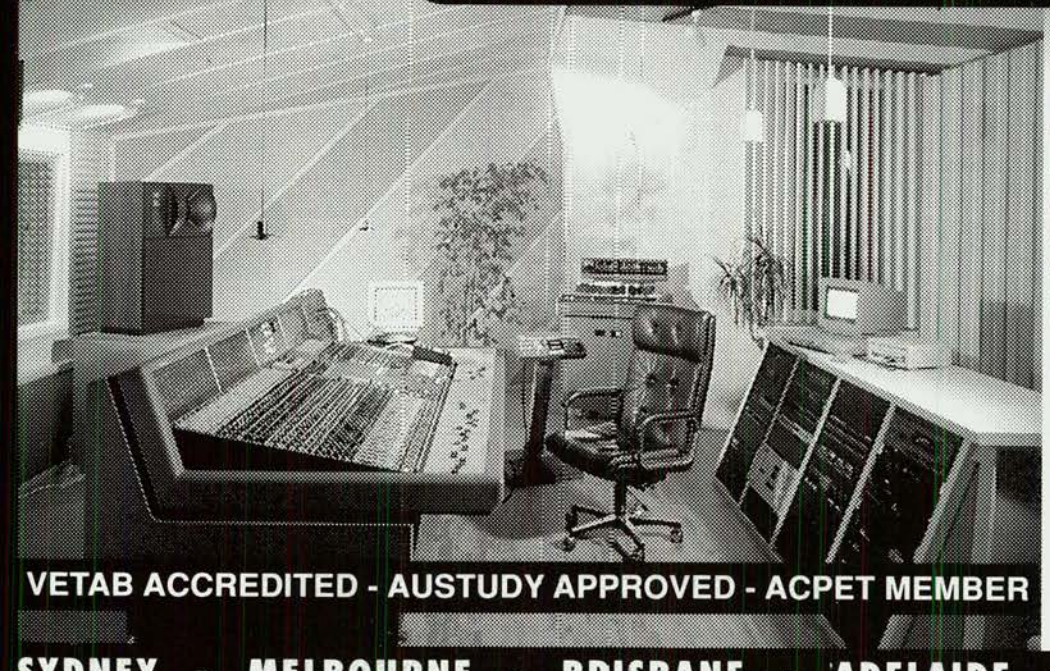
YOUR MUSIC IS SAFE WITH US

LONDON - SINGAPORE - AUCKLAND -BERLIN - MUNICH -PARIS - MUNICH - KUALA LUMPUR - HAMBURG

Professional Studio Training

Full Time - Part Time Courses

Established 1977



THE ONLY INTERNATIONAL AUDIO TRAINING COLLEGE

18 Accredited Colleges

Certificate Level
Advanced Certificate Level
Audio Engineer Diploma
Degree (B.A . Music Prod.)**
Tonmeister Masters Program

** IN CONJUNCTION WITH SOUTHERN CROSS UNIVERSITY

Please call for our free course brochure and studio tour

sae

School of Audio Engineering

VETAB ACCREDITED - AUSTUDY APPROVED - ACPET MEMBER

SYDNEY - MELBOURNE - BRISBANE - ADELAIDE - PERTH - AUCKLAND

(02) 211 3711 - (03) 534 4403 - (07) 369 8108 - (08) 376 0991 - (09) 325 4533 - (09) 373 4712

Write in Reader Service number: 141

ARTIST	PRODUCER	ENGINEER	PROJECT
Fallen Justice	Specogna/Band	Nicholas/Thomas/Rob	CD Album
Vaughans	B.Robertson	R.Specogna	CD Single
Nod Scene	Band	Specogna/Thomas	Cassette Album
Skeleton Crew	Griffin/Specogna	Rob Specogna	Demos & CD
Loaded Dog	P/Keeghan/Rob	Rob Specogna	CD Album
Megaphon Studios (02) 550 6576 Kristen Wolek 24 Track Recording			
Tumbleweed	Paul McKercher	Paul McKercher	Rec/Mix
Martenitsa Choir	Llew Kelk	Guy Dickerson	Record
Bondi Cigars	Alan Britton	Guy Dickerson	Rec/Mix Album
Choka	Buzz Pringle	Buzz Pringle	Record EP
Rough Riders	Graeme Isaac	Guy Dickerson	Film Score
Mirage Studios G. Nixon (02) 211 3915 16 Track Digital, 48 Tk. Digital 24 Track Analogue			
Pelican Jed	Jason de Wilde	Jason de Wilde	Demo
Mick Scali	Mick/Jason	Jason de Wilde	Album
Clover	Jason de Wilde	Jason	Demo
Shanley Del	J.Morris/J.Allom	Jeremy Allom	Album
Charlotte Grace	Jeremy Allom	J.Allom/G.Bourger	Single
Sanctuary	Chris Gorden	S.Lee/Paul Grant	Film
Paradise Studios Bill Field (02) 357 1599 48 Track A'log, Custom Mixer.			
Custard	Wayne Connolly	Wayne	Tracking
You Am I	Wayne Connolly	Wayne	Tracking
Welcome Mat	B.Shepard/Wayne	Paul McKercher	Tracking
Gina Jeffreys	Garth Porter	Ted Howard	Tracking
Carol Young	Rod McCormack	Ted/J.McCormack	Tracking
Robyn St.Clare	Wayne Connolly	Wayne Connolly	Mixing
Paul Bryant Mastering (02) 748 6055 Paul Bryant - Mastering Suite			
Shot to Pieces	Rob Specogna	Paul Bryant	CD Single
Settlers Match	Rob Specogna	Paul Bryant	CD Album
Clock	Pro DJ	Paul Bryant	New CD Single
Great Unknown CDs	P. & I. Mitchell	Paul Bryant	3 CD Retrospective
Lonnie Lee	Lonnie Lee	Paul Bryant	CD Album
Branches	Jeff Cripps	Paul Bryant	CD Album
Pathways Studio Frank Kerestedjian 048.721336 24 Tk. 2" Analog			
Dave Debs	Jim Bonnefond	Jim/Frank K.	Album/3 Trks.
Bad Fun	Frank K.	Frank K.	EP 5 Tracks
Allen Dargin	M.Callaghan	Frank K.	Album Tracking
Anthony D.	Frank K.	Frank K.	Mix 12 Tracks
PCM/Velvet Sound Christy McCarthy (02) 264 3420			
Hammerfish	Aya Larkin	A. "Muff" Smith	Album
Dan Mullins Band	Band	Tony Polson	Demos
Cactus Child	Band	Tony Wall	Demos
Powerhouse Studios Doug Henderson (02) 318 1220 Neve Console 8128 Input/Studer A800 24 Trk.			
Toe to Toe	Paul Tag/Band	Paul Tag	EP
Abusement Park	Jay Aldis	John Darwish	LP CD
Scarlett	Band	Craig Beck	CD
Joel Harvey	Berger/Henderson	Doug Henderson	CD
Armoured Angel	Band/J.Hresc	John Hresc	EP
Native Fear	Band	Boyde Moore	EP CD
R. & R. Recording Robert Zimola (02) 624 4484 16 Track 1"			
Eye-Cue Commun.	P. Saunders	R.Zimola	Nat. Architects Awards
Nu-Skin	R. Zimola	R. Zimola	Motivation
Power of Ten	Band	R. Zimola	Demos
Greg's Band	Greg	R. Zimola	Demos
Aussie Post	R. & R	R. Zimola	
Sony Music Studio Ross A'Hern (02) 332 0320 24 Track			
Margie Evans	Dave Brewer	Mark Roberts	Album
Mike Bukovski	Mike Bukovski	Ross Ahearn	Album
Roddy O	Ivan Gee	Simon Tonx	Album Tracks
GF4	Vision 4/5	Simon Tonx	Single
Bluebottle Kiss	Band	Tim Whitten	EP
Midget	Midget	Simon Tonx	Demo
Sound Level Pty Ltd. Joe Breen (02) 552 3200 32 Channel - Live to DAT, Multi Track available.			
Tristan Chord	Jordan	Paul Gannell	Demo
Love Gas	John Soane	Fulvio	Album
Tallus	Marsten	Rory McKenzie	Demo
Bitch	Fiona Jackson	Paul Gannell	Demo
Soundwarp Audio Services (02) 905 7144 Meredith Brooks Mastering			
Audio Active	A.Sherwood	Meredith Brooks	Compilation
Juke Box Jive	Mark Bowden	Meredith Brooks	Mastering for Alb.
Chassis	Chassis	Bill Syratt	Live Recording
Studio Arts Productions (042) 849128 Ed Lee. Independent Recording Studio			
Kindred	Band/Ed Lee	Ed Lee	Album Trks. CD
Acel Darma	Band/Ed	Ed Lee	Demo
Erica Jive	Band/Ed	Ed Lee	PreProdn. CD
P.Harness	Band/Ed	Ed Lee	Prodn. Master CD
Lands /Drifting Pods		Ed Lee	Demo
Empty Horse			Demo
Studio Shift Nonda/Tom Kazas (02) 3984268 24 Track 2"			
Cold Turkey	Nonda	Nonda	Album
Trackdown (02) 550 6890 Geoff Watson 24 Trk, 8-16 Trk, A-Dat 8 Trk.			
Dave Mason-Cox	Dave	Tim Ryan	Evangeline EP
Various	Kennedy Miller	Nigel/Simon	Film Underscore
Blinky Bill	Yoram Gross	Tim Ryan	TV Series P/Prod.
Various	Simon Leadley	Various	Trackdown Album
Stephen Rae	Stephen Rae	Greg White	McDonald's TV Jingle
Tracking Station Studios Contact Martin Cass (02) 281 8899 24 Track A'log			
Wayne Law	Martin Cass	Martin Cass	Album
Vanessa Fallon	John Feild	A.Ruig/C.Brooks	Album
Beccy Cole	Martin Cass	Martin Cass	Demos
Bruce McCumstie	Martin Cass	Martin Cass	Single
Radiators	Mick Mazzone	Anthony McKenzie	Album
Matt Healy	Fun Club	Martin Cass	Album
Troy Horse Studio Michael Lewis (02) 557 3129 24 Track			
The Crew	Band	Colin Wright	Album
Helgrind	M.Schlonger	Liberty	Album
Wild Cat	Rene Vettereli	Bruce Waite	Album
Dark	Band	John Vittorio	EP
Leadjawr	Peter Kelly	John Vittorio	EP
Remus Pleeze	Rosie Lynn	Colin Wright	Saucy Phone Messages
Wooly Mammoth Studio (02) 557 2721 Mark Paisley 16 or 24 Trk. 32/8/2 Digital			
Charlie McMahon	The Music!	Nik Sanning	"Tjilatjila" Album
&i	&i	'Nudge' Smith	EP
&i	&i/John Bee	C.Simkins/N.Sanning	Album
Simon Smith	Simon Smith	Brett Sullivan	Album
Andy Gowan	Andy Gowan	'Nudge' Smith	Album
Sultana Muhammad	Band	Nik Sanning	Demo

Queensland

Burbank Productions (07) 245 4314 John Ryan 16 Track			
Peter Uppman	Ryan/Uppman	John Ryan	Album
Tony Newland	Tony Newland	John Ryan	EP
Geoff Barnes	John Ryan	John Ryan	Single
Laurel Edwards	Laurel Edwards	John Ryan	Demos
Stealaways	Jo Owens	John Ryan	Single
Welcome Strangers	B. Radford	John Ryan	Single
Digital Paradise (07) 552 70722 Ian Peters 32 Track Digital			
Calvin Butterworth	Mike Wade	Ian Peters	Album Tracks
Boner Lisa	Ian Pool	Ian Peters	Album Track Mix
Jason Bickford	Jason Bickford	Ian Peters	Album
Jarr'd	Leon D'Arcey	Ian/Leon	Demo Tracks
East Aus.Film Corp	Bob Hardy	Ian Peters	Doc. Post Prodn
Col Elliott	Col Elliott	Ian/Leon	Video- Post Prodn.
Grevillea Recording Studios Malcolm Jacobson (07) 262 8422 24 Track			
Surfernia	Simon Sheehy	Simon/M.Jacobson	Demos
Nik Phillips	Nik/J.Jacobson	Mal Jacobson	Demos
Anthony McGlone		Mal Jacobson	CD Mastering
Laurence Mooney		Mal Jacobson	Mastering
Anthony Russell		Rodney Jacobson	Mastering
Outlaw Recording & Records. 018 772 380 Jerry Reinisch Adat 16 Track			
Silhouette	J. Reinisch	Uncle Jerry	Demo
Mangrove Jack	M. Hopkins	Uncle Jerry	Song for Comp.CD
Black Opal	J. Reinisch	Uncle Jerry	CD
Suite 16 Audio Productions (07) 369 8733 Murray Lyons 24 Trk.Analog.24 Tk Digital			
Suzie McKenzie	Jon English	Julian Lynch	Demo
Steve Glover	Steve	Julian Lynch	Demo
Mark Allan	Garry Smith	David Champion	Demo
Kristie Faulkner	Garry Smith	David Champion	Demo
Various	B.Newman/L.Muhoberac	Julian Lynch	Brisb.Convention Cntre.Opening
Sunshine Studios (07) 844 6844 Leon Prescott 36 Channel Neve			
Shooting Bone	Mark McElligott	Mark McElligott	Album
The Honeymen	Leon Prescott	Leon Prescott	Single
Dionysis	Mark McElligott	Lochlan McGoo	EP
Vandersound Studios Eric Vandersande (075) 468100			
Woodhill	E.Vandersande	Ken Bird	Demo
Fishbox	Eric	Kelly-Anne Hill	Demo
Cameron Hess	Eric	Cameron Hess	Demo
Echo	Eric	Dean Penrose	Demo
Merv	Eric	Max Ryden	Demo
Jenny Sisson	Eric	Eric	Sound FX

South Australia

Mixmaster Productions Mick Wordley (018) 822 986 24 Track 2" Dolby			
Clowns of Decadence	Mick/Band	Mick/Evan	Album
The Reckoning	Mick & Band	Mick Wordley	Album
Kranktus	Mick & Band	Mick Wordley	Album
Patch Theatre	D. Smith	Mick Wordley	Promotion
Blue Experience	Mick/Band	Mick Wordley	Tracking
Miltons	Mick	Mick Wordley	Re-Mixing

Victoria

Allan Eaton Studio (03) 95340752 Leanne 48 Track			
Ian Chaplin Quartet	Ian Chaplin	Robin Gray	Album
Sam Keever Trio	Sam Keever	Robin Gray	Album
The Last Bullet	N.Tyson Chew	Robin Gray	Film Score
Saraha	G.McDonald/L.Strong	Robin Gray	Film Score
Chime Choir	Kevin Cosey	Robin Gray	Album
Wendy F-Dale	Wendy	Robin Gray	Demos
Apollo Studios (03) 354 9058 Michael Lulic			
Wildebeast	Band	Michael Lulic	Pre-Prod.Demos
Off The Planet	Band	Michael Lulic	Demos
Essendon	Band	Michael Lulic	Demos
Question	Band	Michael Lulic	Pre-Prodn.Demo
Hard Kopy	Band	Ernie	Demos
Gavin	Gavin	Ernie	Demos
C'est Ca Audio-Visual Services Moira McCourt (03) 419 1506 Auto 24 Trk.-			
Sulk	Siiri Metsar	Siiri Metsar	Girl Zone II
Deregulator	Siiri Metsar	Siiri Metsar	Compil. CD
Melissa Drabel	Siiri Metsar	Siiri Metsar	Compil. CD
Kirsty Stegwazi	Siiri Metsar	Siiri Metsar	Compil. CD
Circus OZ	Siiri/Circus OZ	Siiri Metsar	Tour CD Album
Gotham Audio Tom Kehoe (03) 879 9400 48 Track Dig. /SSL Console			
Southern Sons	Band	Michael Letho	Album Mixing
Jane Rutter	Reggie Bowman	Michael Letho	Album
C.D.B.	V.Daltito/A.Dale	Tony Espie	Album Mixing
Nothing	D. Hirschfelder	Michael Letho	Live Album Mix
Merril Bainbridge	Ross Fraser	A.Humphries	Single Remix
Smok.Dawson/J.Farnham	John Farnham	Doug Roberts	Recording
Metropolis Audio (03) 696 2111 David Warner SSL,Harrison 24/48 Tk. Analog/Digital			
Nick Cave	Tony Cohen	Tony/T.Johnston	Album Mix
The Truth	The Truth	Mark Forrester	Single Mixes
P.T.P.	Band	Mark Forrester	Single Mixes
Rohan Smith	Ross Cockle	Ross Cockle	Album Mix
Dave Graney	Dave Graney	Paul Kosky	Mixing
Nick Barker	Nick Barker	Mat Thomas	Demos
Newmarket Studios (03) 372 2266 David Bates 2 x 24 Track Studios			
5 Floors Up	Chris Corr	Chris	Album
Bev Sheehan	Storyville Jazztet	Robert Dillon	Album Trks
Rob Strom	Rob Strom	Robert Dillon	Single
Creole Bells	Steve Waddell	Daniel Desierie	Album
M/Valley Drifters	James Black	Chris Corr	Album
Night Shade	James Phoenix	Robert Dillon	Album
001 Recording Studios Contact George Siew Ooi (03) 348 1300 24 Track 2 Digital Rec. Midi Room			
Kismet	M.Ingram/Band	Mark Ingram	Album
Armondo Hurley	Siew	Sam Melamed	Album
Tim O'Brien	O.Bolwell/T.O'Brien	Owen Bolwell	Song
Chantage	Siew	Brian Marsh	Demo
Agonize	B.Marsh/Band	Brian Marsh	Demo
Tlot Tlot	Siew	Owen Bolwell	Album
Pink Noise Studios 0419 349 618 Rodney Beuthin Digital Editing/Mastering			
Swiss Flex	D.Schoenberg	R.Beuthin	Video S/Track
House of Incest	Byron Scullin	Byron	Melb.Uni Thtre.
Graham Bishop	D.Hannan/GB	Dave Hannan	CD Pre Prodn.
Platinum Studios Jim Mountford (03) 827 7483 48 Trk. SSL/24 Trk			
Paul Kelly	Simon Polinski	Simon/A.Rhodes	Album Mix
Hunters & Collectors		K.Tonuma/A.Rhodes	Live Album Mix
Frente	Ralph Sall	P.McCabe/A.Rhodes	Comp.Album Trk
T.I.S.M.	Laurence Maddy	L.Maddy/K.Moellar	AC/DC Tribute
Skunkhour		D.Hemming/A.Rhodes	Remix
Native Title Project	David Bridie	M.Forrester/A.Rhodes	Single Mix
RB-X (Australia) (03) 94296199 Bevan Quelhurst 24/48 Tk Rec. SSL Cons.			
Harley Boys	Band	Melita Jagic	Demos

ARTIST	PRODUCER	ENGINEER	PROJECT
Cringer	Band	Melita Jagic	Demos
Dave Gurr	Maria Rahr	Melita Jagic	Album
Mike Brady	Mike	Doug Brady	Australia Remembers
Greg Champion	Greg	Mark McDougall	Football Songs
Brady/Copping/Burton	Themselves	Various	Jingles
St. Andrews Recording Studio Mark McCormack (03) 583 2341 or Paul 018 102519 24 Track			
Metanoia	Steve Rowe	M.McCormack	Album
Bodyjar	Greg Long	Greg	Demos
Black Seed	Mark	Mark	Demos
Entassis	Band	Mark	Demos
Rowe Prodns.	Steve Rowe	Mark	
SAE Melbourne Studios (03) 9 534 4403 Mike Pollard			
Gellyfish	C.Turkmen/Band	C.Turkmen	CD/Album
Vapour Snail	Charles/Band	C.Turkmen	CD EP
Kurgan	C.Turkmen/Band	C.Turkmen	CD EP
Stolen Child	D.Warren/Band	Dale Warren	CD Album
Psy Harmonics	Ollie Olsen	Dale Warren	Mastering
Andrew Taylor	Andrew	C.Turkmen	CD Album
Sing Sing Phil & Kaj (03) 428 4622 48 Track			
The Truth	M.Forrester	M.Forrester	Album
Bad Loves	Doug Roberts	Matt Voigt	B Sides
Dave Graney	Band	Phil Butson	Single
Mavis's	Kalju Tonuma	Kalju	Album
Janyes	Tony Cohen	Mathew Thomas	Album
Tony Norris	Band	Michael Letho	Album
Studio 52 Paul Higgins (03) 417 7707, 32 Tracks StudioA/ Studio B ADAT & Track			
Bad Karma	Trevor Carter	Trevor	Album
Apparition	Trevor Carter	Trevor	NJ-Music II/Album
Remedy Stone	Trevor Carter	Trevor	New Single
Wheel	Band	Rowan Alcock	Demos
Hammer Gasket	Band	Rowan Alcock	Demos
Rubber	Band	Cam Kinsey	Demos (For MDS)
Supersonic 0419 349618 Dave Hannan 24 Track Adat Digital			
Graham Bishop	Dave Hannan	Dave Hannan	New Age Album
Martin Sharp	Steve Smith	Dave Hannan	Album
Megan Kirby	Meg/Dave	Dave Hannan	Album
Angie Coffey	Angie/Dave	Dave Hannan	Jingles
Wombat Road Studio (051) 454204 Barry Clissold 24 Trk. Flus full Midi Facilities			
Ralph Turner	Ralph	Barrie Clissold	CD Album
Daryl Lee	D.Lee	Barrie	Demo Tracks
Disorder	Band/Barrie	Barrie	Demo CD Trks.
Lindsay Hammond	Barrie Clissold	Barrie	Album
Time Out	Band/Barrie	Barrie	Demo CD Track
B.C.M. Club	G.Bantock/L.Forster	Barrie	Album

Northern Territory

CAAMA Aboriginal Studios 089 529205 Richard Micallef 24 Trk			
Wirringya Band	Shane Howard	Stan Satour	Album
Tidd.as	David Bridie	Mark Forrester	Native Title Album
Kev Carmody	David Bridie	Mark Forrester	Native Title Album
Buna Lowrie	David Bridie	Mark Forrester	Native Title Album
Bart Willoughby	David Bridie	Mark Forrester	Native Title Album
Archie Roach	David Bridie	Mark Forrester	Native Title Album
Cornucopia Recordings (089) 85 5457 Andi Berry 16 Track Digital			
Radio For Help	Geoff Barrett	Andi Berry	Radio Play Edit/Mast.
Crimplene	Crimplene	Colin Simpson	Demos
Kakadu Studios Ken Hutton 089 411344 24 Track, Mobile, Digital Mastering			
A.Mellios	K.Hutton	K. Hutton	Original Cassette
Alex Taare	K. Hutton	K. Hutton	Original Cassette
Mimi Band	K. Hutton	K. Hutton	Originals CD
Paul Francis	K. Hutton	K. Hutton	Covers CD
Tiwi Wailers	K. Hutton	K. Hutton	Original Cassette
Darrion Venn	K. Hutton	K. Hutton	Original CD
Maestro Music Lindsay Masters 089 321 754 8 Track			
Jenny Taylor	L.Masters	L.Masters	CD
Fred Bowen	L. Masters	L. Masters	EP

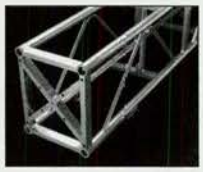
Western Australia

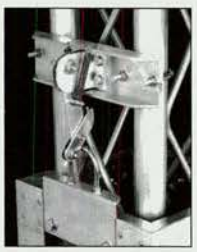
Bonsai Recording Studio Tom Thorpe (09) 349 6029 24 Track			
Studio Trax	Tom Thorpe	Tom Thorpe	Album
PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles
Keith McDonald	Tom Thorpe	Tom Thorpe	Jingles
True Learning Centre	Tom Thorpe	Tom Thorpe	Corporate
Aurora	Tom Thorpe	Tom Thorpe	Album
Planet Sound Studios Contact John Villani & Denise Preston (09) 382 2211 48-32-24, 2 Rooms - Both SSL			
Hank Marvin	Hank Marvin	Les Williams	Album Tracking
Kanji Choshi	Mr Iwakuma	John Villani	Album Tracking & Mix
Natalie Silbert	John Villani	John Villani	CD Single
Wayne Simmons	John Villani	John Villani	Album Tracking
Wenay D'Souza	Wenay/J.Villani	John Villani	Mix Down
Poons Head (09) 339 4791 Rob Grant			
Sage	Rob Grant/Band	Rob Grant	EP
Circus Murders	Rob Grant/Band	Rob Grant	Album
Spank	Rob Grant/Band	Rob Grant	Album
Hedonists	Rob Grant/Band	Rob Grant	Album
Alton Tebbut	Rob Grant/Band	Rob Grant	Album
Twisted Universe	Rob Grant/Band	Rob Grant	Musical S/Trk
Troppo Sound Mick Connolly 091. 922 394. 24 Trk. Dolby S Dat Master			
Kuckles	Stephen Pigram	Brett Young	Demo
Pigram Bros	Band	Brett Young	Debut Album
Various	Lynn Hazelton	Alan Pigram	Jingles
Peter Brandy	Lynn Hazelton	Alan Pigram	Demo
Witzend Recording Studio (09) 331 1818 Alan Dawson 16 Track			
Jessica Kenny	Alan Dawson	Alan Dawson	EP
Greg Huntley	Alan Dawson	Alan Dawson	Demo
Clarion	Alan Dawson	Alan Dawson	Demo
Body & Soul Singers	Alan Dawson	Alan Dawson	Live Recording
Andalusa	Alan Dawson	Alan Dawson	Album
Joe Algeri	Joe	Alan Dawson	Single

BASF

YOUR MUSIC IS SAFE WITH US

SYSTEM 2000





- - - MODULAR - ROOF - STAGE - AND - LIGHT - TRUSS - SYSTEMS - - -

penn fabrication

Exclusively Distributed in Australia by **PENN FABRICATION** Australia Pty. Ltd.
43-45 Johnston St., Port Melbourne VIC. 3207 Ph:(03) 9646-7222 Fax:(03) 9646-8222

Write in Reader Service number: 142

ROCKARD COATINGS
For Roadcases and Speaker Boxes

This product has been available for two years and the people who have been using it keep on re-ordering.

The product is a water based, non-toxic, non-flammable coating that is applied by either a hopper gun, black textured or sponge roller to speaker boxes and roadcases. It has proved to be as hard and tough as competitors products, a lot safer and easier to use. To make the product more accessible to the music industry, we are looking for distribution outlets Australia wide.

For more information call Neil Smith on 018 449 018.

ROCKARD

ALL ENQUIRIES WELCOME
Phone: (02) 550-3828
Toll Free: 008 804-994
Fax: (02) 550-6919

TALK WITH THE BEST IN THE BUSINESS

Clear-Com.
The best-selling intercom in show business.

Show business professionals rely on Clear-Com for clear, reliable backstage communications. Over 125 different Clear-Com components, including beltpacks, headsets and intercom stations are available to make sure your show goes off without a hitch. And they're backed up by the highest level of service and support in the industry. That's why Clear-Com is the world's best-selling intercom system for theatres, performing art centres, and video production.

Call or fax us for a complete catalogue or the name of a dealer near you.

- Easy to Install
- Simple to Use
- Superior Audio Quality
- Rugged & Dependable

Clear-Com Intercom Systems

Jands Electronics Pty Ltd ACN 001 187 837
578 Princes Highway, St Peters NSW 2044
Phone: (02) 516 3622, Fax: (02) 517 1045

Write in Reader Service number: 116

BUYERS GUIDE

Studio Mixing Consoles

<Continued from page 44>

Allen & Heath from Studio Connections Aust. P/L (03) 9646 0544

GS1-32 inputs/8 outputs. This console is designed to hook up to your ADAT. 32 inputs, 8 outputs, Meter Bridge, 4 x Stereo aux returns, 3 Band EQ, Midi Muting. $5495.00

GS3 - is available 16/8 - 24/8 - 32/8 with 8 group busses 6 x aux. sends & 4 x stereo returns. It has mute automation & an 8 x channel expander module is available.24/8 $11,995.00.

GS3V is automated console giving you up to 72 x remix points. Available 32/8 - 24/8 - 16/8 8 x channel expander module is available. 24/8 $16,995.00.

GL2 Is available 14/4. Rack mountable or desk-top version. 12 Inputs - 4 outputs, 6 x aux sends, 4 x band equalisator. $2995.00.

Peavey from Australis Music, (02) 698 4444

2400 Series 36 x 24 x 48. Peavy production series mixing consoles use a unique monocoque chassis especially constructed for maximum rigidity and resistance to flexing. Each unit also comes standard with full led array with the option of VU meters. 36 Primary inputs, 24 Buss's 8 AUX effects buss's with 2 band EQ, 4 band sweepable EQ per channel, 4 effect return strips. 92 Inputs with EQ at mix down or 116 inputs if you add 24 subfaders. 100mm sub faders and a midi command centre on-board. $41,995.00.

1600 Series 32 x 16 x 32. Ultra low noise design, gold connections at crucial contact points, balanced ins and outs and a modular construction which allows individual channel removal on all models. The 1600 series also lets you add up to 8 channels to the buss section of the desk. 32 Primary inputs, 16 busses, 4 AUX effects with 2 band EQ, 4 band sweepable EQ per channel, 100mm faders and a midi command section centre board. $33,995.00.

800 Series 24 x 8 x 16. 24 Inputs, 8 buss's, 4 band sweepable EQ per channel. 4 AUX effects buss's with the same design principals as the 2400 series.

All production series consoles rely heavily on ultra modern CAD/CAM (computer aided designs and computer aided manufacture) along with constant inspection throughout the manufacturing process, ensures impeccable quality. $23,995.00.

Alesis from Electric Factory. (03) 9480 5988

X2 The Alesis X2 Recording Console is a 24 Channel; 8 Group output, in line monitor professional mixing console whose flexibility and sonic quality live up to the standards set by the Adat digital multitrack recorder. 24 Channels, 4 Band EQ - on each channel. 8 Aux sends. 16 Returns. $22,000.00.

1502. This compact 15 channel 19" Rackmount mixer is perfect for home or live mixing when space is a concern. 15 Inputs, 5 XLR/Line channels, 5 stereo channels, 3 Band EQ/2 Send/Returns. $895.00 inc. tax.

Mackie Designs. From Australian Audio Supplies. (02) 879 6124

8 Bus Series. Available in 16, 24 & 32 channels, by 8 bus consoles. Revolutionary in price & performance. In line monitoring, internal 116dB dynamic range, phantom power, 100mm faders, expandable automation available, parametric high mids, swept lo-mids, high & low shelf EQ, 6 Aux sends, 6 stereo, returns, fully balanced. 16/8 $7495.00, 24/8 $9395.00, 32/8 $11,295.00.

2242. The perfect live or recording mixer in a 19" Rack format. It can also be table top mounted. 22 Input. 6 Aux, Sends/4 Stereo returns. 10 Channel inserts, 4 Band EQ. $2299.00 inc. tax.

MS1202. Ultra compact 12 channel by 2 line/mic mixer, with specs that enable it to interface with the 'digital' age.

4 Low noise, high headroom mic inputs with +48V phantom power, 4 stereo line inputs, 2 Aux. send/channel, 2 stereo returns, 2 band EQ, Inserts on Chl-4, headphone monitor. $949.00 incl. tax.

CR1604. 16 Channel by 2 mic/line mixer that is totally expandable and physically versatile. 16 Channels, 6 low-noise high-head room mic preamps with phantom, 7 Aux. sends per channel, 4 stereo returns, 3-band EQ, multi-way physical configuration built-in power supply. $2795.00.

LM3204. 32 Channel by 2 line mixer with 2 mic inputs - 40 inputs in 5 rack spaces - Mackie quality for the input deprived musician. 16 Stereo line inputs, 4 Aux sends per channel, 3 Band EQ, 2 mic preamps with phantom power, 5 rack, 4 stereo returns spaces, bulit-in power supply. $2595.00.

• **Also available: SR2404**. Mackie's new 24 Channel, 4 bus desk.

DDA from Mark IV Audio (02) 648 3455

FMR. 8/8/24/2, 16/8/24/2, 24/8/24/2 (Consoles can be supplied part loaded). Four band EQ with dual mid sweeps, 6 auxillaries, meter bridge as standard. Stereo and digital input modules are available as well as Midi Mute.$30,000.00

QMR. 24/12/24/2, 32/12/24/2 (Consoles can be supplied part loaded). Four band EQ with dual mid sweeps, 6 auxillaries, meter bridge as standard. Midi mute option available as well as integral or add on patch bays. $40,000.00.

AMR. 36/24/24/2, 44/24/24/2 (Consoles can be supplied part loaded). Four band EQ with dual mid sweeps and Q, 6 auxillaries, meterbridge as standard VU or LED metering, moving fader automation available, patch bays as standard. $150,000.00.

DMR. 20/12/24/2, 32/12/24/2 (Consoles can be supplied part loaded). Four band EQ with dual mid sweeps, 8 auxillaries, meterbridge as standard VCA and Moving fader automation as options, patch bays available. $74,000.00.

•**Also available: DCM, Profile** and **System 7** On Air Broadcast Console.

Spirit from Jands Electronics P/L (02) 516 3622

Folio RAC PAC. Ch.- 14, Subs - 4, auxs. - 6 + Direct, EQ - 3, Sweep - 1, Fader Length - 60mm, Track I/O's - 8. High quality rack mount console for home recording, studio sub-mixing and live applications. Flexible bussing and group outs; low noise pre-amp.$2995.00

Spirit Protracker. Ch. - 8, Auxs. - 1, EQ - 3, Sweep - 2, Fader Length - 60mm, Track I/O's - 8. Rack mount mixer designed to interface to digital 8 track recorders for live tracking. Expandable; inbuilt limiters on each output, low noise pre-amp. $2495.00.

Spirit Studio. Ch. - 16,24,32. Subs - 8, auxs. - 6, EQ - 4, Sweep - 2, Fader Length - 100mm, Track I/O's - 16,24,32. Professional multitrack recording console. Up to 72 inputs available at mixdown (32ch). Split, assignable EQ, External Power Supply. $8000.00-$15,000.00.

Spirit Auto.Ch. - 16,24,32. Subs - 8, Auxs. - 6, EQ - 4, Sweep - 2, Fader Length 100mm., Track I/O's 16/24/32. Fader and MIDI Mute automation. Operates from dedicated software or most MIDI sequencers. Same Audio facilities as Spirit Studio. $13,000.00 - $23,000.00

Soundcraft from Jands Electronics P/L (02) 516 3622

Soundcraft Delta 8. Ch. - 20,28,36. Subs - 8, Auxs. - 6, EQ - 4, Sweep - 2, Fader Length - 100mm, Track I/O's - 16. A "Split" format console with 8 groups and 16 tracks of monitoring. It suits broadcast production applications. $26,000.00 - $42,000.00.

Soundcraft DC2000. Ch. - 24,32. Subs - 8, Auxs. - 6, EQ - 4, Sweep - 2, Fader Length - 100mm. Track I/O's - 24,32. An "In-Line" format console with 24 (32) tape sends and returns. It features moving faders, automation, and a touch screen for control of multitracks and effects. $54,000.00 - $77,000.00.

Soundcraft DC2020. Ch - 24,32,40. Subs - 8, Auxs. - 6, EQ - 4, Sweep - 4, Fader Length - 100mm. Track I/O's - 24,32,40. An "In-Line" format console with 24 (32) tape sends and returns. It features moving faders, automation, and a touch screen for control of multitracks and effects. $60,000.00 - $90,000.00.

Soundcraft Sapphyre LC. Ch - 20,28,36,44,52. Subs. - 8, Auxs. - 6, EQ - 4, Sweep - 2, Fader Length - 100mm. Track I/O's - 20,28,36,44,52. An 'In-Line" format console with 8 groups and one tape I/O per input channel. Automation ready. $49,000.00 - $118,000.

Soundtracs from Syncrotech Systems. (02) 417 5088

Project Studio. 24/8/24, 32/8/32 Totally new release Colour scheme, superb audio performance, exceptional equalisation, versatile monitoring, comprehensive patching. 24 or 32 Channels with dual inputs on each channel. Hi & Lo shelving and 2 swept mids on EQ. EQ on monitors, 6 Aux. sends automation optional. From $9098.00.

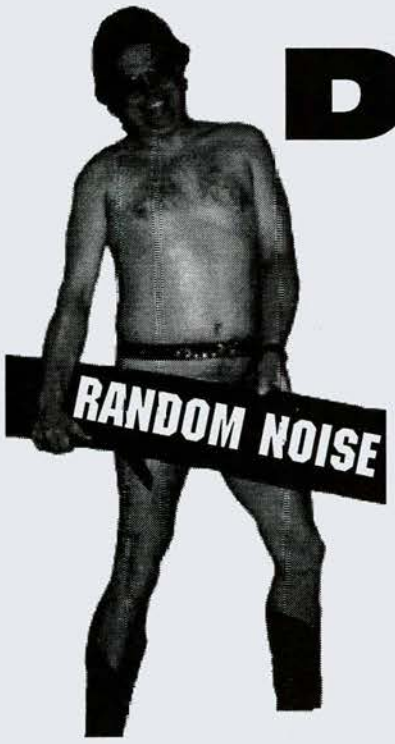
Solo Logic. 24/8/24, 32/8/32. Offer dynamic mute automation of channels, monitors, groups and effects returns is provided along with super smooth dynamic VCA fader automation on all channels, plus machine control.

24 or 32 Channels with dual inputs on each channel, HF, MFI, MF2 and LF EQ. 6 Aux. Sends, 8 groups, on board automation.From $16,418.00.

>Continues over page

We list FOUR consoles of each brand for indicative purposes. There are usually MANY more models and variants available. Prices correct @ 15 July.

Duncan Fry



LET'S SMOKE THE DOG!

Although as sound guys we were always bagging lighting guys, we did actually have a friend who did lights. Let's call him Monty. He travelled around from gig to gig in a bus, which he had set up with a roller door in the back to provide transport for the complete production, and frequently the band too when he went away on country gigs.

At the latter end of his lighting career, he bought himself a dog, a labrador called Sam, whose sole aim in life seemed to be just to eat and eat. I guess that once he had his nuts cut off he found little else in life to interest him. The dog, that is, not Monty!

Anyway, Sam just grew and grew into a giant lard arse of a thing. Wherever he moved his skin would shimmer like ripples on a pond, so we nicknamed him 'Sammy the Walrus Dog'. Since Sam would eat everything in the house (even the furniture), if he was left at home unattended all day, Monty used to take him out on the gigs where he would loll around slobbering dribble on everything and everyone, and hopefully guard the bus at the same time.

Monty was as straight as a die, didn't smoke and rarely drank anything stronger than Coca Cola. However, the same couldn't be said for the band he was working with, who would happily fill themselves full of any mind altering substances that they could lay their hands on.

So, one night they were all away working at a pub in the outer suburbs. The bus was unloaded, and Monty and the band were inside doing the gig. Sam was waiting in the bus doing his best guard dog imitation, but having the attention span of an autistic newt he got tired of this after a few minutes and started snuffling around to see what there might be to eat. Rummaging through bags of old socks and used undies, his questing nose suddenly discovered a tasty, organic smelling chunk wrapped up in aluminium foil jammed behind one of the seats.

He had discovered the band's stash, a big, expensive block of hash! *(One of the hidden costs of touring?Ed).* Obviously the stuff had the same appeal to dimwitted dogs as it did to dimwitted humans. Sam ripped into it with gusto, chomping it in his slobbering mouth until it was all gone. Then, as the stuff began to take hold of him, he started to feel ever so sleeeeepy, so he slooooowly curled up in a corner of the bus to get in touch with his inner self and discover canine Utopia. Then he passed out!

After the gig the band came back to the truck, all vibed up and ready for a Post Gig Rap with the help of the Colombian Pink Eye Special. But of course it was nowhere to be seen. They feverishly rummaged through the back of the bus, lifting the seats up, accusing each other, but they couldn't find it anywhere. Then someone mentioned that young Sammy, who would normally be running around like a headless chook, hadn't moved for the last ten minutes. One of them knelt down beside Sam and carefully sniffed his breath. A thin trickle of brown saliva was dribbling from the poor stoned dog's mouth, and his teeth were covered in the remains of the silver foil.

The culprit had been discovered!

Then the s--t hit the fan, so to speak! Or would have done, if the dog hadn't eaten it! But it was too late. Sam stayed passed out for three days, occasionally rising to have the odd leak, look around with stoned eyes, and pass out again!

When he woke up a few days later, he staggered around like a zombie for a week or so, and although he was never particularly bright to begin with, he was even less bright from then on. And, desperate as the band was, none of them really felt like smoking the stuff when it eventually reappeared at Sam's rear-end!

DICKHEADS. by Tim Ireland

BUYERS GUIDE

Studio Mixing Consoles

Megas Studio. 16/4/2, 24/4/2, 32/4/2. The megas Studio console is a general purpose console for a variety of audio applications with the objective to develop a economic quality mixing console. 16,24 or 32 Channel consoles with 4 band EQ, 6 Aux sends, 16/24 + L/R routing and direct outputs on channels. From $12,214.00

Solitaire. 24 Bus production consol.e (automatec). The finest audio quality combined with leading edge DSP multi processor technology. A full 24 bus in line console with dynamics in every channel and optional moving faders or VCA automation. 24, 32 or 40 console with dual input on each channel. 4 Band EQ (Parametric) on channel inputs, 2 Band EQ on monitors, 8 Aux busses (32 on mix down), optional moving fader automation. Dynamics in every channel. From $50,623.00

Studiomaster, from Syntec Internaticnal. (02) 417 4700

P7. Whether being used with analogue or digital multitrack machines, the P7 will accommodate either format perfectly Being expandable from 16-8-16-2 to 40-8-40-2. 16—8-16-2 (basic) 8 sub groups with inserts, 4 Band EQ with sweepable high & low mids, 6 Aux. master sends, 4 routable Aux. returns with EQ. $10,899.00.

StarSystem. 38 Input multi-purpose audio console. A compact and flexible mixing console which takes a fresh and logical approach to the design of audio equipment in the 1990's. 8 Primary channels with 3 Band EQ, 3 Aux. sends, Left/Right - 2 parametric equalisers, access to all 4 Aux. busses. Opticnal compressor/gate. $5749.00

Session Mix Gold. SM8-2G. Designed for a variety of applications. Utilising a hybrid transistor - /1C preamp) electronically balanced microphone and line inputs. Can be rack mounted. 8 Input channels, 3 Band EQ with sweepable mid range. 4 Ausiliary sends pre-channel plus insert. $2299.00.

Yamaha from Yamaha Music Australia (03) 9699 2388

RM800. 16 Channel & 24 Channel. 8 Output groups, in-line monitor. Auxiliary system enables full playback monitoring without using any main input channels. Including 4 stereo returns RM800-16 provides 40 inputs for mixdown, RM800-24 has 56. 100mm Fader enables precise level control. Best priced recorder/mixer in its class. Available as 16ch or 24ch, 3 Band EQ (with sweepable mid-band), 6 Aux. sends, 4 stereo Aux. returns, 8 output groups (both -10dB and +4dB are supported). 16ch - $3695.00 - 24ch - $4995.00.

Promix 01. 16 Channel programmable mixer. Enables to set & store mix settings and recall settings instantly.By connecting Promix 01 to a MIDI sequencer, all parameters can be MIDI controlled. 20 - bit AD/DA converters with 64 times A/O oversampling + 8 - times D/R over sampling motorised faders. 50 Scene memories. 16 Input channels (8 balanced XLR's with 48V phantom power, 8 balanced jacks). 4 Aux. sends, 3 band full parametric EQ, 20 bit Ad/DA converters, THD less than 0.1% (20Hz-20kHz @ +14dB into 600Ω) $3995.00

MC2404 II - 24 Channel mixing console, 10 busses - 4 group, 4 Aux. & main stereo. 2 Mix matrixes, 6 into 1. Insert points on all channel inputs, group outputs (1-4) & main stereo outputs. 4 Aux. sends - 2 pre, 2 post fader; user programmable 4 Band EQ, Hi pass filter (80Hz roll-off frequency), Low noise, high rejection integral power supply. 10 Busses, 24 channel, 2 stereo Aux. returns, 4 Band EQ - fixed high & low, two swept mids, THD less than 0.1%20Hz-20kHz @ 14dB into 600Ω. $10,995.00.

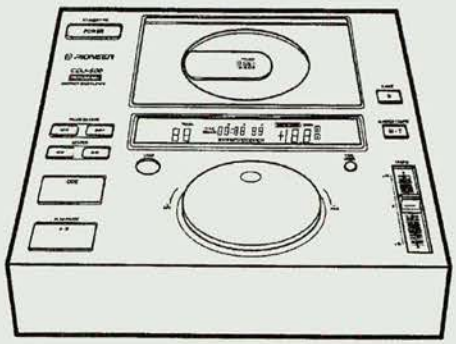
MX400 - 16 channel + 4 stereo input channels mixing console. Switchable A/B inputs, 20dB pad. Switch & gain control allow wide-range input sensitivity control. Signal & peak indicators on all mono & stereo channels. 100mm Channel faders. Channel ON switches on mono & stereo input channels.
3 Band EQ with sweepable mid-band. 5 Aux sends on each mono channel (input), 16 channel. $3695.00

We list FOUR consoles of each brand for indicative purposes. There are usually MANY more models and variants available. Prices correct @ 15 July.

Next Buyers Guide:

MICROPHONES.

DJ's this deal's for you!



For a very limited time you get the hottest deal on the hottest DJ's CD turntable available..... the Pioneer CD-J500
[offer closes mid-cay September 30th]

$250 trade-in for any old turntable or CD player

There's no gimmicks, just bring in your old player and we'll give you $250 off the normal retail price of a CD-J500.
[We'll even take an old cassette player]

Phone now for details....

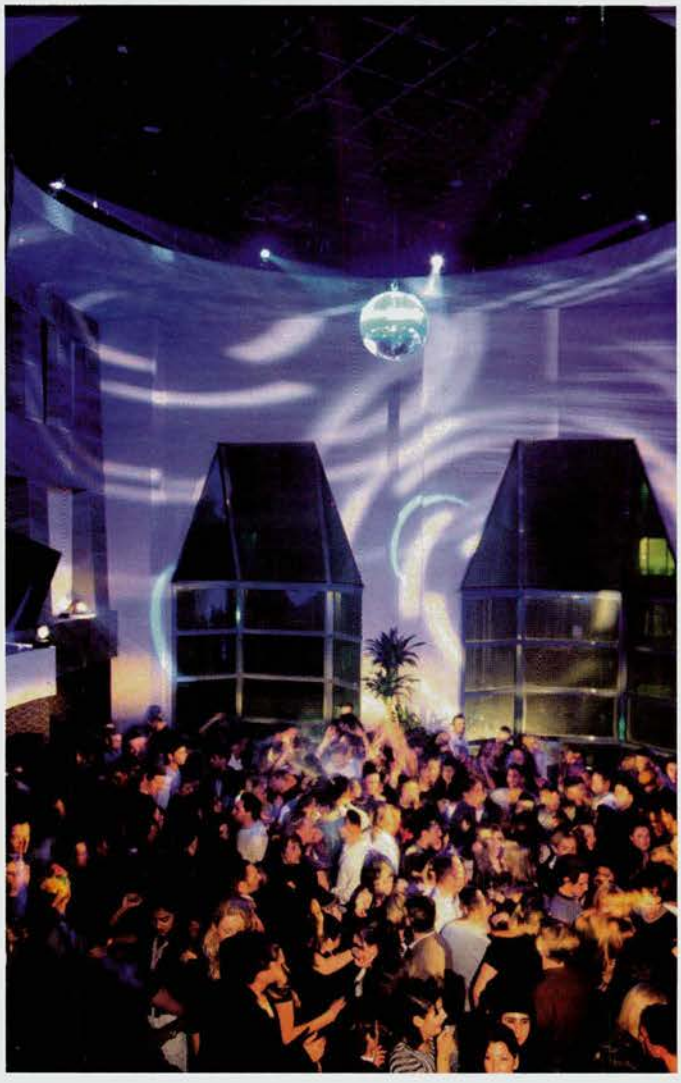
N.S.W...02 559 4363 QLD...07 236 2333
N.QLD...077 723 470 WA...09 271 1517
VIC...03 931 51255 SA...08 331 3860

PIONEER
The Art of Entertainment

CLUBLAND

With Natalie Apostolou

SKY BOUND



Sky Gardens is arguably one of the focal points of the city of Sydney's shopping strip the Pitt St mall. Addressing the gap in the inner cities lack of large clubbing areas, SKY joins the ranks of Riva, Merivale and dearly departed city haunts such as Stranded and Jamieson St.

No expense has been spared to create a high style and substance club environment. The key players in SKY's ensemble come from impeccable pedigrees; internationally renowned Jacqui O who was the mastermind behind Lunacy, 2000AD and the inimitable Hordern F.U.N parties; Daniel and Kaz, the team behind Sydney's Moonwalkers Club promotions team that instigated the consistent rise of Riva and hosted the tres successful Glam fashion nights; In-house DJ Jonathan Wall completes the A-team as a music authority with his ear to the ground.

The unveiling of SKY on June 17, confirmed its target market and commitment to over the top style and scintillation. The opening night schmoozers included Trisha Goddard, Channel 7's Gladiators, Ursula Hufnagel and glam scouts from Who, Vogue, Mode, Cleo and Studio and an opening speech by the indispensable Kate Fischer. The 1000 strong crowd were shrouded under 50 foot ceilings and Avsounds stellar lighting and sound installations. The floor plan has been quartered into 4 areas of distinct ambience, with a decor that positively exudes the height of sophisticated, world-class clubbing

Since opening the venue has hosted a myriad of events including the Models Inc extravaganza, which showcased Australia's top models as well as our top designers wares. Displaying versatility, SKY presented a Rio night hosted by Delores Del Monte and assisted by the Amazon Angels. Live bands and cabaret style shows, magazine and label launches are all scheduled as a staple of SKY entertainments coming attractions.

Audio
2 x Technics SL1200 turntables
1 x Gemini Disco Mixer

>>continued

MAYFIELD

The Secretary Manager of Mayfield Ex-Services Club, Mr John Fear, travelled all over the East Coast looking for ideas for the club's refurbishment. On his return he approached Custom Audio Installations & Lighting to formulate a design better than what he had seen, something to give him the edge on the club cabaret circuit. The planning began in June 1994 with the Downstairs Cabaret Lounge the first project.

With a very low ceiling and a small stage area, Colin Rothapfel of Custom Audio decided to use 12 Teatro 650w fresnels with a Teatro Talento follow spot for the stage area. Control was a Jands Stage 12 lighting console and a Jands Roadpak dimmer. On the dance floor he chose 24 Martin Robocolour 2's and 4 Martin 812's with a Martin 2308 controller.

"This allowed programmes to be installed so that no matter who was using the dance floor, it was easy to give them a spectacular light show," said Colin. "The Robocolours were perfect for the low ceiling as were the 812's. The colours look great especially with the smoke. We chose a Jem Show Fogger which fills the area perfectly."

As it turned out the Upstairs

ABSTRACT

FUTURESCAN MK III

RESISTANCE IS POWERLESS

ABSTRACT DESIGN TO LIGHT

WESTFIELD, LEICESTER ROAD,
BLABY, LEICESTER LE8 4GQ.
TEL: +44 (0) 116 278 8078
FAX: +44 (0) 116 277 1286

Write in Reader Service number: 120

DISTRIBUTED BY:
U.L.A

UNIVERSAL LIGHTING & AUDIO
UNIVERSAL PLACE
4/43 OLYMPIC CIRCUIT SOUTHPORT QLD 4215
PHONE: (07) 5532 9922 FAX: (07) 5532 4155

SKY SPEC'S

2 x Australian Monitor AM 1600 amplifier
2 x Australian Monitor AM1K2 amplifier
2 x Electro-Voice MTD12 Mid-high cabinets
2 x Electro-Voice MTD2 Sub-bass cabinets
2 x Electro-Voice XEQ3 dedicated controller
1 x Sony Tape deck
1 x Dennon DN2000F Dual CD player
1 x Equipment rack
1 x DJ monitor
1 x DJ monitor amp
4 x Electro-Voice S40 (Room fill speakers)

Lighting

8 x Clay Paky Miniscans 300's
1 x CP-1 control unit
12 x Shimmers
1 x Jem smoke machine
1 x 36" Mirror ball
1 x White Lighting Strobe
8 x Scanners

SKY VITALS

Location: Level 3 Skygarden, Castlereagh St Sydney
Open: Currently Saturdays 9.30pm-5am, further nights TBA
Capacity: 650
Operated by: SKY Entertainment
Opened: June 17 1995
Features: Stage and Catwalks (moveable for shows)
2 bars, Lush decor, High Ceilings, Multi level floor plan, Pool area.
Sound and Lighting: Supplied by Avsound
Personnel:
Resident DJ: Johnathon Wall
Lighting: Ming Gan
Promotions: Jacqui O, Kaz and Daniel Louison
Bar Manager: Peter McGregor

Mayfields (cont)

Auditorium was completed first. With a vibrant colour scheme and interesting architectural highlights the room is very modern with clean lines. Mark Fenwick, the architect from Suters Architects Snell, stressed 'that although this was a Cabaret Room he didn't want the stage looking typically rock'n'roll. He wanted the stage to follow the same clean lines as the rest of the room.'

"We decided to go for broke and make the Upstairs auditorium completely intelligent," said Colin. "No par cans, no fresnels. Instead we used 10 Martin Robocolour PRO 400's giving 32 colour combinations, colour correction, dimming, strobing and a wash on a front of house Penn TT Tri truss. Combined with 16 Martin Robocolour 2's for the back and side wash, the venue can handle any situation."

On the dance floor 4 Martin 1220's with rotating gobos can be used for any application - the 50/50 dances, discos and cabaret performers. Of course there is a large mirror ball in the centre. The plain coloured walls at each side of the stage acts perfectly as a cyc. The whole system is controlled by a Martin 3032 PC with a Direct Access Panel so that anyone can access any lighting state with a press of a button. The operators can even follow the guest artist with the 1220's using just the mouse!

"The follow spot that we chose was the Clay Paky Long Throw Shadow 1200MSR which is just superb, cutting the distance easily," said Colin. "We've even caught John the sec manager behind the controls following the guest artist! To use a standard smoke machine was going to cause a problem for the older patrons so we installed the Jem Water Cracker which produces a haze which is perfect for the lighting yet doesn't upset the patrons because they don't know it's there. The management and architect were extremely happy with the overall look of the dimmerless installation, the fact that it is user friendly and cost effective due to the low power consumption of the fixtures."

Mayfield Ex-Servicemen's Club
58 Hanbury St Mayfield,
Newcastle
PH 049 684411

• By Catriona Forcer

Contact Natalie Apostolou, phone (02) 876-3530, FAX (02) 876-5715 WITH YOUR NEWS

Stars of Ominous Tidings

If my generation has contributed anything to the betterment of society it would be the shameless and irrepressible zest for keeping the sounds of our childhood alive. The quest for salvaging our sanctified 80's pop sensibilities has swept the nation. For 80's clubbers things couldn't be better but for the fledgling promoter/DJ, settling for 15 minutes of fame seems to be the pattern.

In this transitory club world justifiably, those of the indefinable 'it' quality will rise slowly but surely to the field of vision of those who know. Falling aptly into this category is the smashing duo (Damien Hoffer and Kathryn Slattery) behind Omen Productions, a production management/consultancy team with a penchant for the pop decade.

Omen was created on Xmas eve 1994, when Damien's previous contract was torn up by the powers that be at Club Marconi and Entertainment Techniques who were contracted to produce the now defunct Marconi Dance Club. Stemming the flow of karma, Damien and his business partner Kathryn decided to seize the day, form a company and supply professional, no nonsense productions to Clubs or individuals who want high quality sound and lighting at a reasonable price.

The Forbes Hotel in Sydney's city centre is the site of their immensely popular early 80's 'indie' night-"The INBETWEEN Days", held every Friday night from 8pm. The team has also recently completed a successful run of New Romantic nights named "Seraphim" at the Angel Place Brasserie.

The guys also regularly produce corporate parties for the swank likes of D.D Needham Advertising and Price Waterhouse. Omen Productions find these gigs a fertile experimentation ground as higher budgets allow them to amaze clients with high tech intelligent lighting and thoroughly individualised music formats.

Damien distinguishes Omen Productions as "a young couple doing our best to give other people , who may be ignorant of the awesome sound and lighting technology around, some fabulous parties and some great memories."

Omen Productions, contact (02) 565-1282.

NEWZ

• The city of Sydney has been graced with a new live venue (gasp). **The Iron Duke** on the corner of Botany and McEvoy Streets Alexandria.

• **Zoom** (Sydney) is treating Saturday night partyers to new dimensions in its music misson. In conjunction with Up, Up & Away promotions, the teaming of DJs Joe 90 and David Brace promise a dance smorgasboard with local, interstate and international guests appearing at regular intervals. 163 Oxford st.$5 till midnight, $10 after. Dress cheeky.

• **City Rowers Tavern** in Brisbane have renovated adding lots of goodies through their two storey entertainment spot. The most toted is a huge video screen (alledgedly Brisbane's largest).

• **The Terminus** in Brisbane is now accomodating live bands (local and national) every Saturday night at the 249 club.

• Commercial Road, Melbourne has a new mammoth club named **The Dome.** Miss Krystal, Sean Quinn, Jayson Digby and a host of others are weekly guests/DJ's

• Music Week spots our own **Mushroom** records as on the brink of worldwide success with Love to Infinity's 'Keep Love Together' at high spots on UK dance charts.

LIBERTIES

Hurstville Ritz Hotel
350 Forest Road Hurstville
CJK Enterprises is behind Hurstville's leap into Sydney's thriving club competition arena. Liberty's is testament to how a solid promotions team can work effectively with venue management, to create a vibrant original concept club. The venue was designed by owner Steve Bowden who wanted to encapsulate the clubbing essence of the inner city and replicate it for Sydney's Southerners.

The corner stone of the club is a miniature bit of technical wizardry in the form of the model of a Manhattan Style Skyline. TCP's Richard Skarzynski, worked as production designer, taking pride in this unique special effect, utilising neon, fibre optics and fog and operating on a 16 minute rotation from day to night, using a TCP control system.

The huge floor space allows a licensed capacity of 1410. The club also features split levels and raised bar areas including a one stop diversion emporium-the sportsbar which features all the electronic gizmos you could want.

Expect to find a full a la carte restaurant, Cocktail Bar and Louisiana Cajian Style Buffet. As well as live entertainment for Friday nights RnB, Funk, Soul and Energy themed night named 'Pure'.

Nights to watch for; Wednesday-Club Alpha, Thursday-Ladies Night, Friday-Pure, Saturday-Club 25 (over 25's)

Producton designer-Richard Skarzynski from Total Concept Productions

Special effects: 1 x 15m x 2m Manhattan Skyline set

Audio

2 x Technics 1200 turn tables
2 x Stanton Slipmats
2 x Stanton Headshells
1 X Denon DN 2000F Compl act Disc Player
40 x JBL S3 Ceiling speakers set on 6 zones

>>> cont. over

WINTERDAZE

Held at Shed 14, Victoria Dock on Saturday 10th June, proudly presented by the **ALSO Foundation**

The Cast And Crew:

Lighting Designer/Operator: Alan 'Pearl' Parkinson.

Production Manager: Tracey Wall

Artistic Director: Gil Douglas

Choreographer: Amanda Morris

DJ Roll Call: Gavin Cambell (Razor, Savage, Tasty), Guy Uppiah (Central Station, Razor, Chasers), Paul Goodyear (The Peel and Ace Remix Services), Martine (Factory and GirlBar).

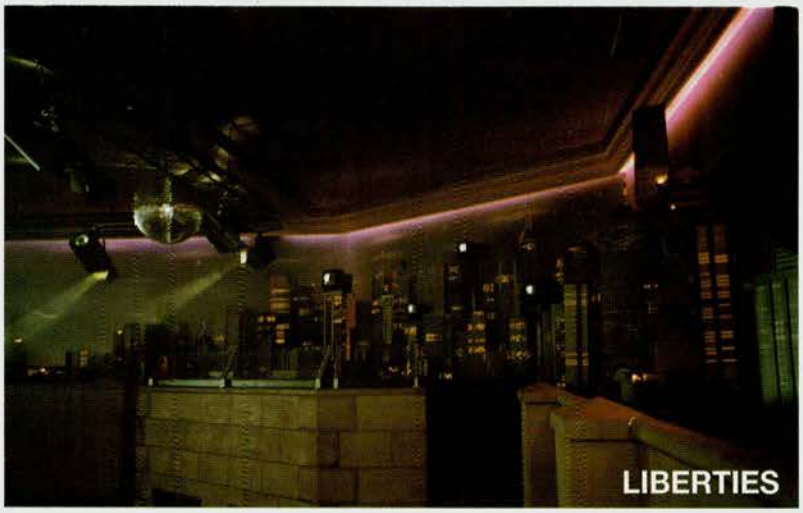
The Melbourne based ALSO foundation has proved itself as an institution in providing diabolical dance party productions. The wickedly successful Red Raw last Summer left punters panting for a Winter solstice. Winterdaze's thematic brainstorm this season was *New Legends* , incorporating three shows under the over the top tutelage of Sydney's Gil Douglas.(of Leather Pride fame). Melbourne's favourite choreographer Amanda Morris collaborated with Michael Tan for a floor show spectacular that had dancers gyrating through snowstorms and assorted Parkinson inspired pyrotechnics.

New Legends featured a surreal winter wonderland escapade, Stage A bearing sleet and snow, Stage B had Gothic indulgence and excess and Stage C featured aquatic inspired debauchery The all Jands sound and lighting production blew the Melburnians away, setting the standard for bigger and better productions still to come.

Evolving out of the dance fest is the WinterDaze 'New Legends' CD out through DanceNet. DJ Gavin Campbell took all the elements of prevalent attitude and vibes of the evening and confined to the CD format for relentless pleasure. This conceptual CD is the first of an intentionally queer sounding se-

>>> cont. over

Write in Reader Service number: 146



ries of Gay and Lesbian dance party compliations.
Audio and Lighting production courtesy of Jands; Michael Kant, Niki Coumous, Brian O'Conner
Varilite Programmer: Sascha McKissock, **Lighting:** Squirrel, **Audio:** Mal

Lighting
Dance Floor-
12 Moving Lights
16 Ft Concert Truss
30 VLT's
48 Par 64's
48 ACL'S
6 Terra Strobes
12 Par 64 Colour
Stage A:
6 VL5's
6 VL6's
48 Par 64's
10 2k's
Stage B:
3 2k's
3 1k's
22 par 64's
Show Mode
20 V2's

Stage
6 Q1's
10 VLT's
Mingling Area
3 Tk's
2 1k's
1 Dozen Par 56's
48 Par 64's

4 x JBL 4716 mid-high cabinets
2 x Revolver double 15 inch bass bins
2 x Jands 516 Amplifiers
1 x Brooke Sirens FDS 340 Electronic Cross Over
1 x Yamaha 2031 Graphic Equaliser
3 x Crown Macrotech 2400 Amplifier
1 x Rane AC22 Electronic Cross Over
1 x Yamaha 1031 Graphic Equaliser
1 x Inkel 100 watt amplifier
2 x JBL JB5 Bass Bin
6 x Redford Outdoor Speakers

Lighting
8 x TAS Mini-Ultrascans
1 x TAS Mini-Ultrascan controller
2 x Martin Mini Stars
8 x Ultra Violet Tubes and Battens
2 x TAS fogging machines
4 x Coemar Versatiles
1 x Dynalite Mini-Chaser
4 x Jands High Powered Strobes
2 x Tas Dominators
2 x Jands Blinders
8 x Scatterspots

Video
40 x Sharp 51cm televisions
40 x Pivotelli Brackets
1 x Distribution Amplifier
1 x Sanyo Hi Fi Video Cassette Recorder
5 x Samsung 13cm Monitors
2 x Sanyo PL100 Video Projectors

AUSTRALIA'S LARGEST STOCKIST OF HIGHEND SYSTEMS PRODUCTS.

- HIRE
- SALES
- SERVICE

We also stock
JANDS, LSC, LEE
& ROSCO PRODUCTS

CLEARLIGHT SHOWS PTY LTD 9 Horscroft Place, Moorabbin VIC., 3189
Ph: 61 3 9553 1688 Fax: 61 3 9553 4401

LIGHTING MONTHLY

August 1995

Edited by Catriona Forcer

new from STRAND

Following on from the introduction last year of it's new SuperNova dual wattage HMI Fresnels, Strand Lighting have launched the SuperQuasar 6000W HMI Parlight. This new fixture exploits the very latest in HMI technology - the 6000W single ended HMI lamp - to give equivalent performance to an 18kW fresnel. SuperQuasar 60 has been developed to meet the needs of the most prolific Motion Picture production centre in the world - Hollywood. Designed by Strand's local partner - Cinemills - this 6000W parlight, at just 16kgs, is light and easy to handle.

Strand also launched a new 650W Fresnel at the recent NAB show in Las Vegas. The Bambino 650 is a new addition to Strand's range of compact fresnels which range from the 200W Mizar up to the 10kW Vega. Bambino 650 is designed around the largest lens in it's class and has a lightweight pressure die cast aluminium housing. Bambino 650's compact size makes it suited for location work while it's performance will be invaluable in studios equipped with the latest CCD cameras. As a key or back light Bambino 650 is the ideal fixture to optimise Strand's Videolux Fluorescent softlights.

WRITE IN 210 ON READER SERVICE CARD FOR INFO

SPACE CANNON

Ashton Admor have taken stock of the Space Cannon range manufactured in Italy. These xenon powered systems can create spectacular light architecture and beams of light visible from a distance of over 30 miles.

Space Cannon claim to have designed a xenon lamp power system offering four fundamental advantages:

- Considerable Energy Saving - The Space Cannon vH power system guarantees real consumption which is the same as the lamp's rated value.
- Longer Lamp Life - The power supply system enables lamp life to be extended by 50%.
- Automatic Lamp Regulation During Ignition - This function means that any differences of an electrical type or of a thermal type are electronically controlled by the luminaire's power supply unit.
- Lightweight, Compact Power Supply Unit

The Space Cannon luminaires offer constant, uniform cooling via a special tropicalized cooling system, so they can operate under extreme weather conditions (from -65°C to +55°C).

For lamp ignition, Space Cannon uses a fully electronic igniter which is able to ignite the xenon gas without deteriorating the electrodes and consumes just 8-9 watts.

After considerable research, Space cannon decided to use a reflector of the electroformed type. The reflector is obtained by

Space Cannon Three

electroforming in a nickel plating bath. The reflector is coated with a layer of rhodium which protects the nickel from oxidation. Production costs are high - approximately a 100 times greater than other systems.

For lamp focusing, Space Cannon technicians have created and applied an electronic regulation system with a keyboard which controls three motors from outside the luminaire. These motors move the lampholder tray until focus is achieved.

The connector cable, which complies with military norms, has several wires inside it to enable auxiliary connections between the

Joel Schumacher (Director) and Chris O'Donnell (Robin) in the Riddler's Lair.

BATMAN & MARTIN

(not Robin?)

In the new blockbuster movie 'Batman Forever' several scenes feature the use of Martin Professional's mega-projector the Roboscan Pro 1220. For example the Riddler's party, filmed at the Pantages Theatre in LA, features Roboscan Pro 1220s with spiralling, rotating gobos swirling over the crowd.

Another scene made in the Chinatown district of LA, again uses the gobo facility of the Pro 1220 to generate Chinese letter characters which are projected onto the actors as well as onto the buildings. This effect was created by the movie's visual effects team by hanging the Pro 1220s from scissor lifts out of shot. At the circus, in another part of the film, Roboscan Pro 1220's are called on again to add their special light to the subject. All the Pro 1220s used in the movie were supplied and programmed by Albert Chen of New Dimensions in San Francisco.

Serious "Performance" lighting

The Arena range of 2.0 & 2.5kw luminaires from Selecon, a comprehensive range of Zoomspots, Fresnels and P.C.s for the larger stage or studio. Enhanced optical designs, innovative design and precision engineering offers choice, superior performance and operation benefiting the lighting designer, technician and owner. Three models of Zoomspots – Narrow, Medium and Wide with new ellipsoidal optical systems providing light output that leads the industry. The High Performance Fresnel for stage and studio (250mm/10 inch lens) the Theatre (200mm/8 inch lens) Fresnel and P.C. complete the range. All available with the 2.0kw theatre standard GY16 lampbase or the G22 base for the new CP91 2.5kw and CP92 2.0kw lamps. Further versatility is offered by interchangeable Zoomspot Medium and Wide lens trays with the change able to be made from one to the other in seconds.

Significant 10 inch Fresnel sales include 80 units to the Adelaide Festival Centre, 90 units to the Victorian Arts Centre, 80 units to the Queensland Performing Arts Trust and South Pacific Television who have 60 units lighting their current soap "Shortland Street".

ARENA HIGH PERFORMANCE FRESNEL 10"

Short Spec
SF 2500/25 – CP91 2.5kw lamp 8° – 413,350 candela
60° – 47,100
SF 2000/25 – CP43 2.0 kw lamp 8° – 383,000 candela

ARENA THEATRE FRESNEL 8"

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

ARENA 2.0/2.5kw ZOOMSPOT

Short Spec
Zoomspot 2500 Narrow 8° Peak 700,000 candela
to 16° Peak 401,800 candela
Zoomspot 2500 Medium 14° Peak 509,600 candela
to 32° Peak 154,350 candela
Zoomspot 2500 Wide 20° Peak 298,900 candela
to 37° Peak 124,450 candela

Darling Harbour and Brisbane Convention Centre also geared up recently with Arena units across the range.

The high Performance Fresnel utilises a 250mm (10 inch) supprex glass lens providing a minimum 20% increase in light compared to the industry standard 200mm luminaire for use in large theatres, studio and display applications. The beam has greater clarity, with less spill than that of a fresnel.

ARENA PC 2000/2500

Short Spec
2.5kw – 4.5° 546,350 candela
– 60° 38,220 candela

Arena 2.0/2.5kw Zoomspots have a 230mm front lens which means serious performance. The ZS2500N delivers 1000lux at 26 meters set at 8°. The Arena Theatre Fresnel is a general purpose theatre fresnel with 200mm lens. Arena PC 2000/2500 is a high performance 200mm plano convex

EASE OF MAINTENANCE

Access for relamping, maintenance and cleaning is provided by swingdown body panels. A fast, simple, effective and maintenance-free system.

NEW SHUTTER SYSTEM

A new "clutch plate" tension system for the Arena Zoomspots and 1200 Zoomspot range. Each shutter moves against and is held by a formed brass pad which is spring-tensioned. This provides a consistent, precise and jam-free movement while firmly holding the shutter once set.

MAXIMISED COOLING

Airflow to minimise the luminaire operating temperature, an important consideration in lamp and filter life as well as in the handling of the luminaire. The Arena Zoomspot and fresnel range maintain a maximum surface temperature (155°-177°) over 100°C lower than that quoted by a major competitor.

NSW Herkes Ph: 02-319 3133
MacSound Ph: 0-67-784 090 Theatricks Ph: 018-963 993
VIC LSC. Ph: 0-3-9561 5255 Three Arts Ph: 0-3-3818 0397
QLAND East Coast Lighting Ph: 0-7-252 9583, Laser Ph: 0-7-236 2333
SA Osmonds Ph: 0-8-410 1111 GUVT Ph:0-8-363 0454 **ACT** Topstage Ph: 0-6-280 5710
WA Stagecraft Ph: 0-9-227 9000. Ashtons Ph: 0-9-478 3800
TAS KW McCulloch (Hobart) Ph: 002-286373 KW McCulloch (Launceston) Ph: 003-431 034
NT Top Ends Sounds Ph:0-89-81 7744

SELECON
PH: 64-9-360 1718, FAX: 64-9-360 1719

Court Hears of Death

Encore magazine recently reported that a TV lighting firm was found in breach of its duty to 'ensure the health, safety and welfare of persons not its employees' after a best boy died from electrocution while working on a set being constructed to shoot a television commercial.

The prosecution alleged that the defendant was in breach of s.16 of the Occupational Health and Safety Act which says that an employer has to take responsibility for not only his employees in the case of an accident, but also persons not employed.

The company was contracted to supply the electrician and, as part of the arrangements with production company, it was made aware that they would need an assistant. The production company undertook the hiring of the assistant.

MISS SAIGON ROLLS IN

At time of press, previews for Miss Saigon are well underway at Sydney's Capitol Theatre.

There are 90 tonnes of technical equipment which take 34 semi-trailers to move. At each performance a total of 300 people will be working at the theatre including 68 technical crew. The 75 different effects, including 60 moving pieces of scenery, are all computer controlled from the bowels of the building.

Apart from the famous helicopter, there is also a giant gold 405kg statue of Ho Chi Minh which took four months to build.

The other big production will be the Opening Night Party which has also taken a lot of planning. Read all about it in next month's Connections!

Know of an interesting lighting story?
Something you're working on?
Something you heard of?
Big or small
Get in touch with
Cat Forcer ph:(02) 876 2612
or fax:(02) 876 5715
also
MORE PRODUCT INFO WANTED!

SPACE CANNON (cont)

power supply unit and the luminaire which have the following safety functions: *dual precision thermal protection, magnetic protection, lamp explosion protection, protection against incorrect lamp installation.*

Space Cannon luminaires use their own mechanical system which enables them to rotate on their base without needing to use slide contacts. They can also be supplied with a remote control unit, with or without cables.

The Range comes with different amounts of lampheads hence the **Space Cannon One**, **Space Cannon Three** and the **Space Cannon Four.** Also available are the **Space Cannon Mini** and **Space Cannon Mini Three.**

The **Target** is a multi-beam projector producing 20/30/50 beams of light and it is available in

The Black Devil 4000w

2000W and 3000W version. It makes a full rotation (pan) of 360°, adjustable from 0° to 360° in addition to the internal reflector rotation.

The **Blade Runner** is a mechanical searchlight, making both pan and tilt movement. It can work also without an external control desk because it is provided with an electronic card that can be pre-programmed.

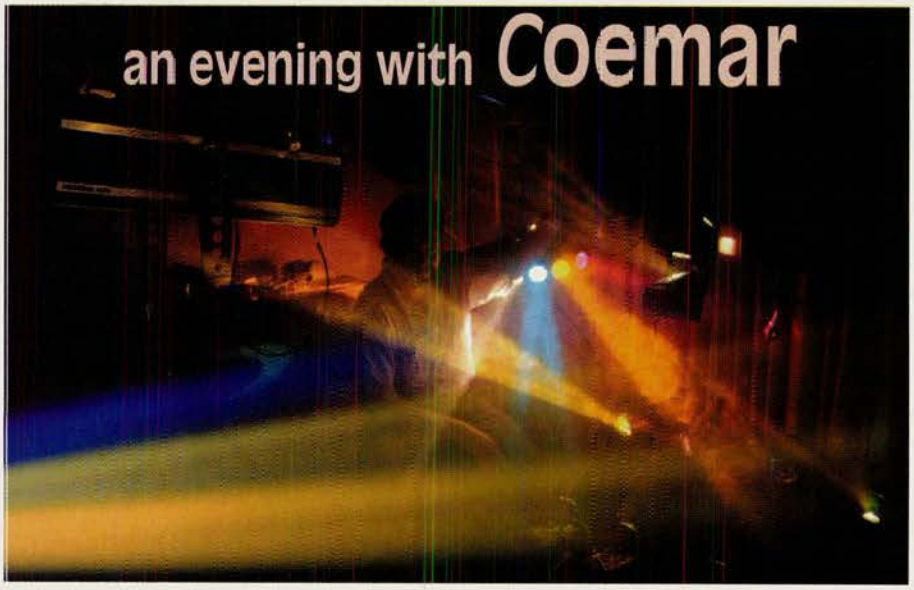
The **Black Devil** series is the range of intelligent lighting from Space Cannon. It features a motorised mechanism which enables it to move in all directions (270° tilt and 360° pan).

Ideal for live use and large club installations, among it's features are fast movement, high precision and apparently none of the shudder normally found with units as large as this. Eight independent functions can be controlled on each individual luminaire using DMX512: *pan, tilt, colour change, shutter, beam widening, beam narrowing, lamp on, lamp off.*

The Black Devil series of luminaires are available with lamp power from 2,000 to 7,000 watts. A 10,000w version will soon be available.

•*Call: Ashton Admor (09) 478 3800.*

WRITE IN 211 ON READER SERVICE CARD FOR INFO



The taxi driver gave me a knowing look when he dropped me outside Motel Room 12 but things were far from seedy. Coemar De Sisti were in Sydney and they had chosen the intimate setting of a motel room to conduct a person to person show of their wares.

Richie Mickan was there to give a thorough guide of the various products distributed by Coemar and the 'hands on' opportunity was useful. In fact some equipment wasn't on display because it had been purchased on the spot for an event that night and replacements had to come from Melbourne!

Of particular interest was the new **Scan 250** and **LL195 Controller** from Leisure Lighting which is aimed at the smaller club or Mobile DJ, and features full manual control or full auto functioning. The moving light is budget priced at $920 + tax and comes with 8 colours, 4 gobo and strobing effect. The controller comes with a joystick, 11 built-in programmes and can be audio activated.

Also on show was the new **Coemar Nat TM 1200 DX,** a compact fixture with 360° total movement in both axis. The Nat 1200 DX uses 12 channels of DMX, has 9 colours (with a pure seamless colour mix), 1200w HMI lamp, strobing function pulsing iris, 5 gobos fully indexed and rotatable in both directions at variable speeds, focus and of course the trademark Nat head. Price is just under $10,000.

The recently released **Mini Ultra-Scan 2** and **Micro Scan 3** were on display too.

Software, such as **ShowCad**, was on display and Richie demonstrated just how easy it was to use compared to stencils! Hands on experience was certainly useful here.

For further info call: CDA (03) 9467 8666.

new high performance range of 1.0/1.2kw Condensor Profiles *from* Selecon

Selecon have released their new High Performance Range of 1.0/1.2kW Condensor Profiles. The range includes:

- 9 -21° Long Throw for those front and side auditorium positions where the throw is such that the Medium angle luminaire wastes too much light.
- 14 - 36° Medium a general purpose Condensor profile for front of house and onstage work. The front zoom lens assembly comprises three lenses necessary to avoid distortion in the wider angle settings.
- 30 - 54° for short throw positions in studios and smaller theatres. As for the Medium luminaire the front zoom lens assembly comprises three lenses to remove distortion of the beam.

Selecon R&D found their optical modelling software particularly effective in optimising light output and selecting lens combinations which deliver a wide range of beam angles while minimising the distortion commonly found when using beam angles wider than 30 degrees.

The condensor optic design positioned before the gate uses two lenses resulting in an increase in the amount of useful light directed through the gate and in the evenness of its distribution.

For both the Medium and Wide luminaires a three lens combination is used to achieve the beam angle variation. The rear combination of two plano convex lenses removes the distortion that normally occurs in wider angle settings. This design, claims Selecon, ensures the unique projector like quality of the Condensor optics is able to be fully used across the whole range of 9 to 54 degrees that their luminaires cover.

WRITE IN 212 ON READER SERVICE CARD FOR INFO

simply the most

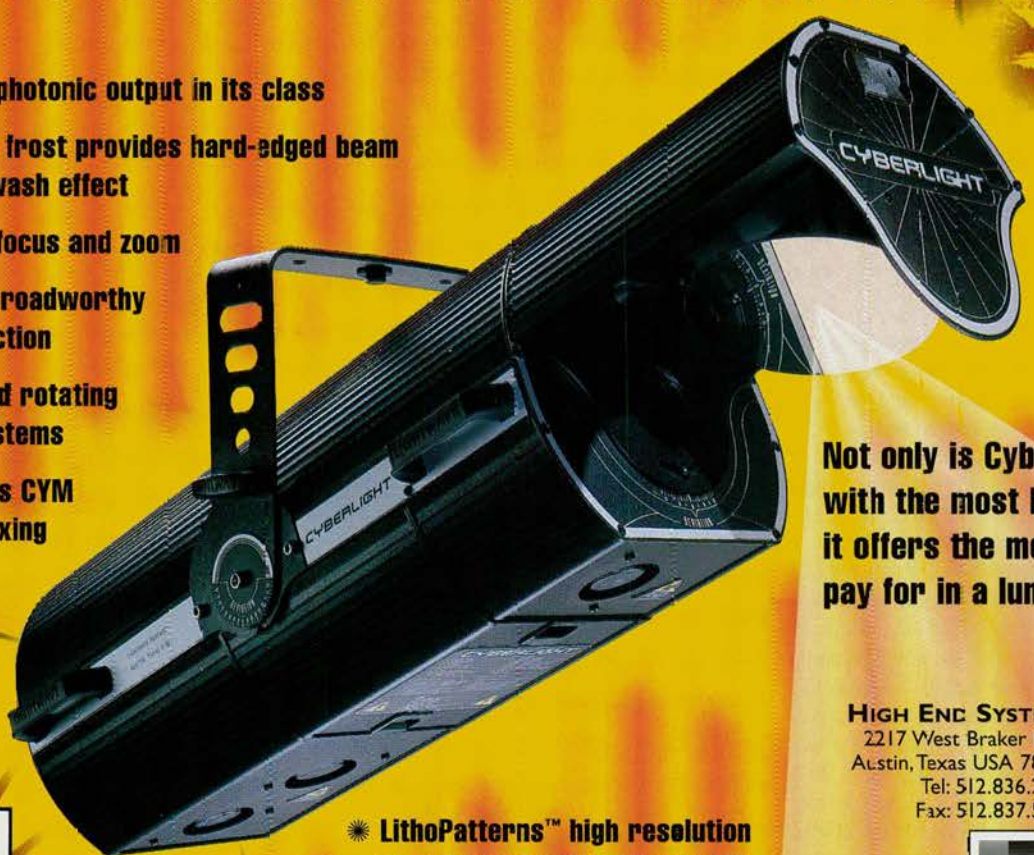
BRILLIANT

[sun gobo]

[psyrbye™ gobo]

performer in showbiz

- Highest photonic output in its class
- Variable frost provides hard-edged beam to soft wash effect
- Remote focus and zoom
- Rugged, roadworthy construction
- Fixed and rotating gobo systems
- Seamless CYM color mixing



Not only is Cyberlight packed with the most brilliant features, it offers the most of what you pay for in a luminaire... *Light.*

- LithoPatterns™ high resolution glass gobos produced only for Cyberlight and Cyberlight® CX.

GUVT

82 Arthur Street,
Fortitude Valley QLD 4006
Tel : 07. 3. 358. 5022
Fax : 07. 3. 358. 4969

HIGH END SYSTEMS
2217 West Braker Lane
Austin, Texas USA 78758
Tel: 512.836.2242
Fax: 512.837.5290

LIGHTWAVE RESEARCH®

High End SYSTEMS
The Science of Lighting™

CYBERLIGHT

CALL 1-800-773-187

Write in Reader Service number: 111

South Pacific at Chiang Mai

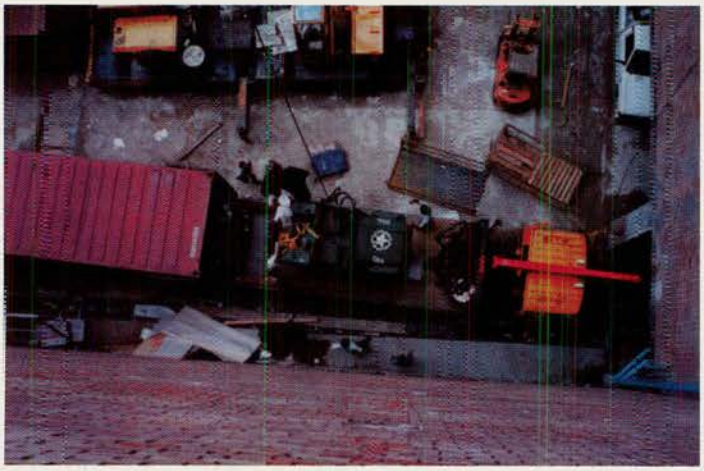
Nigel Levings reports on the latest Australian production to venture into Asia

Chiang Mai is Thailand's second city, nestled in the Northern mountainous area. Here a modern 5 star hotel, a five story shopping complex topped with a cinema chain and a 1500 seat lyric theatre have been built just outside the moat surrounding the ancient city of Chiang Mai.

The tasteful auditorium of the theatre features traditional Thai timber carving and a stage that is designed to house traditional Thai theatre forms and large scale western style productions. The proscenium opening is very wide by our standards and is based on the stage ratio of traditional Thai theatre. The prompt and op forestage areas are built to accommodate the side orchestra positions. The proscenium width is 25.2 metres, the South Pacific set was opened up 2m from it's maximum Australian width but there was still a wide gap to the proscenium box boom positions. The proscenium height is 9.2m but the stage suprisingly shallow, 2 metres less than our shallowest venue so far, HMT Sydney. This dept reduction was taken up in the flies by cutting one of the Bali Ha'i bridges and bringing the back wall of the set downstage. This unfortunately also meant the loss of one of the side lighting slots built into the set.

The theatres width caused lots of problems for our production including some horrendous sight lines from the edge block of seats in the stalls. These wide auditoriums are always a headache for lighting designers as the auditorium ox boom positions end up too far away and at a very acute angle to the stage. Sydney's Capitol Theatre has a similar problem which I was able to resolve in 'West Side Story' by putting my box boom in the orchestra pit. In the Kad Theatre Chiang Mai this solution was not available. The wide stage also meant very long and very heavy barrels on the line sets. The barrels have been welded up into single lengths which made the removal and storage of 25m plus lengths very awkward and the flying requirements of 'South Pacific' meant that there were a lot to remove and store.

Building standards in Thailand are different to say the least. Thai ceilings are a terrible trap for tall Australians. The use of spirit levels and tape measures also seem to be very limited in the building industry in Chiang Mai. Construction of the theatre grid is very inaccurate and this caused the bump in crew endless problems in a very heavy flying show like 'South Pacific'. A major problem in the bump in as that 21 out of the theatre's 57 lines had to be rebuilt by the bump in crew. This meant rebuilding cradles so that they ran square, replacing the wire rope in the system, rewarding head blocks so that they were square and in line, and introducing the wonders of swaging to Thailand where the dog clip and a couple of turns around the bar are the standard methods of attaching the lines to the barrel.



Bumping in - up 7 storeys

These rebuilds of the theatre combined with delays in processing the scenery through customs in Bangkok put the production a long way behind from day 1. Day 1 incidentally didn't start until day 3 when the first truck finally arrived from Bangkok. Added to this was the fact that the theatre is on the seventh floor and the only get in was through a dock door in the rear stage. This dock door opens to a sheer 50 metre drop to a lane beside the shopping complex. Every piece of scenery has to be lifted by crane and swung in through the dock door which is under 3m high. There is a taller dock door but it is another two floors up on the fly floor level. There is also a lifting beam and hoist - not finished at the time we were getting in and unlikely to be strong enough for heavy shows like 'South Pacific'. Our load in started on Wednesday morning and with round the clock crews we got the final piece of scenery on stage on Saturday. Arriving in a tropical climate around the start of the monsoon season is also bound to cause the odd hiccup in the load in.

The lighting equipment is a big swag of the latest that Strand has to offer. Supplied by Strand Hong Kong it includes a good assortment of all the right sort of equipment you would need to light in a theatre of this size. The Alto, Toccata and Cantata range of lanterns together with assorted bits and pieces including the Strand re badged Rainbow scroller, some hefty Pani projectors and Selecon's Performer follow spots. The control system is a Galaxy Nova and there is no shortage o dimmers. There is a curious feature in the patch system. It seems that the original notion must have been for "dimmer per outlet" as the outlets are hard wired to the dimmers. Somewhere along the line dimmers must have been cut as there are now a number of paralleled outlets. All this may have been fine if the labelling had been consistent. The outlet number is not the same as the dimmer number even though there is no provision for it ever to be anything other than the dimmer number. The parallel outlets were not easy to find either - that is until our head lx Al Forster spent a lot of his meal breaks entering their numbering system onto a spreadsheet to help

Back wall - going up!

SOUTH PACIFIC AT CHIANG MAI (cont)

track down our patching difficulties. Two streams of DMX output from the Galaxy are available wherever they seem to be needed although you may find the electrical installation is not the neatest you have ever seen - "agricultural" is the word that springs to mind

The crew as well as the theatre are very new. They need time to get to know their new home. When we arrives they had just been through the nightmare of he so called 'soft opening' of the theatre with the Gordon Frost Organisation production of 'Grease'. 'South Pacific' was to be the official opening of the venue. The crew largely do not come from a tradition of western theatre forms and so there were some steep learning curves to follow. Chiang Mai is also a relatively small town and the chances of finding experienced crew are slim. Our follow spot operators were mostly students and were too young for my assistant LD, Chris Yates, to buy drinks for on the opening night. Nonetheless the Thai crew were splendid; a very friendly, even tempered and constantly smiling people. They may have a way to go before they get to the standards of the fabulous crew at Hong Kong's Academy Theatre but they have been well and truly baptised by fire with 'South pacific'.

Cultural differences are a difficulty when trying to make p lost time in a tough bump in. The two crews trying to work quickly and efficiently together are constantly having to face not only the barrier of language differences but also the barrier of misunderstanding each others culture. 'Thai Time' was the expression used to indicate that somewhere our sense of urgency for a task to be completed was not being communicated to our local crew. Thai culture is strongly concerned with harmony and so a 'yes' may be to ease your concerns and re establish your peace of mind rather than a confirmation that a job has been done. Good manners are very important to the Thai people. Our rather relaxed attitude to the formalities of social situations must have been a shock to the locals.

It is certain that there will be more touring of Australian productions into the Asian circuit. Perhaps we will see in the not too distant future a chain of touring venues like the old JC Williamson's chain. Australian productions have already played Singapore, Chiang Mai, Hong Kong and Seoul. It is not hard to see that to this could be added Jakarta, Manilla, Bangkok, Ho Chi Minh City, and if the Yen ever drops to a comprehensible level, Tokyo. Australian crews will need to become the world experts at relating to different cultures and to working across the language barriers. We are excellently placed to do this as these cultures and languages all have thriving communities on our major cities and our multi cultural society has taught us all the value of mutual respect.

● **Nigel Levings**

THE FORGOTTEN FACTOR
'the truss'

Given the preoccupation of the professional lighting fraternity with such wonders as intelligent lights, lasers and DMX control, it's no surprise that scant attention is paid to the structures from which all this high technology hangs - the trussing system.

Admittedly, trussing systems in their most basic form could hardly be called inspirational (the basic rock'n'roll pub rig often comprises a pair of stands supporting a single span of truss), but a look at some of the major discotheque installations around the globe shows evidence that the design and fabrication of trussing has become an art form in its own right. The system design is often integral to the image created by architects and designers.

The live production industry has advanced from rigs which were typically steel or scaffolding based to aluminium systems that are winched on chain motors and can be erected with much greater efficiencies in time and manpower. Modular staging systems are often integrated with the trussing and are designed to minimise set up times.

The Penn Fabrication Stand at the recent PALA show

Penn Fabrication design and manufacture Headwater Trussing & Staging Systems which are designed to maximise utility in all applications from static display systems to concert production rigs.

TRUSS SYSTEM 2000

System 2000 is a ground supported truss system based around 250mm square truss and featuring single hung front and back drop truss. The 500mm x 400mm drop truss house the par cans and socapex connectors are standard equipment on the sliding drop truss light bars. It is available in a number of configurations and can be supplied with a roof canopy if desired. Options include a power winch system with inboard motors, double hung drop trussing and front/rear roof extensions. The dedicated tower system includes built in ladders.

The system is ideal for small to medium size shows, is supplied with all rigging hardware and can erected by 4 people in 3 hours.

STAGING SYSTEM 2000

Staging System 2000 is a fully self levelling 12m x 12m stage system. The 2.4m x 1.2m aluminium frame panels are 1.5kg lighter than conventional panels and the deck surface is slip resistant.

The system is 95% tool free and can be set up in 2.5 hours by six people. A range of options is offered including sound wings, a stair riser system and hand rail system.

TRUSS SYSTEM 5000

The newly released System 5000 is a roof truss system that represents a 45% increase on load bearing capacity over the System 2000. Utilising heavy duty 3.2mm wall fluted tubing System 5000 is available in configurations up to 20m x 20m x 10m. It has a double hung drop truss front and back and is winched via chain motors.

In addition to being chain motor driven System 5000 employs heavy duty outriggers, winch carriages and top plates and has a built in ladder system.

STAGING SYSTEM 5000

The Staging System 5000 uses a heavy duty aluminium frame and slip resistant decking. Like the System 2000, the 5000 is a self levelling stage and is suitable for outdoor applications.

The four corner legs of the stage form the bases onto which the towers of the 5000 series truss are bolted, producing an overall system of strength and stability. PA wings, stage risers, stairs and hand rails can be added.

SMALLER SYSTEMS

In addition to those mentioned above, Penn manufactures a range of smaller 'club' systems designed to cater for the installation market. These include domes, circles, goalpost and flying systems ideal for nightclub, theatre and school applications. Truss systems can also be customised to suit individual applications.

For further info call: Penn Fabrication (03) 9646 7222.

Put Away Your Par Cans!

Here Comes the Robocolour PRO400!

Consider this ..

Martin's NEW Robocolour PRO400 delivers 32 colour combinations plus a hot colour modifier, 2,000 hour lamp life, DMX512 control, full-range mechanical dimmer, a choice of 3 beam widths, plus a wash and a strobe effect. All this in a compact package that operates on 1.25 amps!

So, if you are still using expensive, heavy and power-hungry dimmers, still fiddling about with cellotape and gel strings, and still lugging around Par Cans powered via permanently tangled wiring looms, then take a look at the new Robocolour PRO400 - you'll never look back

Martin Professional - the choice of professionals!

Martin

Show Technology Australia Pty Ltd. • 13-15 Bridge Street • Rydalmere NSW 2116 • Phone 02 898 1111 • Fax 02 898 1222

Write in Reader Service number: 152

When Big Bob Bobbed Out.....

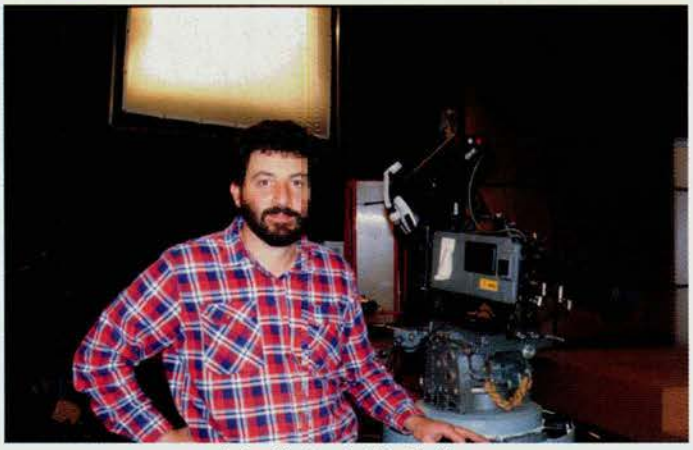
Cat Forcer meets the new Lighting Supervisor at Channel 7

When Bob Fletcher left, after 30 years, from his position as Lighting Supervisor at Channel 7, his successor was John Norton. John is no spring chicken at Channel 7 either, having been there for the past 21 years. Obviously life must be good at the television station as very few people in the department seem to leave (not the same could be said for Channel 7 ownership!). There are ten permanent and three casual staff employed in the lighting department.

John is in charge of supervising the lighting of the three studios at the Sydney headquarters - Studios A, C and E. There was a Studio F not so long ago but it has been turned into a wardrobe department for the popular *Home & Away*. For the past couple of months, since he took over the position, John has been bogged down by 'paperwork' and is only now able to get his hands back to lighting.

"Most lighting guys hate paperwork and it's very difficult to get invoices from the guys!" he joked. "Nobody wants to sit behind a desk so I'm trying to work out a happy medium at the moment."

Studio A is very busy as it is currently used for the shows *Denton*, *Funniest People* , *The Sports Show* and a new religious program called *Please Explain* The audience seating is on air skates which means it can be swivelled into various positions quite easily.



John Norton in Studio C

"Although if we move the audience around 900 the re rigs can be quite big," said John. "These days different shows demand different looks for their audiences. You can't light the audience the same way for each show. We prefer to hire equipment, particularly for variety, rather than buy it due mainly to the technology changing so fast. We use a range of suppliers including Lotts of Watts, Premier and Bytecraft. We have 240 dimmers in this studio so we've hired an extra 24 to run the groundrow for the cyc and the 80 par cans. They're on hire as is the cabling that runs them and the scrollers. For us to put that in ourselves - purchase the dimmers, put the cabling in etc - is about $7000. It's cheaper to hire it at about $200 per week. When the show finishes the cabling has to come down and it's all hooked up through the roof so it'll take a while."

The studio was also to be used for the now defunct *Mulray* show which would have meant it would have to be turned around five nights of the week. The studio has a pulley and rope system so the batons have to be manoeuvred manually. Generally a crew of five can turn over a fairly large rig in five hours. As the Mulray show was a return show not too much work on the set or lighting was wasted.

"The floor plans were already set," said John. "What troubled us most was that we got into a hire arrangement with Lotts of Watts for 26 weeks. They were going to give us a good price as it was a longer hire than normal. As the equipment would have been here 26 weeks we could have used it on other programs as well without an extra hire fee. We would have had 4 Golden Scans, a smoke machine and follow spot which would have been great on other things too. But, as you know, the show finished after a week and we lost the ability to have that stuff on stand by which was a shame."

The less complicated Studio E is taken up four days of the week by *Home & Away*. In Studio E the rigging is electronic and there is less lighting involved in a drama rig than a variety rig.

Studio C will be home to Channel 7's latest adventure called *Missing Pieces* which John will light. Because Studio C is a fixed grid, set three and a half metres above the floor, it's virtually impossible to run two shows from it as it takes three days to turn over.

"Because the studio is vacant we've had the luxury of being able to put the set in a week earlier," said John. "Slotting a new show into a busy studio schedule can cause problems to arise and you have to make do. We're still using tube cameras in here and so we have to lift the light up. Mitch Lane, who lights *Denton*, runs at 40 or 50ft candles maximum because he uses a lot of colour and he wants to be able to see it when he drops it in. Operating at such a low light level, you can use heavy, rich colours and you can still see them. Here in Studio C we need twice as much light at least 100ft candles. Also the auto cue on the cameras knocks back the light. It's a little restrictive but we have to make it work."

Because Studio C is a fixed grid most work was done with a scissor lift and it took three guys a couple of days to get the rig together. John had a fair amount of time to point the rig which was needed because the set was highly reflective causing its own problems. All the softlights were taken out of the roof and 5K fresnels with large scrims in front of them were used as a softlight and space light source.

When Studio C was built it was an exact copy of an American studio even to the extent of using 120 volt power to run everything.

"Slowly over the years we've changed it over," said John. "We've got about a dozen touring racks up on the grid and we've hired some Bytecraft Bytesize 12 way racks which we plug in on the floor. So the whole studio is powered off portable racks and dimmers which works for now. There is a proposal to turn the studio over and make it the same as Studio E. But I believe that'll cost over $2 million dollars to put the grid in, electronic winches, batons and a dimmer room downstairs. At the moment the studio is slightly underpowered for what we want to do, 250 amps of power is not a lot to play with when you're doing some shows like *Hard Yards* that was in here. Next door (Studio E) has 384 5K dimmers and here we have 180 so we have to work within these restrictions."

ROSCO
PRODUCTS THAT MAKE IT HAPPEN

Supergel colour filters - and only Supergel colour filters - allow you to reach the new levels of design so many designers, technicians, producers and audiences are now demanding.

In the last couple of years alone, the range has been enhanced with many new colours, colours that designers everywhere describe as "cleaner, hotter, stronger".

With well over 100 colours and diffusers the range gives incredible freedom of expression and because Supergel colour filters tend to last longer, they are more economical.

All of which means it is probably time you looked at the better-than-ever Supergel range.

And that means better than anybody else's.

TALK TO YOUR ROSCO DEALER

For your free copy of the ROSCO book 'Choosing Colour' contact
ROSCO AUSTRALIA PTY LTD
P.O. Box 873, Artarmon, 2064
ph (02) 9066262 fax (02) 9063430

For Theatre, Film & Video Production

Write in Reader Service number: 138

THE ART OF LIGHT

Film & TV Production

OSRAM HMI®

Whether an entire stage has to be flooded in sunshine or just one small area needs spotlighting, HMI lamps from OSRAM are so efficient that they provide perfect illumination whatever the requirement - and in daylight quality too. Their matchless efficiency means that HMI lamps are ideal for all lighting situations from floodlighting to spotlighting. Success is based on innovation and OSRAM, as the leading supplier of specialty film and TV production lamps, has innovative technologies at hand. For your nearest distributor and stage lighting specialist call 02 - 481 8399

TECHNOLOGY BROUGHT TO LIGHT **OSRAM**

Write in Reader Service number: 157

WBD OSR 95-1004 DO

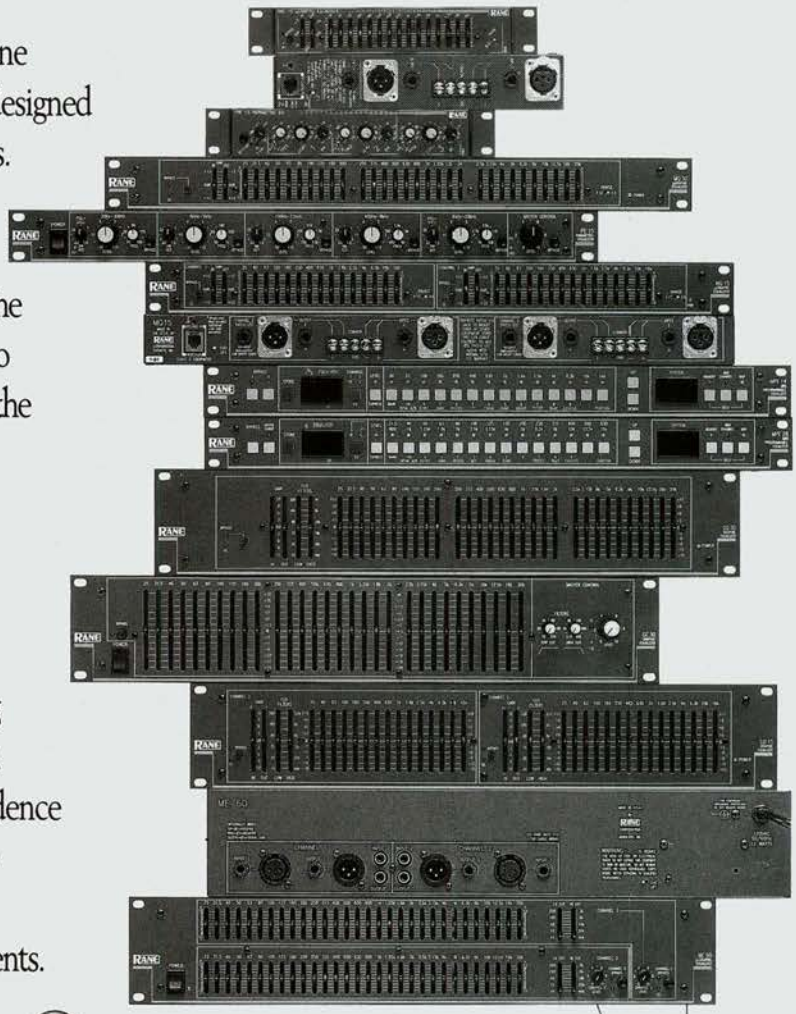
"THE RIGHT TOOL FOR THE JOB"

There's no substitute for the right tool. So when it comes to equalization, look to Rane for a superlative arsenal of equipment designed exclusively for commercial applications.

A recognized leader in equalizer technology, Rane offers an extensive line of commercial equalizer designs, from the standard-setting GE 30 dual-mode graphic to the compact FME 15 HR-format graphic to the programmable MPE series. All are safety agency exempt and fitted with a full compliment of connector hardware to meet your specific needs.

Every Rane equalizer offers the same proven reliability and uncompromising studio grade sonic quality, regardless of price.

So you can choose with confidence from a variety of models to satisfy a wide range of budget and format requirements. Whatever your job, we've got the right tool.



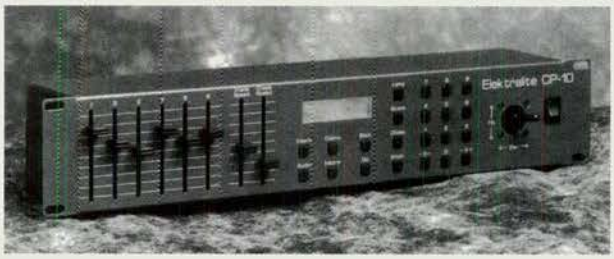
PURITY BY DESIGN

RANE

JANDS Jands Electronics Pty Ltd ACN 001 187837
578 Princes Highway, St Peters, NSW 2044 Tel: (02) 516 3622 Fax: (02) 517 1045

Write in Reader Service number: 118

ELEKTRALITE CP-10 CONTROLLER



Group One have released their new Elektralite CP-10 Controller following the success of the CP-1 which was introduced 18 months ago.

No matter what brand of lights you use - Roboscans, Miniscans, Golden Scans, Trackspots, Intellabeams, Microscans, Mini Ultra Scans - individually, or all at once, the CP-10's extensive library of 'personalities' has all bases covered.

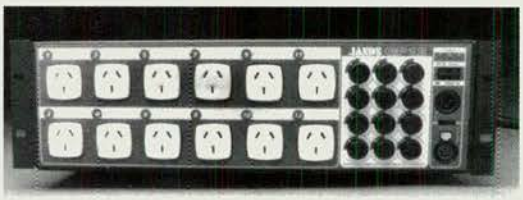
According to their Australian distributor Show Technology, the unit is quick and easy to program, comes with timed crossfade and is compact at 2 RU and 19" rack mount. Features include:

- 64 DMX channels
- 200 programmable scene memories
- sound to light
- can control conventional dimmers, colour changers - anything with a DMX input
- midi in/out
- 50 chases with up to 99 programmable steps
- coarse/fine joy stick control
- can control up to 8 separate fixtures of up to 8 DMX channels each. Price: $2499.

Call: Show Technology (02) 898 1111.

WRITE IN 214 ON READER SERVICE CARD FOR INFO

The Jands GP12



The new Jands GP12 digitally controlled dimmer rack is the successor to the popular Jands Roadpak. Designed for use with lighting consoles providing a DMX512 output (such as the Jands Event, Event Plus, ESPII and Stage 12/24), the GP12 is the result of 12 months R&D.

"With GP12 the design intentions were to create a cost effective, compact and reliable dimmer using the most efficient technology for local and overseas distribution," says Jands engineering director Peter Grisard. "The Jands line-up now provides users with a choice of equipment that fulfils both technical and budget demands."

The GP12 features 12 output channels, each with a maximum load of 2.4kW, with Ferrodip™ choke assemblies providing low acoustic and electrical noise characteristics. The GP12 can be rack mounted for touring use or attached directly to a wall in permanent installations, and is supplied complete with a two metre length of power cable fitted with a Clipsal three-phase plug (export models may vary) and mounting brackets. Price: $2795 RRP.

For further info call: Jands (02) 516 3622.

WRITE IN 213 ON READER SERVICE CARD FOR INFO

Bits

- In the second sizeable sale of lighting by **Selecon** to Australia's seat of government, Canberra's Parliament house now boasts a swag of new loose lighting equipment in 'The Great Hall'. Adaptable 7 inch PC1200's,Arena 2500 watt profiles and some of the new 1200 12-26 degree Condensor profiles make up the basis of the new system.
- The Sydney based **Australian Opera** have recently taken delivery of a new Rainbow Scroller system from Herkes Electrical. The system include 8 inch 2/16, the new 15 inch plus scrollers and are powered by a MaxiPsu splitter /power supply.
- **Chameleon Touring Systems** has taken delivery of an ETC Epression 2x lighting control console for use with David Atkins' *Hot Shoe Shuffle*. Rumour has it the show will appear on Broadway next year: coals to Newcastle!
- **Warner Brothers MovieWorld** on the Gold Coast has purchased three ETC Expression 2x consoles. They will be used to control conventional and moving lights and feature in the new 'Maverick Show', a wild west stunt display.
- The recent refit of the **Regent** in Melbourne has seen the installation of 21x 4 way 800w Selecon Cyc lights from Three Arts services.

TECHNOFEAR 'WHITE STAR'

Technofear want everybody to know about their new laser system the 'White Star'. This colour laser projection system was designed, developed, assembled and tested by Technofear who claim that it is designed and configured in a totally modular way allowing future technology to simply connect into its appropriate position.

"There is no limit to what you can do with our systems" says Mark Marshall, one of the key people from Technofear.

Technofear's design, creation and control facilities are constantly being updated in order to cater for all their future products and other products under development with their overseas network of laser technologists.

The system is powered with a Spectra-Physics 'White Light' laser which has a stable laser output of >20 watts, though the system is designed to withstand much higher wattage. The system can control multiple scanners simultaneously producing flicker free images with a higher resolution. Incorporated is a specially selected crystal for colour selection and high speed blanking allows an infinite colour palette including the ability of colour fill and variable beam size.

"This is not just off-the-shelf software and hardware," said Marks. "This is the merging of over 10 years of R&D development updating our software and hardware in order for us to achieve our own concepts and those of others without technology being the key limiting factor. We've finally done it."

Other features:

- Internal and external triggering of effects and accessories
- Sync to all standards through custom configuration menu
- full system control and diagnostics

full 3D & Stereoscopic output

- ILDA compatible
- fail safe - safety interlocks

For further info or demonstration call: Technofear (02) 544 1711.

WASH LUMINAIRE NAMED 'STUDIO COLOUR'

American lighting manufacturer and distributor High End Systems recently announced that they are changing the model name of their new automated wash luminaire from Technicolor *(see April issue of Connections)* to the Lightwave Research Studio Color™. According to High End Systems CEO Lowell Fowler, "The name Technicolor was never really accepted throughout our distributor network, and the overwhelming suggestion was to change the product name."

For further info call: GUVT (07) 358 5022.

BRISBANE LX COMPANIES

The first of a two part story from Daniel Cole

In an attempt to keep track of entertainment supply and service in QLD, Connections went-a-visiting. Included here are some companies who took the time to respond.

Laser

The mood at Laser is certainly buoyant. In Brisbane over the past year there has been a number of entertainment opportunities and Laser seems to be responding.

Although the company supplies both lighting and sound, "We are actually specialists in each area" said Sales Manager, Peter McKenzie.

Laser Showroom

Managing Director, Phil Hansson looks after the pro-audio side of the operation whilst Peter McKenzie plots the lighting scheme.

"The company was started by Phil; he looks after the audio visual aspect whereas I do lighting, so people know immediately who they're dealing with," continued Peter.

The engineering side of the company is strong also.

"I'm an electrical contractor by trade and Phil Hansson is a fully qualified electrical engineer — these are qualifications that professional people can deal and associate with."

Their new factory is a 10 min. walk from Brisbane's Transit centre, so they are well positioned within the city. A warehouse next door will become an "active lighting sound display area", used for live events and featuring equipment supported by the company.

Over the past year the direction of the company has moved towards specialist areas such as convention and contractual work.

"The look is the thing," said Mr McKenzie. "The way we've renovated our new premises is towards select industries. We are now aiming towards markets that you normally wouldn't put lighting. So when you walk in to the building it doesn't look like a disco hire company, instead, we have quality from the front door onwards."

The shift towards other areas seems to be going well. One of Laser's most recent projects has been supply to the Brisbane Exhibition and Convention Centre.

"Since I've been here we've won three civic centre jobs and the Convention Centre, which required a lot of time," he says. "The contract is certainly the biggest item on Laser's books so far — if not in Brisbane. The contract is worth in excess of half a million dollars."

Large biscuits.

Laser supplied a range of luminares from theatrical, architectural and par cans; also, trussing, cabling and accessories such as clamps, filter.

"The contract was won not by being the cheapest but through supplying services and information when required — being around and willing to help. Laser was competing with a larger company with more of a record of larger installations so having a rapport helped.

"The Convention Centre has been a quick turnaround from tender to supply, something like three months," Mr Mc Kenzie said. "We're still in the thick of it now."

To further hone their potential for tenders, Laser is working towards gaining Quality Assurance, a business rating supervised by their State Government. Once they are assessed as complying with the Government stipulations, the process of tendering for projects will give them an edge. The Government is encouraging Q.A. at all levels.

Laser also maintain a well stocked hire section. They have a wide and numerous selection

PREMIER Lighting
MELBOURNE • SYDNEY • BRISBANE
LIGHTING FOR ENTERTAINMENT

HIRE: Australia's widest range of lighting hire equipment.

SERVICE: highly trained staff who are on call 24 hours a day.

SALES: a full range of all major brands.

Australia's Premier Lighting Company!

Port Melbourne 03 646 4522
Bayswater 03 720 4765
Leichhardt 02 550 9233
Albion 07 262 8366

Technofear®

You MIGHT find other laser sales and production companies slightly cheaper or more expensive than Technofear – but there's no doubt, after your experience, you won't use them again.

Why ? Because the others bombard you with technology with little regard for concepts, creativity and artistic design.

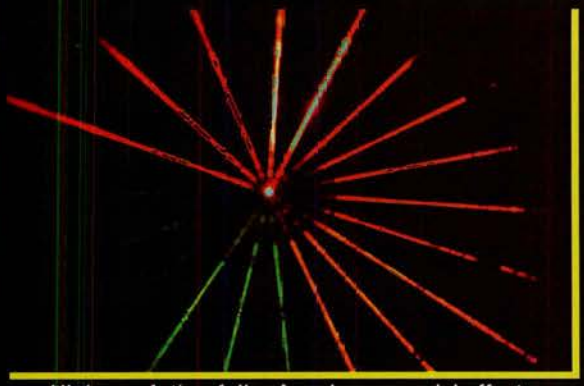
Well, not at Technofear ! Our design capabilities are renowned, with clients continually utilising our services acting as living proof. Yet, we still offer a full spectrum of laser technology to suit every application, indoors and out.

At Technofear we are dedicated to provide you with the very latest in state-of-the-art technology, concepts and artistic design with experience and knowledge where it counts.

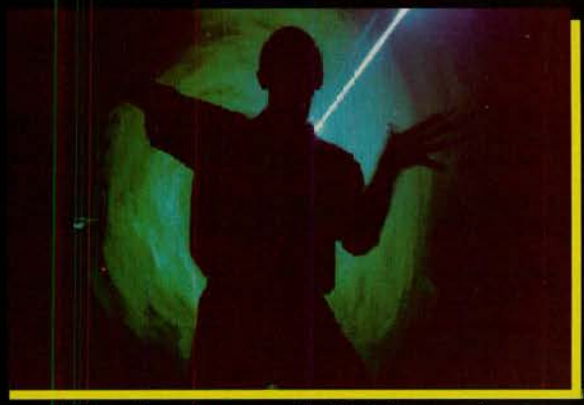
Combine this with our GLOBAL network of Lasershow designers and you have a unique and valuable resource.

Be it Corporate, Entertainment or that Special Project, when you're ready to get serious about design, call Technofear.

Just try us and experience the difference.



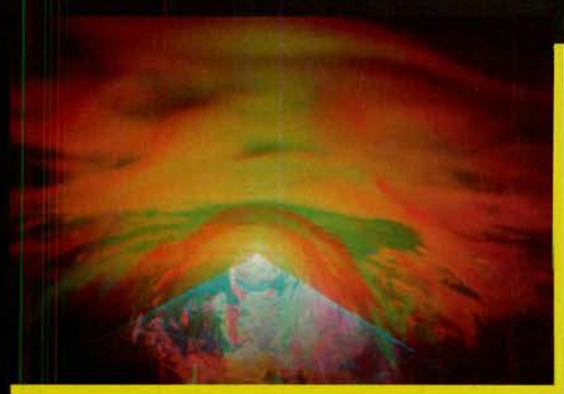
High resolution full colour laser special effects.



Interactive choreographed total immersion.

Full 3D capabilities, to bring your concept to life!

Perfect reproduction of your clients corporate insignias.



Telephone: (02) 544-1711
Laser Production Studio
P.O. Box 801
Cronulla NSW 2230.
E-Mail: technofear.com.au

© Copyright 1995 - Technofear® a registered trade mark of Technofear Pty Limited A.C.N. 003 052 319. All rights reserved.

Write in reader service number 153

YOU CAN FEEL GOOD ABOUT YOUR BUYING DECISION

PRICE

"For the past 7 years we have consistently maintained the lowest List Prices on the market".

PERFORMANCE

Dollar for Dollar our luminaires outperform the opposition.

PREFERENCE

We offer a choice of over 40 different luminaire types/configurations, including Theatrical, Low Voltage and Metal Halide units, all of which can be Powder Coated in your choice of colour. Weather-proofing for outdoor applications is also available.

PATRIOTISM

A decision in favour of Prolite is not only practical and cost effective, you will also have done your bit to create jobs for Australians and help rectify our balance of payments problem.

500/650w Fresnel	Includes Barn Door, Lamp, Plug Top, Gel Frame, Safety Cable & Freight	**$227**.co
1000/1200w Fresnel	Includes Barn Door, Lamp, Plug Top, Gel Frame, Safety Cable & Freight	**$382**.co
500/650w P/Convex	Includes Barn Door, Lamp, Plug Top, Gel Frame, Safety Cable & Freight	**$257**.co
1000/1200w P/Convex	Includes Barn Door, Lamp, Plug Top, Gel Frame, Safety Cable & Freight	**$419**.co
500/650w Profile	Includes Lamp, Gel Frame, Plug Top, S/Cable, Shutter Blades & Freight	**$375**.co
1000/1200w Profile	Includes Lamp, Gel Frame, Plug Top, S/Cable, Shutter Blades & Freight	**$581**.co
1000w Single Cell Cyclorama	Includes Lamp, Gel Frame, Plug Top, Safety Cable & Freight	**$181**.co
1000w Four Cell Cyclorama	Includes Lamp, Gel Frame, Plug Top, Safety Cable & Freight	**$582**.co
2000w Compact Follow Spot	(Fan Cooled) Includes Colour Magazine, Lamp, Stand & Freight	**$1455**.co

21% Sales Tax will apply to non-exempt purchasers. A surcharge applies for finishes other than Matt Black Units.

For more information please contact any of the distributors listed below or contact us direct.

PROLITE MANUFACTURING PTY LTD A.C.N. 010 736 508
3/76 Mort St. (P.O. Box 1143), Toowoomba, Qld. 4350
Tel: (076) 32 7312 **Fax: (076) 32 7439**

PROLITE DISTRIBUTORS

VIC		
Lightmoves P.E.S. (Melbourne)	Tel (03) 819 4566	Fax (03) 819 5463
CC's Stage & Studio	Tel (03) 690 3999	Fax (03) 690 3988
ACT		
Nova Production Supplies (Canberra)	Tel (06) 239 2722	Fax (06) 239 2723
WA		
Theatrecrafts (Perth)	Tel (09) 227 7015	Fax (09) 328 2787
NSW		
Stage and Studio (Sydney)	Tel (02) 439 8188	Fax (02) 439 7881
Macsound Electronics (NSW Country)	Tel (067) 78 4090	Fax (067) 78 4911
Northern Sound & Vision (NSW Nth.Coast)	Tel (066) 85 7577	Fax (066) 85 8244
QLD		
Entertainment Services (Brisbane)	Tel (07) 881 3233	Fax (07) 881 3122
Entertainment Lighting Supplies (Gold Coast)	Tel (075) 93 5105	Fax (075) 93 5161
Theatre Equipment Supplies (Brisbane)	Tel (07) 881 3911	Fax (07) 881 3801
Behind The Scenes (Brisbane)	Tel (07) 285 5722	Fax (07) 285 1977

Write in Reader Service number: 155

Brisbane LX Companies (cont)

of theatre, architectural, club lighting and accessories plus a comprehensive audio section, looked after by both Kerrod Heineger and service technician Graham Illsey. Quizzed on the role of their hire department in the 'new regime',

"It is open to public but we don't see a need to push this side of it," he said. "We will keep it turning over but like the rest of the company, it's emphasis will change."

Hire Equipment (abridged) :

AUDIO

JBL 4894 Arrays, JBL System 1400 & 700 Speakers, Jands SR 3000s, Crown PB2, Yamaha & TAC consoles, full range of microphones, D.I.s, effects.

LIGHTING

Jands event 60 Plus, Event 24 Plus, Jands Digital dimmer racks, CLS alloy truss, Par 64s and Ray's. Selecon fresnels and profiles. Intelligent lighting by Coemar and Martin. Full range of rigging. Transport and crewing services as required to suit productions.

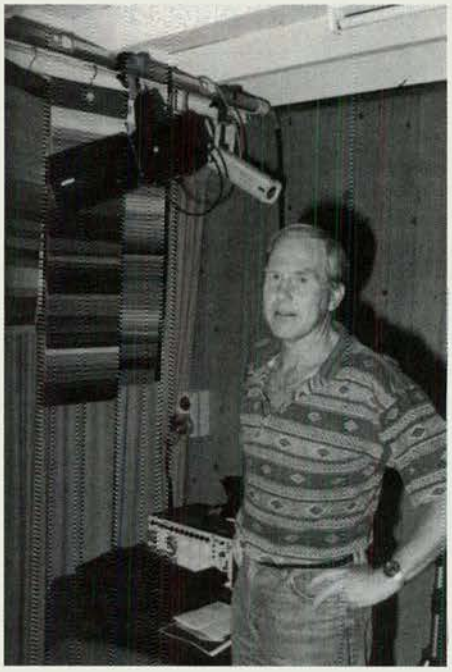
Laser employs a staff of six full-time (including one work experience).

Contact: Laser Pty Ltd, 350 Upper Roma St, PO Box 5510 West End Qld 4101. Telephone (07) 236 2333 Facsimile (07) 236 2555.

Behind The Scenes

Two years ago John Rippin purchased Behind The Scenes which has been trading since 1985. Behind the Scenes caters mainly to the theatrical market. Their role is "to provide high quality theatre product and advice to the industry," said Mr Rippin.

The company has always been known as a manufacturer and supplier of theatrical curtains. They now supply most items; rigging, luminares and associated accessories, such as lighting effects, filter, scenic paints. Behind The Scenes is a distributor of LSC dimmers and control; Prolite theatre luminares; Hawko; Colortran film and television lighting; Portafloor stages, catwalks; HFT theatre tracks and brackets as well as Lee and Rosco products.



John Rippin (Managing Director) Behind The Scenes

Recently, Behind The Scenes was appointed Queensland distributor of Q Engineering.

"We can now expand our services to include less traditional markets such as the building industry or contractual field, and maintain our regular clients, schools, theatres," said Mr Rippin. "We are not a large company, so we don't enter into large scale tendering or supply; we service a wide range of small theatre companies, schools and halls."

The personal approach is his preferred way of doing business.

"We operate with discretion; because the nature and relative size of the theatre business, people are very particular about service and we respond to that.

"I also visit schools and teach kids the basics of technical theatre, so I have a commitment to the future of the theatre industry." he said.

A set back was experienced at the start of this year when vandals set alight the complex in which Behind The Scenes is located. Unfortunately the whole showroom was burnt, and it was only an act of (thespian?) fate that the fire service arrived in time. An order for $100,000 of fireproofed curtains was sitting in the dock ready for shipment.

They have since refurbished and built a new showroom and things seem to be going well. They have installations spread across Queensland and interstate — to the surprise of some larger suppliers with whom they compete. Some more recent customers include *The Royal QLD Theatre Company, Darwin Performing Arts Centre, Redcliffe Civic Centre, Brisbane Entertainment Centre* as well as the circuit of smaller community theatres.

The company is located outside of Brisbane in an industrial suburb called Lawnton. Staff include John Rippin, Managing Director; Janet Leeding, Administration and in curtain manufacturing, Jan Smith and Michelle Edwards.

Contact: Behind The Scenes, Unit 7, 42 Paisley Drive Lawnton, Q 4501. Telephone (07) 285 5722 or Facsimile (07) 285 1977.

Discotheque...or...Professional
LyteQuest By Gemini

FG-2000E $327
Smoke Machine Inc. Remote

SL-750E $195
High Powered Strobe

LQ-70E $165
Sound Activated Moon Flower

LQ-370E $536
The Fantom

Disco World has the Answer

Disco World pty. ltd.
20 Cave Hill Rd. or P.O. Box 509
Lilydale, Melbourne Vic 3140
™Ph (03) 9735 0588 Fax (03) 9739 5255

ALL PRICES ARE EXCLUSIVE OF SALES TAX AND SUBJECT TO CHANGE WITHOUT NOTICE.

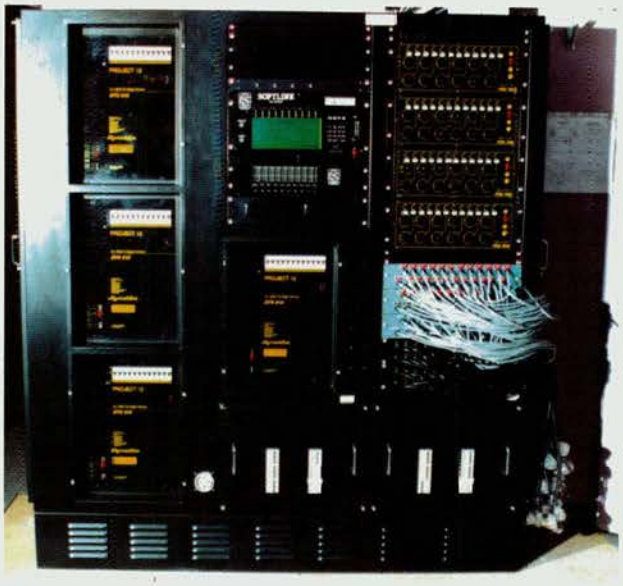
Write in reader service number 132

BALLROOM BLITZ

I recently spoke to Robert Van Der Ent of Grafton Lighting who had replaced the antiquated dimming system at the Wentworth Sheraton Hotel's Ballroom.

"The dimmers had been there since year dot when the place was built," said Robert. "We were to replace them with ones that talk several different languages as well as design and build the unit to do the job.

"We ended up pulling out the existing dimmers and relocating the circuits to the new Dynalite DTK916's. There were four racks of those at 4.5K each which enabled me to take control of the three different ballrooms and the outside foyer. They each had individual dimming channels and control by either DYNet, the system the house control panels work off, or from the house lighting desk via DMX512.



"I incorporated a LSC Softlink which enabled me to send two different DMX links, first of all to 916's which control the house lights to another four production Dynalite ProPacks therefore enabling them to take control of the complete ballroom as far as their production channels go and also the house lights.

"It's a fairly comprehensive system which allows them to run in three separate modes where each ballroom either runs off DMX or the DYNet. Also it can combine two thirds of which can run either language.

The system had to be replaced during the Easter weekend and after a few bugs, everything was running well. The noise in the control room has been reduced and more space has been made available. Previously a 'large green dinosaur' has dominated the room but Robert had been able to confine his dimmers and patching into one cabinet against the rear wall of the room. Robert had to bring in extra power of 100 amps per leg into the ballroom as it was running too hot before. It took several months to design and with Dynalite and LSC products used, there's a high Australian content involved.

Bits

- **East Coast Lighting** confirms the Queensland Conservatorium have chosen new Selecon Enhanced Zoomspot 1200's to light up this prestigious new Brisbane venue.
- The **Adelaide Entertainment Centre** has recently upgraded their followspots to the latest versions of Selecons MSR Performer 1200 bringing them in line with the bulk of hire and touring venues around Australia.
- **Premier Lighting** in Melbourne, Sydney and Brisbane have added more HP dimmers to their rental staocks. The latest order includes both the HP12 (12 x 10A0 and HP6 (6 x 25A) dimmer versions. In addition, Premier will be adding more Event consoles and several of the new Jands Hogs to their inventory over coming months.
- **Coemar de Sisti** have sold some new Tas Mini Ultra-Scan 2's to BSS in Adelaide and to Entertainment Warehouse in Melbourne.
- **Total Concept Productions** have been awarded the contract to refit the sound and lighting systems in the main auditorium of South Sydney Juniors.

Jands products will feature heavily in the refit and will include the Jands Hog 250, Jands HP dimmers, ETC DMX distribution amps, Soundcraft mixing consoles, Crest amplifiers, Rane signal processing and JBL Array loudspeakers.

- **Selecons**' Simon Garrett and wife Sarah are pleased to announce the birth of their son 'Felix' on June 12th weighing in at 7lbs 2ozs and as cute as a button. Simon insists that Felix was not born with side burns!

CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS

CLS

CONCERT LIGHTING SYSTEMS AUSTRALIA PTY LTD

PRODUCTION • Service available for concerts, theatre, corporate, displays & parties.

HIRE • Huge range of the latest lighting equipment, effects and drapes at low prices.

SALES • Call us for Pan Command, High End, Selecon, Jands, LSC, Kupo, Rosco, GAM Products, Lee Filters, G.E., Osram and Phillips Lamps..... ..... all at discount prices.

MANUFACTURE • We manufacture top quality Trussing, Stands and Clamps, Rigging and Electrical Controls, as well as Oil Crackers and Dry Ice Machines.

282 Normanby Road,
Port Melbourne VIC 3207
Ph: 61 3 646 8444 Fax: 61 3 646 8555

CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS CLS

LASER SCIENCE

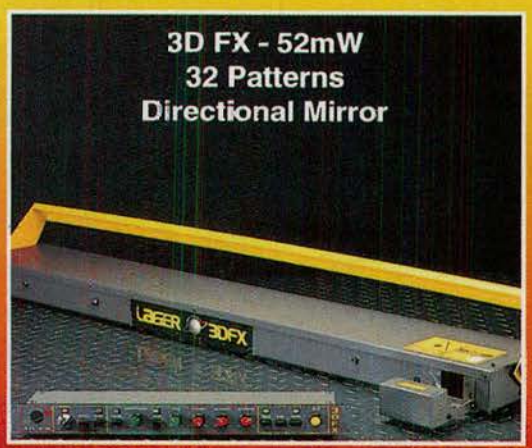
MORE POWER FOR YOUR MONEY !

Interstate Dealers Required

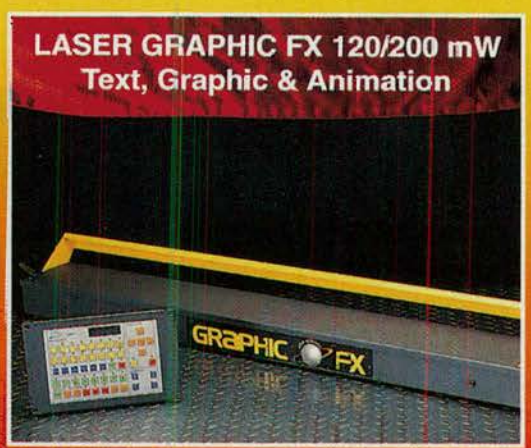
TRISCAN 8mW

LASER FX 15 mW
32 Preset Patterns

3D FX - 52mW
32 Patterns
Directional Mirror



LASER GRAPHIC FX 120/200 mW
Text, Graphic & Animation



NU-Light Systems

Lasers that break through the price barrier

Distributed in Australia by:

Black Express Light & Sound

257 Homer Street, Earlwood, NSW 2206.
Phone: (02) 559 4363, Fax: (02) 558 4923

MADE IN EUROPE

Write in Reader Service Number: 165

BUYERS GUIDE

Lighting Control Boards for Dimmers

DYNALITE (Australia)

From Dynalite, Contact Guy Holden, Ph: (02) 319 5055

MINI CHASER - Sound activated 3 or 4 channel 600w per channel chaser with simple or shadow chase. 4 channel, 600watt per channel. Price: $357.

STUDIO 4 - Dimmer, desk, chaser, 4 channel controller/dimmer circuit breaker protected, sound to light flash chase + fade chase. 1000w per channel, 4 channel, 4 sliders plus master. Price: $961.

STUDIO 12 - Analogue desk, 2 presets with masters, 4 channel chase with separate control for flash and chase. 12 channel analogue desk. Price: $864.

AVOLITES (UK)

From L.S.C. Electronics, Contact Dean McFadden, Ph: (03) 9561 5255

ROLACUE PEARL - High quality touring desk with full moving light control, Preset Focus buttons and 3 dimensional intelligent tracking system. 512 DMX output channels, 15 submasters, 450 memories, 30 pages, 60 channel faders, high resolution DMX512 (16 bit), Midi output. Price: $16,299.00.

ROLACUE SAPPHIRE - High quality touring desk with full moving light control and enough power for suprisingly large shows. 512 DMX output channels, 20 submasters, 450 memories, 30 pages, 60 channel faders, high resolution DMX512 (16 bit), Midi output. Price: $38,148.00.

DIAMOND II - A powerful and technologically progressive console built to Avolites tradition of high quality and ruggedness. 1024 DMX output channels (expandable to 6000), 30 submasters, 3000 memories, 100 pages, 180 channel faders, 8 wheels for Automated Instrument Attribute Control. Price: $76,143.00.

L.S.C. ELECTRONICS(Australia)

From L.S.C. Electronics, Contact Dean McFadden, Ph: (03) 9561 5255

ATOM 12/24 ***(NEW)*** - An entry level console but also for experienced users, offers wide mode, up and down faders, multiple chases, plenty of memory and options such as disc backup. 12/24 channels, 12 masters for scenes or chases, 9 pages, 108 scenes or chases, 99 steps/chase, softpatch to 99 dimmers, grab master, DMX512 optional disk backup, sound to light optional analog output. Price $1350.00. Also available in a 24/48 version ($2200.00).

AXIOM 24/48 - Middle size of the 'Australian Design Award' winning series, controls mixture of moving lights, scrollers and standard lighting. 24/48 channels, 1022 memories, LTP control, 24 submasters, 24 chases, 24 stacks, 4 patches (proportional), DMX512 output, sound to light optional disk backup, optional analogue output. Price: $3450.00. *Also available in 12/24 ($1950) and 36/72 ($4850) versions.*

FOCAL - The LSC flagship, this modular system can control from 60 to 255 channels and includes a full array of scenes, chases, stacks and patching faders are optional and single, 2 or 3 preset configuration are possible. 60 - 255 channels, 4 softpatches to 512 dimmers, modular construction, graphic LCD display, up to 58 submasters, 99 chases, 99 stacks, DMX512 output, disk backup, video option, systems designed to order. Price: POA.

GREAT AMERICAN MARKET

From Showcraft, Contact Lee Conlon, Ph: (02) 698 3009

GAM COMMAND - Hand held DMX riggers control, operates dimmers, colour changers, moving lights, ideal for remote focus and for pre-testing equipment. Full access to all 512 dimmers, handles groups of dimmers, provides backup for console failure, checks 5 pin cables and DMX signal. Price: $381.00.

GAM OPTO-ISO - Compact optical isolator and line splitter for DMX, provides distribution and safety for DMX driven systems in adverse power situations. Battery operated for easy placement, plug-pak power inlet for long term use, sturdy metal case. Price $209.00.

GAM SWITCH DMX - Compact priority switcher, provides automatic switching between Gam Command and light console. Transfers control between two lighting consoles automatically when one is turned off, battery operated or plug-pak input. Price: $241.00.

ETC (USA)

From Jands, Contact Michael Tanner, Ph: (02) 576 3622

MICROVISION FX - Memory console suitable for theatre and studio use. 125 control channels, 512 digital dimmers (DMX512), 3.5" disk drive, c/w colour monitor. Price: $12,900 inc tax.

INSIGHT 2X - Memory console suitable for theatre and studio use. 324 control channels, 108 submasters, 1536 digital dimmers, 3.5" disk drive, "x'+'y' group wheels. Price: $49,900 inc tax.

EXPRESSION 2X - Memory console suitable for theatre and studio use. 500 control channels, 24 submasters, 1536 digital dimmers, 3.5" disk drive, "x'+'y' group wheels. Price: $52,900 inc tax.

IMPRESSION - 250 control channels, 24 submasters, 1536 digital dimmers, 3.5" disk drive, group wheels. Price: $38,900 inc tax.

JANDS (Australia)

From Jands, Contact Michael Tanner, Ph: (02) 516 3622

STAGE 12 - It's cheap, black and good so buy lots (said Jands!). 12 channels, DMX output, chaser, flash buttons, grab function. Price: $995 inc tax. *Also available in a 24 channel version ($1695).*

ESP II 48/96 - Manual/memory console. 48-96 channels, 512 dimmers, 3xsoftpatch, flash buttons, 24 scene masters, separate x fade + effect controls. Price: $5995 inc tax. *Also available in a 24/48 version ($3995)*

EVENT - Available in 24, 36, 48, and 60 channel versions, memory/manual operation. 24 to 252 channels, 512 dimmers scene, stack memory + chases, flash buttons, VDU options. Price: from $6995 inc tax.

MARTIN (Denmark)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

3032 PC PACKAGE - A comprehensive PC based controller, intuitive 'icon' based control in full colour. Up to 96 Roboscan channels (ie. fixtures), can be triggered via analogue or DMX, software upgradeable, run up to 10 cues at once. Price: $3250.

2308 CONTROLLER - Now has more memory (611 scenes) and can run any Martin product (using Martins own protocol). Controls up to 8xRoboscans or 32xRobocolours, stores up to 10 different shows of up to 255 sequences (96 different), 99 scene, 611 scene capacity, sound to light. Price: $2065.30.

2501 CONTROLLER - Entry level budget control which is simple to operate. Controls up to 32 units, in-built programs, sound to light, 9 easy to use microswitch keys, 19" rack mount. Price: $577.70.

GENI (Taiwan)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

GENI CHASER - A compact 5A/ch 4 channel chaser that features in built patterns and audio activation, comes c/w hanging bracket, ideal for mobile DJs, small clubs or bands. 4 channels, 5A per channel, audio activation. Price: $245.

RDJ-12 - Low voltage output controller operated via a hand held wireless remote, can chase or switch channels. 12 outputs 0-10v, wireless control, in built chase patterns. Price: $815.

MICROCOLOUR CONTROLLER - Primarily designed to run Microcolours and Geni DMX strobes but does output 4ch of DMX512 as well. 4ch output DMX512, built in Microcolour programs, built in strobe programs. Price: $327.

SINGLE CH DMX SWITCH - To control any analogue switching to DMX. 1 channel DMX512 in - 240v switching, 16 amps, small PCB design allows mounting inside existing fixture. Price: $113.

PULSAR (UK)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

MASTERPIECE 108 - Can control any piece of equipment that can accept 0-10v, DMX512 or PMX (Pulsar Multiplex). 108 channels. 216 scenes, 54 scene chasers, 48 environments. and 6 environment chases. Price: $6610.75.

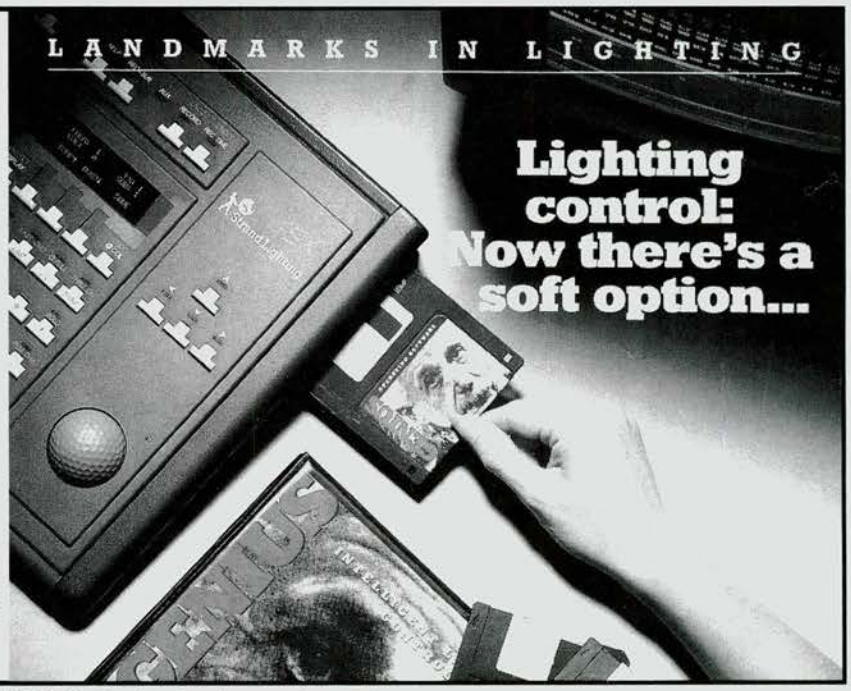
MASTERPIECE 48 - Baby brother of the Masterpiece 108 - now with DMX512 as well as PMX. 48 channels, 96 scenes, 24 scene chasers, 22 environments, 2 environment chases. Price: $4519.85.

SW6000 - 6ch analogue switch pack that has front panel control for local switching as well as 0-10v DC

Strand's GSX™ console announces a new era in lighting control, offering you the flexibility to choose and upgrade your console software via the integral 3.5" disk drive. Simply select one of the Genius™ foundation applications for 25, 50, 75, 100 or 125 channels, giving full professional functionality, then add Kaleidoscope™ for advanced effects and colour scroller control, and Communique™ adding MIDI, MIDI Show Control, DMX in, RS-232 control and more. So when the time comes to add features or channels, you won't have to replace your desk - just upgrade your software. It's brilliant!

Ask for more information now!

Strand Lighting



Distributed exclusively throughout Australia by
BYTECRAFT PTY LTD A.C.N. 006 348 054
23-27 Fonceca Street, Mordialloc, VIC Tel: (03) 9587 2555
Unit4, 2 Railway Pde, Lidcombe, NSW Tel: (02) 646 5999
30 Jeays Street, Bowen Hills, QLD Tel: (07) 252 5988

Write in Reader Service number: 151

control input. 6 channels of switching, 5A/ch, 0-10v dc, 19" rack mount 1 RU high. Price: $490.

MA LIGHTING (Germany)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

SCANCOMMANDER - Ideal for serious scanner control, extensive factory set 'personalities' enables control of practically any intelligent light, voted 'best dedicated Moving Light Controller' at 1994 Entech Awards. 368 channels via DMX512, 16 multifunction fixtures up to 17 channels each, 96 extra channels for additional dimmers or colour changers, 104 basic memories, 26 chaser effects, 16 sequences with up to 99 steps. Price: $11,983.50.

LIGHTCOMMANDER II 12/24 - Offers the technology of the Scancommander, flexible desk for all applications. 12 channels (24 in wide mode), 2 extra 0-10v DC outputs, 12 memory masters, 120 real level memories, 9000 steps in up to 99 programs, 5 multi speed chases, midi in/out, 32KB memory card, sound to light + DMX512. Price: $2395.90.

GROUP ONE (USA)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

CP-10 - The *NEW* CP-10 eliminates the need for a big desk when running moving lights. Its extensive library of 'personalities' covers just about every brand of light. 64 DMX channels, 200 programmable scene memories, sound to light, midi in/out, 50 chases with up to 99 programmable steps, can control up to 8 separate fixtures of up to 8 DMX channels each. Price: $2065.30.

THEATRELIGHT (New Zealand)

From Lightmoves Technologies, Contact Jonathan Ciddor, Ph: (02) 560 000

CUEMASTER 48 - Manual/memory console facilitating creation and replay of manual scenes, fade scenes, chases or entire shows on scene masters. 48 channels, DMX512, 240 scene masters, VDU display. Price: $4650. *Also available with 120 channels ($6850).*

CUEMASTER PLUS 48 - As above, DMX-link panel provides DMX mixing, 100 scene back, soft patch, VDU display independent of main console. 48 channels, DMX512, 240 scene masters, VDU display. Price: $7250. *Also available with 120 channels ($9250)*

DMX-LINK - Free standing back up console with DMX mixing, soft patch, VDU display, key pad channel access. 512 channel access, 100 scene storage and replay, 4 house light faders, printer port, memory card storage. Price: $4450.

JUNIOR 12 - 12 channel, 2 preset analogue console. Price: $925. *Also available with 24 channels ($1395)*

SCENEMASTER 3 12/24 - Entry level DMX console 12 channels - 2 preset, 2xchannel - 1 preset + park store, 24 scene masters, printer port option, VDU option. Price: $2225. *Also available 24/48 (2725)*

CELCO (UK)

From Lightmoves Technologies, Contact Jonathan Ciddor, Ph: (02) 560 000

NAVIGATOR V3.0 - Integrates control of conventional and intelligent lighting into one compact console. 240 channels, DMX512, 480 memories, 60 sequences, multiple intelligent lighting personalities. Price: $10,665.

AVIATOR R180/T360 & R720 - Three configurations of the latest consoles from Celco. 180, 360 and 720 channels respectively, 1024 dimmers, 1000 cues, 100 x 99 step sequences 25 lists, SVGA monitor, 3.5" floppy disk storage. Price: POA

COMPULITE (Israel)

From: Coemar De Sisti Australia P/L, Contact: Peter Kemp, Ph: (03) 9467 8666

ANIMATOR MLC 24/48/72 - Microcomputer-based systems designed to operate moving lights, standard dimmers, and scrollers, provides totally integrated control and direct access to all functions.Up to 72 moving lights (MLC 72) as well as an additional 512 DMX channels, multiple Trackballs & Wheels, macros & Effects, in-built chasers, Snap/Disk storage, DMX in/out, Midi in/thru/out, Multiple protocols (Coemar/High End/etc), Leader Effect for multiple moving lights. Price: from $16,000.

OVATION - Microcomputer-based memory desk of up to 800 channels and featuring printer, rigger and text interfaces with peripheral MLA moving light wing, MIDI interface, radio and infra-red remote control, back-up unit, and DMX input, 400 expandable to 800 channels, Internal disk storage, Direct dedicated control of moving lights, Animator moving light wing peripheral option, Dual monitor output, Radio link, Infra-red link, Back-up unit option, Snap/Disk storage, DMX in/out, Optional extra sub-master wing, Midi in/thru/out. Price: from $23,700.

APPLAUSE - Microcomputer-based memory desk of up to 400 channels and featuring printer, rigger and text interfaces with MIDI interface, radio and infra-red remote control, back-up unit, and DMX input. 400 channels, Single monitor output, internal disk storage, Radio link, Infra-red link, Back-up unit option, Snap/Disk storage, DMX in/out, Optional extra sub-master wing, Midi in/thru/out. Price: from $15,000.

SMART - Microcomputer-based desk of up to 96 channels with manual and auto-split crossfaders, chasers and submasters and featuring auto-sensing voltage adjustment. 96 channels, Single manual crossfader, Single Auto-split crossfader, 2 chasers, 12 controllers plus flashers editor with wheel, 5 Kg weight, Auto voltage sensing. Price: from $5,800.

AXON DIGITAL DESIGN (UK)

From: Coemar De Sisti Australia P/L, Contact: Peter Kemp, Ph: (03) 9467 8666

ShowCAD - PC-based lighting control system featuring propriety PC card and software, Operates up to 1024 channels of DMX with fixture specific templates, autogenerate scene creation, offsite editing, comprehensive softpatching, SMPTE, MIDI, DMX, Analogue and audio inputs. Optional front panel, 1024 DMX channels, Templates for most moving lights, Autogeneration of patches scenes, etc., DMX in/out, MIDI in/thru/out, Offsite editing in wordprocessor or in ShowCAD, 24hr on-line support, Operates on standard PC's. Price: from $5,645.

CRESCIT SOFTWARE (Canada)

From: Coemar De Sisti Australia P/L, Contact: Peter Kemp, Ph: (03) 9467 8666

SOFTPLAY - Extremely user friendly PC-based lighting control system featuring 24, 48, or 96 channel MIDI/DMX output, able to run on most standard PC's and to output to MIDI or DMX dimmers, almost infinite scene creation, ideal for smaller productions/schools. 24,48, or 96 MIDI/DMX channels, Softpatch, Joystick control of moving lights, Infinite scenes, Off-site editing, Live/blind editing, Timed crossfades, Fully programmable effects macros. Price: from $248.00.

AVAB (Sweden)

From Bytecraft Pty Ltd, Contact: Durham Ritchie, Ph: (03) 9587 2555

AVAB 211 - Suitable for the smaller venue, this desk can also be integrated with VLC system just released from AVAB. 24 masters with combined channel/master fader and channel group capability, 150 preset memories, timed or manual cross fader, help function, effects package, monitor and printer compatible. Price: $8400.

AVAB 202 - Suitable for small to medium size venue, may be integrated with the VLC system, also available as 202XP with more advance features. 24 switchable channel/submaster faders, joystick fade speed control, effects package, 3.5" disk drive, optional infra-red remote, monitor and printer, also available in 120 channel version. Price: $16,000.

AVAB EXPERT JR - Suitable for mid-range professional uses and may be integrated with the VLC system, also available are the Mini Expert, Expert and Expert XP with additional operating features. 24 multi purpose faders with flash buttons, manual or times, split dipless crossfades, joystick for fade speed control, optional infra-red remote, 128 channel version available. Price: $20,000.

AVAB VIKING VLC - Full specification professional memory lighting control with custom options incorporating the latest VLC system from AVAB. Modular, multi tasking capability, up to 6000 discrete channels, programmable special effects, fault detection and reporting, moving lantern and automation fully integrated, optional infra-red remote. Price: POA.

STRAND LIGHTING (UK)

From Bytecraft Pty Ltd, Contact: Durham Ritchie, Ph: (03) 9587 2555

MX48 - 2 preset 48 way manual desk with total of 192 memories suitable for school, amateur and semi-professional applications, also available in 12 and 24 channel modes. Flash button per channel, grand master, timed split cross fades, blackout switch, LCD display, programmable effects, printer and monitor available. Price: $4451.

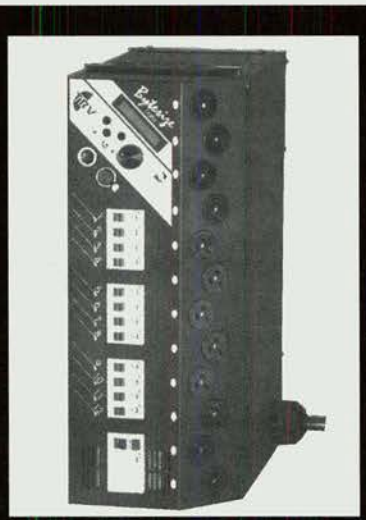
GSX - New generation lighting console combining a powerful hardware platform with application software packages allowing low-priced entry level with channel number and feature upgrade paths. Integral 3.5" disk drive, 2 independent playbacks, LCD display, 24 submasters, control up to DMX dimmers using 25, 50, 75, 100 or 125 channels. Price: $3000 - $10,000.

430 - New concept memory lighting console comprising hardware platform and disk loadable operating and application software, also available as 530 (600 channels, 400 attributes, 1024 DMX dimmers). Price: $25,000 - $60,000.

GALAXY NOVA - Full specification, comprehensive memory lighting control with custom options, integrated automated lighting control and digital dimmer feedback for opera houses, large scale theatres, concert halls and TV studios. Price: POA

Bytesize TRV

- Budget priced dimmer
- Circuit breaker protection
- Internal softpatch
- Curve control
- LCD display
- 10 amp or 20 amp



BYTESIZE TRV

BYTECRAFT

BYTECRAFT PTY LTD
A.C.N. 006 348 054

23 - 27 Fonceca Street, Mordialloc, VIC
Tel:(03) 9587 2555

Unit 4, 2 Railway Pde, Lidcombe, NSW
Tel: (02) 646 5999

30 Jeays St, Bowen Hills, QLD
Tel: (07) 252 5988

Write in Reader Service Number: 150

BUYERS GUIDE

dimmers

ENTERTAINMENT TECHNOLOGY (USA)

From Rosco Australia, Contact Ian Baseby, Ph: (02) 9906 6262

IPS-DS 1206

6 x 1200 watt dimmers in compact, lightweight housing, no mechanical noise, IPS can be hung in a truss, on a pipe or in scenery, for permanent or portable installations. Absolute voltage and current regulation - longer lamp life, universal dimmer - use with tungsten, inductive and ballast load, choke less dimmer - no noise less heat, IPS talkback reports dimmer and status load. Price: $2800.

JANDS (Australia)

From Jands, Contact Michael Tanner, Ph: (02) 516 3622

HP-12 - Professional touring dimmer supplied c/w 3 phase tail + plug. 12 x 10 amp channels, rack/wall mount. Price $3995 inc tax.

HP-6 - Professional digital dimmer supplied c/x 3 phase and tail + plug. 6 x 25 amp channels, rack/wall mount. Price: $4195 inc tax.

GP-12 - Entry level digital dimmer supplied c/w 3 phase and tail + plug. 12 x 10 amp channels, rack/wall mount. Price: $2795 inc tax.

4PAK - 4 channel dimmer/controller with flash buttons + chaser. 4 channels total output 10 amp. Price: $995 inc tax.

L.S.C. ELECTRONICS(Australia)

From L.S.C. Electronics, Contact Dean McFadden, Ph" (03) 9561 5255

TOUR SERIES 12X10 AMP - Microprocessor based low profile dimmer with rugged construction, reliability makes it suitable for on the road or permanently installed. 12 channels at 10 amps/channel, true digital control, DMX512 input, LED indicators, auto senses frequency, riggers test built in, fade curves, high noise suppression. Price: $2900. *Also available in 6x20 amp ($2900).*

WALLPAK 12X10 AMP - Microprocessor based wall mounting dimmer for permanent or semi-permanent installation, ideal for schools and theatres, front panel mounted outlets suitable for use with a patch panel such as LSC Flexipatch. 12 channels at 10amps/channel, 3 phase operation, DMX512 or analog models, built in test and chase controls, high suppression toroidal inductors, selectable fade curves. Price: $2900. *Also available in 6x20 amp version ($2900).*

SERIES H 2X20 AMP - Permanent installation dimmer for architectural use. 2 channels rated at 20 amps each, circuit breaker protection, terminal strip connections, high quality suppression using toroidal inductors, available in analog or DMX512 control. Price: $1200. Also available in 4x10 amp ($1200).

SERIES U 1X20 AMP - Permanent installation dimmer with a built-in up-down-preset control unit, four buttons off, 100% and 2 preset level selection up and down fade times can be set. One channel of 20 amp capability, circuit breaker protection, built-in bypass switch, remote control panels available, quality inductor for low noise operation. Price: $750. *Also available in 1x10 amp version ($660).*

PULSAR (UK)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

DATAPAK - Designed for permanent installations in mind, either wall or 19" rack mounted, either 0-10v DC or DMX512 control in a range of packages. 10, 12, 18 channels depending on model, 5A, 10A, 20A depending on model, DMX512 or 0-10v control, approval in EC. Price: from $1400.

GENI (Taiwan)

From Show Technology, Contact Emmanuel Ziino, Ph: 1800 646 666

LIGHT MODULATOR - 4 channel dimmer/chaser. 4 individual faders, master fader, background fader, sound chase, speed chase, 0-10v DC output (for further slaving of racks), flash buttons, 19" rack mount, RCA audio input. Price: $709.92.

DYNALITE (Australia)

From Lightmoves Technologies, Contact Jonathan Ciddor, Ph: (02) 560 0000

PROPACK 12 -Most suitable for schools, clubs and small tours. 12x2.4kW, DMX512, analogue + or -, 19" rack mount - 4RU, test facility. Price: $2070.

PRODUCTION DIMMER 12X2.4kW - Professional touring and production dimmer. 12x2.4kW, DMX512, analogue + or -, 19" rack mount - 3RU, test facility, circuit breakers. Price: $2885. Also available in a 6x5kW version ($2885).

STUDIO 12 DIMMER - For the budget and energy conscious. 12x1.0kW, analogue + or -, single phase supply fuses for protection. Price: $1038.

STUDIO 4 - Stand alone 10 amp single phase follow spot dimmer. 1x2400W channel, integral fader. Price: $324.

ZERO 88 (UK)

From Lightmoves Technologies, Contact Jonathan Ciddor, Ph: (02) 560 0000

DELTA PACK - Integrates with Zero 88 Mercury and Orion club controllers and Zero 88 sigma switch packs for lighting control solutions for clubs. 4x10kW dimmer channels, fault indication, single phase supply. Price: $513.

BYTECRAFT (Australia)

From Bytecraft Pty Ltd, Contact: Durham Ritchie, Ph: (03) 9587 2555

BYTESIZE - Budget priced dimmer with carry handle, can operate as stand alone upright or vertically or horizontally wall mounted, also available as 6 x 20A channels. 12 x 10A channels, DMX512 or AVAB input, MCB protected output, proportional output patching and curve control, LCD display mounted control panel, internal backup. Price: $3200.

BYTESIZE 483/TR -Broadcast quality dimmer for professional permanent and touring applications, also available in 6 x 5kW channel model. 12 x 2.4kW channels, input DMX512, AVAB DMX, Felix, Command Link, analogue +/- 10v, fault reporting, internal programming of 100 presets, softpatch, curve control. Price: $4200.

BIGTOP - Broadcast quality dimmer for touring applications includes 2 outlets per dimmer and guard rail, also available in 6 x 5kW channel model. 12 x 2.4kW channels, input DMX512, AVAB DMX, Felix, Command Link, analogue +/- 10v, fault reporting, internal programming of 100 presets, softpatch, curve control. Price: $4200.

IDS QUAD PACK - Broadcast quality modular dimmer system for professional permanent installation, also available in 36 x 5kW and 18 x 10kW channels models. 36 x 2.4kW channels, input DMX512, AVAB DMX, Felix, Command Link, analogue +/- 10v, fault reporting, internal programming of 100 presets, softpatch, curve control. Price: $21,000.

Note: All vendors have much more than the (maximum) four products illustrated here.

Buyers Guide on the Internet: Next.COM.AU, find us in 'Magazines'.

Next months Buyers Guide: Fresnel Spots & Floodlights

DOUGHTY CLAMPS

Coemar De Sisti now stock a range of Doughty clamps which they say combine strength and durability with a high degree of safety.

Constructed from high tensile aluminium extrusion which is finished in either polished silver or silk black, this unit provides a secure fixing for tubes with external diameters ranging from 48mm to 51mm. It is therefore suitable for use in many diverse applications including those associated with the construction, manufacturing and leisure industries. The standard clamp is slotted, allowing the use of a captive M12 nut or bolt head, which enables users to create fixings suited to their own individual requirements.

Doughty clamps, in common with all other products made by Doughty, are designed and manufactured within Great Britain under quality assurance systems which comply to several international standards.

Doughty have designed and developed the aluminium half coupler, (part No. T57000), in conjunction with the German engineering construction inspection service 'TUV'. This unit forms the basic component for the total range and has accordingly been subjected to the most stringent safety testing possible. The TUV have certified this coupler with a safe working load of 500kgs.

The Hook Clamp

Beware cheap imitations coming out of China, all Doughty products are stamped 'Doughty'.

Clamps are available from $39.00.

For further info call: CDA (03) 9467 8666.

Martin tough it out

Rod Salmon (part-time rally driver and Show Technology Director) and Michael Guest (current NSW Rally Champion), teamed up with Martin Professional of Denmark to form the Martin Roboscan Team and take 2nd place in the Mobile 1 Round Australia Trial.

This gruelling event took Rod, Michale and their martin Roboscan Mitsubishi (complete with service crew truck and back up car) and 251 other starters, 18,500 km around Australia in just 20 days.

Between Ayers Rock and Kalgoorlie the guys hit a kangaroo at 200 km/hour, and later that day, a tree! Fortunately damage was minimal.

After leading for 7 consecutive days and a virtual trouble-free run, the Roboscan team lost their lead after a series of mechanical problems. Despite a tremendous effort to regain the lead, the team came a tremendous second. Congratulations!

space cannon

TARGET
Series 2000, 3000
Multibeam Projector

THREE CS
3 Rotating Head
Searchlight

FOUR CS
4 Rotating Head
Searchlight

BLACK DEVIL
Series 2000,
4000 & 7000

DISTRIBUTED WITHIN AUSTRALIA BY:
ASHTON ADMOR PTY LTD ACN 009 460 235

PO Box 305 Belmont WA 6104
Tel: (09) 478 3800 Fax: (09) 479 1941

Write in Reader Service Number: 136

Classifieds

THE ONLY NATIONAL CLASSIFIED ... CALL (02) 876-3530, or FAX (02) 876-5715 BY THE 23RD OF THE MONTH

EMPLOYMENT

Receptionist (Junior). We need a young, bright, bubbly person to help us out with answering telephones, general office duties and some secretarial support. You must have completed a secretarial/office skills course, be computer literate and able to type. This is a position for a team player and is a great opportunity for the right person. Salary neg. Call Rolla on (02) 898 1111 for more information.

Casual : Carpenter (staging - riser assembly) **Loader/Assemblers** (staging), **Operators/ Loaders** (lighting). Please call David at Daylight International Lighting & Staging (BH. (02) 660 7755

STOLEN

Equipment stolen from Dave Scotland, C/- Turramurra Music (02) 449 8487 or A/H (02) 498 3639 or Gordon Police Station. **AMPS : Mesa Dual Rectifier** (Ser. No. R0103) in carpeted Nova Forge Roadcase. Chrome Chassis with leather covered casing. Has Marshall-style AC input (instead of standard hard-wired AC lead). **Peavey Classic 50/50** Stereo valve power amp. Was in Boss 2 - space rack (no lids) when stolen. **ART Power Plant** (Single space preamp). Was in Boxx 2 - space rack (with lids) with Yamaha vented blank panel. Accompanied by various leads. Boss FS-5U footswitch and power board. Home made 100w 1 x 12 combo, carpeted. Closed back with controls on back cover. Has crate 12 inch speaker. **SPEAKER BOXES : REXX** 1 x 12 inch TL Box, carpeted, with badge removed. Has back panel switch to give 3 different sounds from the box. Has pop-out/reset fuse. **Peavey 1245M** Monitor wedge. **ELECTRIC GUITARS ;** All are left hand guitars but strung for right hander. **Peavey Tracer** Locking - Trem Electric with Rosewood neck. Originally red but stripped back to wood (check cavities). Seymour Duncan Trembucker in bridge and '59 in neck (custom routed - originally single coil). Empty middle pick up hole covered by Pearl Plate. Spare Pickups in case. **Profile** Strat Copy, cream body with Rosewood neck in no-name rectangular case. Dimarzio HS-1 in Bridge and Seymour Duncan classic stacks in neck and middle. **Custom Tele-Style** electric with black body in gig bag. Ibanez Maple neck (logo sanded off). Gibson Les Paul bridge system. Dimarzio Paf in Bridge and Seymour Duncan '59 in neck. Strung with heavy strings and tuned to C#. One black guitar stand - you can keep that. **ACCESSORIES :** Fender black nylon gig bag. Korg DT-1 tuner. Hughes and Kettner red box. Boss TM-3 headphone amp. Ibanez crunch rhythm pedal. Magnalite AA torch. Guitool screwdriver/ Allen key set. Boss FS-5U. Many Jack to Jack leads, short speaker leads, Marshall type AC leads, etc. Various brass slides. 2 x Pro Harps (A and D). 1 Packet condoms (unused), unribbed, plain flavour.

WANTED

Early valve hi-fi, amplifiers, turntables, speakers, valves etc. Cash paid. Ph: 074 491 601

FOR HIRE

Classic range of valve and ribbon mics for hire. Charing Cross Studio (02) 387 8362.

FOR SALE

10 x Rainbow colour scrollers. 2 x Martin 1020 Roboscans. 1 x Event 24 Jands lighting desk. 3 x Memory cards. 2 x Jands digital dimmers (roadpacks).14 x Par 64 raycans. 6 x Par 64 washcans. 2 x Triple cyc. units.1 x Quad. cyc unit.12 x Pinspots and stands. 2 x 15' Push-up trees with Roboscan mountings. 2 x 10' Push up trees. All mains looms pre-wired. All DMX and 4 pin signal looms.1 x Blinder (dual). This near-new and compact lighting system is privately owned and in immacualte condition. It is fully roadcased and an absolute bargain at around half retail price. $30,000.00. Phone Andy on (09) 364 3178

ABS torn and bubbling on your roadcases? Cut it out, mask up the hardware and replace it with Rockard Coating for a new durable finish. Rockard Coatings 018 449 018

Aires 32-8 Console. $9000.00 Northside Sound (042) 292111 or 018 427123

Alesis 3 x Quadraverbs. $600.00 each o.n.o. Derringers Music. (08) 371 1884

AM 1600 x 5 Amps. $2000.00. Northside Sound (042) 292111 or 018 427123

American Art HD-31 x 2 EQ's. Long throw faders. $400.00 each. Derringers Music (08) 371 1884

Amp Jands 702 $700.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Amp Jands 920 $1000.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Amp Perreaux 6000 $1400.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Amp Perreaux 8000 $2000.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

ART 18-12's Cabs $2000.00 pair. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

ARX 118 18" Subs. Let's sell 'em. $5500.00 for eight, the lot. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

ARX EC-1 Crossover. $400.00. Northside Sound (042) 292111 or 018 427123

Attention : Rock and Roll Music, Sydney Concert

MORE ➡

Blackshoes PRODUCTIONS

Audio Visual Operator

We require a young, motivated Audio Visual Operator to work within our busy, expanding company. Experience in corporate audio and /or video required, with emphasis on lighting design & operation preferred. Clean cut appearance & drivers license essential. Technical knowledge an advantage.

Please apply in writing to:

The Production Manager

22 - 36 Mountain St., Ultimo NSW 2007.

IMPORTERS & DISTRIBUTORS OF HIGH-TECH LIGHTING & AUDIO EQUIPMENT

STOREPERSON

Entertainment Industry

Are you young, energetic & keen to work in the entertainment industry?
Then you're the person we're looking for!

Due to overwhelming demand and our commitment to customer service, we need to find another storeperson urgently. This is your chance to be part of a growing company with a large product range including the world's leading brands.

If you have experience in stores, that's great! But we will happily train you.
Salary and conditions are negotiable.

SHOW TECHNOLOGY AUSTRALIA

Interested?
Think you can help us out?
Then please call Suzie on 02 898 1111

Show Technology Australia Pty Ltd
ACN 062 241 785
13-15 Bridge Street
RYDALMERE NSW 2116
Telephone: 02 898 1111
Facsimile: 02 898 1222

WESTERN AUSTRALIA'S BEST PRICES on:
Jands Events - DMX Dimmers
Golden Scan III's - LSC Precept
Coemar Moving Lights
GEM, Rosco & TAS -
Smoke Machines
Colourset Scrollers
THEATRECRAFTS
The New Force in W.A. Lighting
For New &Second Hand
Call (09) 227 7015

MULTIMEDIA 2000

DIGITAL RECORDING & EDITING STUDIO

Spectral Digital Workstation
256 Tracks 16 I/O Capacity
Onboard DSP & Digital Patching
MIDI, Effects & Processing

MultiMedia 2000
91 Reservoir Street
Surry Hills NSW 2010
Tel: (02) 212 6358
Fax: (02) 211 3141

Enquire now! Our friendly team of experts are on hand to assess your requirements.

Classifieds

Light and Sound and Cannon Sound have joined forces. The new business will be known as Cannon Sound Systems. For further information call (02) 550 3828 or free call 1800 804994 Neil Smith.

Australian Monitor AM 1600 800 watts/side $2200.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Australian Monitor amplifier 1K2 600 watt/side $1800.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Australian Monitor BT350 Loudspeakers 1 x 15" & Horn $900.00 each. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Australian Monitor K7 amplifier 350 watts per side $1500.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

BGW 750 Amps x 2. In rack. Like new. $1600.00. Derringers Music (08) 371 1884

BSS FDS-320 Stereo 2 way, mono 4 way. $900.00. Northside Sound (042) 292111 or 018 427123

CD Double twin players inc. pitch control, pitch blend. Brand new $1100 plus tax. Disco World (03) 9735 0588.

Clay Paky 3 Miniscans - good condition. $3000.00 the lot. Phone Jason (07) 55 930 711

Consumables, Gaff, Gel, Lamps, Roadcase and Speaker hardware. Over 700 lines of essential entertainment consumables. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

DDA DD-500 Crossover. $800.00. Northside Sound (042) 292111 or 018 427123

Digitech RDS 3600 Digital delay. $350.00. Northside Sound (042) 292111 or 018 427123

Disco Effect from $180.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Evre20 Mks $600.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Ex-Hire Sound and Lighting equipment for sale. Lots to choose from. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Fender Speakers $500.00 Pr. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Foggers from $295.00 ex-rental. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Gauss x 2 Double 15" & 2". Loaded in system 1400 copy cabinets. $2200.00 pr. Derringers Music (08) 371 1884

Gemini U.S.A. DJ mixers U.S.A. PMX7 2 Phono, 2 Line, Removable Crossfader $185.00, PMX-2000 9 Inputs, 14 Band Equaliser, Removable Crossfader $549.00, New Stock Plus Tax. Disco World (03) 9735 0588.

Gemini U.S.A. Graphic equalisers, power amps, mixers, wireless mics, pre amps, turntables, speaker boxes. Phone for free catalogue. Disco World (03) 9735 0588.

Gemini U.S.A. Power Amps New From $620.00, PVX-160 160 Watts Ch x 2 into 8 ohms. New $899.00 plus Tax. Disco World (03) 9735 0588

Gemini U.S.A. True Diversity Wireless Mic system. Hand held mic inc. carry case. New $650.00 plus tax. Disco World (03) 9735 0588

Graftons W150 Wedges $250.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

H & H x 2. 15" Drivers. $120.00 each. Derringers Music (08) 371 1884

Inkel 12 Channel mixer amp $1600.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Instinct 48 Lighting console. $2900.00. (02) 799 7219

Jands 8 Gate $600.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Jands JM9 32-4-2 $2500.00. In roadcase. It's Good! A let's sell it price.Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Jands SR3000 Amplifiers. $2000.00 each. (02) 799 7219

Jands/JBL AP30 cabinets, 6 with canvas covers $2000.00 each. (02) 799 7219

JBL 2275 Drivers x 3. $300.00 each. Derringers Music (08) 371 1884

JBL 2420 x 2. 1" Drivers with 2425 Diaphragms. $250.00 each. Derringers Music (08) 371 1884

JBL 2425 Alnicl $300.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL 2445 Drivers. $650.00 each.Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL 2470 Drivers. $300.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL 4208 Studio monitors. Ex demo. $795.00. Derringers Music. (08) 371 1884

JBL Ceramic 2425 Drivers $250.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL Components, 2445s $600.00 each, 2225s $350.00 each. (02) 799 7219.

JBL M644 Gates. $795.00. Derringers Music (08) 371 1884

JBL MR Series 15 and horn trap boxes. Mint. $1600.00 pair. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL Systems 1400 XL $5000.00 pair ex demo. Be quick!. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

JBL x 2 4782 Soundpower double 12" subs. $3000.00. Derringers Music (08) 371 1884

JBL x 3. E140 Drivers. From $300.00. Derringers Music (08) 371 1884

KLARK TEKNIK DN-300 Graphic equaliser. $1100.00. Northside Sound (042) 292111 or 018 427123

Lamps and accessories - new & "experienced". Par 64, 56 and rays. T-Stands, barn doors, globes etc.

Lamps Smoke fluid, gels, gaffa, Lytequest, Martin Gemini, Dynamite. Disco World (03) 9735 0588.

Lexicon x 2 Prime time dual delay units. $400.00. Northside

MORE ➡

RE:MOVE

5642650

RE:MOVE

THE OFFICIAL CONNECTIONS EQUIPMENT RE-LOCATION TRANSPORTER.

DOMESTIC - COMMERCIAL REMOVALS & STORAGE

CALL MIKE (02) 564 2650

damien gerard SOUND STUDIOS

Professional Recording

Mic Sales

Studio Use Only

SHURE • BEYER • EV

Also Available.....

ASSORTED OUTBOARD & PERREAUX PREAMPS

Call Marshall for further details.

For information & bookings:
Call: (02) 660 8776
Fax: (02) 692 9915
64 - 80 Wattle Street
Ultimo NSW 2007

STUDIO SOLUTIONS

THE PRO AUDIO & VIDEO SPECIALISTS

- **Repairs**
- **Maintenance**
- **Sales**
- **Installations**

Call Howard Jones

Suite 105, 511 Pacific Highway, CROWS NEST NSW.
Phone (02) 906-4363 Fax (02) 439-6444

Classifieds

Sound (042) 292111 or 018 427123

Lighting Equipment - Second Hand. Colorwiz Scrollers $375.00 each. Altam Lekos $175.00 each. 18ft Winch-Up Stands $300.00 each, Floor Stands $3.00 each, Rosco 1500 Smoke Machine $300.00, ZR-20 Smoke Machine $500.00, Powermist Smoke Machine $500.00, Jands Stagemaster 12 Channel Desk $400.00, 10ft Telescopic Stands $70.00 each, Twin Beacons $40.00 each, White Lighting Strobes $400.00. All working. CLS (03) 9646 8444

Lightwave Research Emulators x 2 and 1 L.R. Controller plus roadcases, signal leads and clamps. Approx. 1.25 globes. Used since new. Excellent condition. $10,250.00. All offers considered. Genuine buyers only. Ph: (03) 9853 1586.

Looms Wieland 15 metres to 30 metres. From $135.00 each. Header $60.00 each. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

LSC Precept 24, Precept 12 & racks. Offers. Northside Sound (042) 292111 or 018 427123

Lyrec 16-2" with 24 Tr. Headblock. V.G.C. $4000.00 Digital Paradise (07) 552 70722

Mic Stands Boom ex-rental. $40.00. Atlas Boom Stands $95.00 New. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Microphones (2), Sennheiser 441 VGC. $375.00 or 2 for $700.00. (03) 9585 0905

Microphones (4), Studio/Instrument. Primo/Nakamichi genuine condenser; VGC; phantom power or supplied external battery box with bass switch & pad. $350.00. (03) 9585 0905.

Milab DC-63 $500.00 - Cardiod Pattern only. Pathways Studio 048 721336

MITEC 40 Channel console onboard DBX gates and compressors 8 Sub groups 8 Aux sends & 8 Stereo Aux returns. $20,000.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

MXR Graphic equalizer 31 band mono $200.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Par 36 Pinspots $18 New inc. fuse, mirror balls, helicopters, ET's, ropelights, strobes, Lytequest lighting effects. Disco World (03) 9735 0588.

Par 38 Lightboxes. V. Good condition. With R95 100W ES lamps, 6-pin Utilux connectors in and through. $80.00 neg. 019 666 210 (Sydney).

Par 56 Cans Black or polished new from $49.00 plus tax. Disco World (03) 9735 0588.

Par 64 & 56's Black or chrome. From $65.00 Ex-rental. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Par 64 Cans Black or polished. New from $59.99 plus tax. Disco World (03) 9735 0588.

PEAVEY Tri flex Speaker System $500.00. Derringers Music (08) 371 1884

Peavey 16 Chnl. MK III $1200.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Perreaux 6200 amp. $1400.00. Northside Sound (042) 292111 or 018 427123

Phase Linear 1100 Series II Stereo 5 band parametric. Excellent condition. $400.00. CC'S Light & Sound. Ring for Free Catalogue 1800 80 30 64

Precept 24 In case. $1500.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Profiles 2K from $350.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Publison Desser $550.00 - Stereo. Pathways Studio (048) 721336

Radio microphones, Shure 58 inserts. $600.00 each. (02) 799 7219.

RAM Micro RM10, 10-8-2 desk. $400.00. Northside Sound (042) 292111 or 018 427123

Ramsa WR-P01A 200 Watt stereo powered mixer with 4 microphone inputs and 2 stereo line inputs. Excellent condition. $1395.00. CC'S Light & Sound. Ring for free catalogue. 1800 80 30 64.

RCF x 2. 15" Drivers. $150.00 each. Derringers Music (08) 371 1884

Revox B-77 Reel to Reel 1/4 inch Tape Machines (3). 3.3/4 and 7.1/2 IPS, IEC equalisation $1000.00 ea. Ph Warren Huck at CAAMA 089 529 202 or Fax 089 529 212.

Rockard Coating the easy way to finish roadcases and boxes. Rockard Coatings 018 449 018

Roland DEP.5 $600.00 Pathways Studio (048) 721336

Roland GE-810 Studio series graphic. $300.00. Northside Sound (042) 292111 or 018 427123

Roland SEQ-331 Graphic equalisers. $350.00. Northside Sound (042) 292111 or 018 427123

Roland SRV.2000 $750.00. Pathways Studio (048) 721336

Ross 31 Band EQ mono $200.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Sennheiser ME80 Shot gun mics $300.00. Graftons 890 Bourke Street, Waterloo. (02) 698 7777

Session 8 Hard disk 8 track studio. $5000.00. Mirage Studios (02) 211 3915

Shure SM 58 and 57. New and second hand.

MORE ➡

ELECTRIC SUNSHINE.. LIGHTING YOU CAN SWEAR BY, NOT AT.

Ph: (02) 660 6000

Fax:(02) 552 1111

CENTRESTATE Sound & Lighting

TOURING PRODUCTION, TRANSPORT, DRIVEWAY HIRE & RETAIL SALES

PA'S from 200 to 20,000 watts
DESKS Soundtrax, Soundcraft, Hill & Yamaha
SPEAKERS Australian Monitor QMX15, QMX12, F600, SLAM BOXES, Delay & Flying Systems Available
AMPS AM1600 & 1K2
FB 10 Sends available Soundtrax & Soundcraft desks, Wedges, Drumfill, Sidefill
LIGHTING Event 48Plus Desk, 80 Cans available, FX, Fog, Profile & Follow Spots, Miniscan Moving Lights, Trees, Trussing & Blacks

AVAILABLE DAILY WEEKLY ANYWHERE
Call Alan Brown in Orange NSW on

(063) 62-0587

THE PUBLIC ADDRESS CO.

20 Years of Live Sound & Lighting now featuring:

P.As
From small to quite big really.

DESKS
Good ones with lots of knobs.

SPEAKERS
Well, it wouldn't be much of a P.A. without them.

AMPS
Ditto!

F.B.
Bulk

LIGHTING
Heaps of this stuff too!

All the above brands are also available for sales and installation.

(02) 799 7219

Classifieds

From $130.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Smoke Machines Lytequest U.S.A. new from $319 plus tax. Disco World (03) 9735 0588.

Sound Development graphics $450.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Sound Workshop console 20-16 V.G.C. $4000.00. Digital Paradise (07) 552 70722

Soundcraft 200 24-4-2 $3600.00. In roadcase. Good condition. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Soundcraft Spirit 24-8 foldback desk. $6500.00. Northside Sound (042) 292111 or 018 427123

Soundcraft Spirit live 4 28 Ch. In Roadcase. $5500.00 Derringers Music (08) 371 1884.

Soundcraft Venue II 40-8-2 with the works. Mint condition. $23,500.00. Be quick! Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Soundtech ST164 16 channel into 4 subgroup mixer with 4 way EQ and 4 Aux. sends. With roadcase. Very good condition. $1650.00. CC'S Light & Sound. Ring for free catalogue. 1800 80 30 64

Soundtracs 24:16 channel studio mixing console. Excellent condition. $2500.00. Apollo Studios (03) 9 3549058 or 015 321051

Soundtracs M Series 32 channel console $6000.00. (02) 799 7219.

Speakers, Eastern acoustic active 3 Way. Includes cabling. Suit touring or installation. Great sound and reliable. $4000.00 o.n.o. Contact Michael,Troy Horse Studios (02) 557 3129

TAPCO 6100RB 14 ch. desk. $400.00. Northside Sound (042) 292111 or 018 427123

Tascam M3500-24-ST Recording Console. 24 mono inputs 8 stereo inputs (equiv. to 40 inputs) with 100mm faders and equalisation, 24 tape monitor inputs on 60 mm faders, 8 buss, 6 aux, 32 way meter bridge. Supplied with patch pays and insert leads. Very good condition. $9,000 o.n.o. Ph. Warren Huck at CAAMA 089.529 202 or Fax 089.529 212.

TEAC X1000R 4 Track 2 channel open reel deck. Very good condition. $1250.00. (074) 446 951

Theatrelight showmaster 24 channel fully programmable lighting control console. Excellent condition. $1500.00. CC'S Light & Sound. Ring for free catalogue. 1800 80 30 64

Turbosound TMS-4 x 8 3 way speaker cabs. $2000.00. Northside Sound (042) 292111 or 018 427123

Yamaha 250X Speaker boxes 2 x 8" speakers and horn. Very good condition. $1500.00 pair. CC'S Light & Sound. Ring for Free Catalogue 1800 80 30 64.

Yamaha 916 16 channel mixer with 3 way EQ switchable midrange and 4 aux sends. In Roadcase. Excellent condition. $2990.00. CC'S Light & Sound. Ring for free catalogue 1800 80 30 64.

Yamaha 2031 Graphics. $750.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Yamaha D-1500 Digital delay. $550.00. Northside Sound (042) 292111 or 018 427123

Yamaha D15000 Delay $700.00 each. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Yamaha EMX2300 12 Chnl powered desk. Mint. $2500.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Yamaha MC 2404 Audio console, cased. $2900.00. Northside Sound (042) 292111 or 018 427123

Yamaha PM 2800 Moniter Desk. $14,000 40 channel. Be quick! Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Yamaha SPX90 Mk II $700.00. Cannon Sound Systems (02) 550 3828 or free call 1800-804994 Neil Smith

Lots Of Watts

EVERYTHING in SOUND & LIGHTING

Hire, Sales, Service, Production & Installation.

1 Mary Parade
Rydalmere NSW 2116
Ph: (02) 638 0302
Fax: (02) 638 0331

THE RADIO STATION
IN-EAR MONITOR SYSTEM

- Reduces excessive stage volumes
- Eliminates possibility of feedback
- Reduces risk of hearing loss & vocal fatigue
- Allows easy vocal pitching & freedom of movement
- Intergrates into any monitor system
- Easily transported - 3RU Case & only 20 kg.

IN YOUR EAR MONITORS

FOR HIRE RATES & INFORMATION
Ph: 02 360 2200
or 019 929 700

WILD GRAVITY

• SALES • HIRE •
• INSTALLATION •
20,000 WATTS

DELTAMAX 1152 & JBL
40 CHANNEL YAMAHA 2000
AND 24 CHANNEL 400B F/B
80 PAR CANS MULTI-PINNED
96 DIGITAL CHANNELS
SELECON PROFILES & CYCS
CLS TRUSSING
CHAIN BLOCKS
REHEARSAL ROOM
16 TRACK DIGITAL STUDIO
NEC DATA Projectors & Screens.

Phone NOEL ANTHONY

(077) 213540 or
Fax (077) 211375
TOWNSVILLE
106 BOUNDARY ST

ADVANCED LIGHTING EQUIPMENT
Sydney Australia

Specializing in metal equipment and engineering services for entertainment, exhibition and general industry.

● design ● manufacture ● sales ● service ● installation

trussing systems-alloy & steel - lighting bars - telescopic push-up & winch-up stands - - hooks & clamps - portable stage risers - customized mic. stands - custom brackets, frames & adaptors - set construction - video trolleys - TV brackets - drum kit repairs, modifications & rejuvinations - rigging accessories - transportation frames, dolleys & cases - general engineering - architectural metalwork - site welding - lighting sales - installations - design and total project management.....

2 Huntley St., (P.O. Box 206) Alexandria NSW 2015 Ph: (02) 310 5222 Fax: (02) 310 5511

ADVERTISERS INDEX

AIBA	34
Amps Unlimited	4
AR Audio Engineering	19
Aro Technology	50
ARX	48
Ashton Admor	85
Audio Telex	15,28
Australian Audio Supplies	17
Australian Business Theatre	41
Australian International Music Show	11
AV Experience	41
AWA	3
Black Express	81
Blackfeather Music Studios	50
Bongo Printing	52
Bose Australia Inc.	27
Burkinshaw Consultants	41
Bytecraft	82,83
Central Musical Instruments	37
Classifieds	86-89
Clearlight	64
Coemar De Sisti Aust.	91
Concert Lighting Systems	80
Disco World	18,79
Electric Factory	13
ESA	31
GUVT (Highend Systems)	68
Hannon Insurance	14
Hirepoint Software	41
Horwood Aust.	51
Jands Electronics	2,25,56,74
Magna Systems	38
Mark IV Audio Aust.	21
Multicontact	35
MultiMedia 2000	50
Musitronics/RCF Aust.	30
Newport Broadcast	39
Osram	73
Penn Fabrication Aust.	55
Pioneer	59
Premier	76
Production Audio Services	33,36
Prolite	78
Ramtek-Big Box Builders	41
Rockard Paint	56
Rosco	72
Scan Audio/Jamo	40
School of Audio Engineering	53
Selecon	66
Show Technology Aust.	67,71,92
Southbank Trading	47
Staging Rentals	41
Studio Connections	23
Syncrotech Systems Design	9
Technofear	77
The Resource Corp.	44
Turramurra Music	29
Universal Lighting & Audio	61

READER SERVICE CARD:
You can obtain information on Products and Services in this magazine where a reader Service Number is indicated. Just fill out the **FREEPOST** Reader Service Card elsewhere in the magazine, and send it to us. Post FREE!

THE PA PAGE

The Importance of being NEAT

Part One in a series, by Michael Orland.

Among the many Yuppie terms popularised in the 80's, "user friendly" is one of those that has slipped into mainstream usage as comfortably as the cellular phone into the average roadie's pocket.

A "user friendly" P.A. system is one that requires minimal concentration during setup and usage, making the overall job less stressful and more enjoyable.

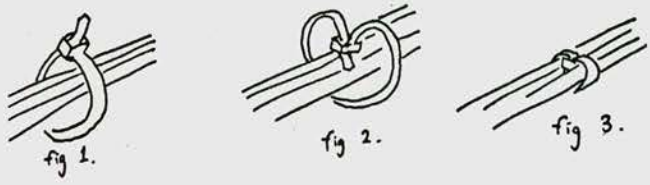
I often get asked to do walk-in mixes, which gives me the opportunity to see how others wire up their systems. Glancing behind the racks reveals all. Some racks of amps or effects are meticulously wired, enabling setting up to be done with the brain cruising on auto, and troubleshooting to be done at a glance. Others would need a lot of tidying just to qualify as rat's nests.

Occasionally I'll be talking with the owners of the latter, who'll say things like "Look, it's MY rig. I'm the only one who ever sets it up. As long as I can make it work, that's all that matters". Ahhh...the memories flooding back... I can remember feeling that way. I also vaguely remember stressing to the max trying to trace bundles of leads in my own rat's nests while drummers incessantly tuned their kits trying to make all nine toms sound identical, guitarists displayed their 'legend to last a lunchtime" virtuosity at 140dB with the lame excuse of "finding their sound", and singers screamed into my wedges for me to adjust their IQ to hear themselves over the racket. (Unlikely when I couldn't even hear myself think). And when something failed during the gig....Rooting around in the dark, in a mess, and in a panic. Thankfully all that now feels like a long time ago in a galaxy far far away.

In past articles, I've tried to suggest simple "hey presto" tricks for fixing common problems. Not this time. The answer is hard work. Start by replacing all common leads that go from one place to another, e.g. stage box to amp rack, amp rack to speaker stack, mixing desk to effects rack, etc. with looms, or wherever practical, multicores.

Gaffing cables together to make looms is a poor look. The gum makes them messy to handle. Cable ties are a nice look. Bought in packets of 1,000 from electrical wholesalers, they're not expensive.

The problem with cable ties is they nick and burn your hands while you're rolling your looms. Problems? No problem! Invert them! It takes a little longer to make looms this way, but makes them so much easier to work with, that the time is well worth it.



Loosely clip the tail end of the cable ties through the head. (fig.1) Invert the whole tie. (fig.2) Pass the tail through the middle of the cable bunch and yank tight with pliers/vicegrips so that the head embeds itself within the cables. (fig.3) Force the cables apart enough to get sidecutters around the base of the excess tail, and snip clean at the head. Do this evenly along the loom straightening and aligning as you go. Wherever practical, try and keep all cables within the loom to an identical length to discourage tangles.

All cables within the loom should be clearly labelled at both ends bearing in mind the type of lighting conditions normally available for setting up in. Little books of adhesive numerical labels are available, but I find it just as effective to make my own using my typewriter.

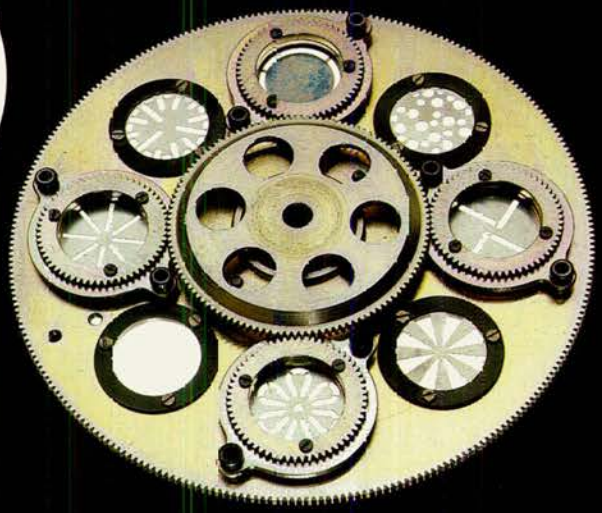
Alternatively, you may have a bubble jet or laser printer with your PC. The labels don't need to be adhesive. Cutting rows of numbers in strips of three or so is a nice look. Buy some lengths of clear heatshrink with a diameter wide enough to fit over your cable with label. Buying the stuff in ten up lots from Dick Smith's/Jaycar reduces the price substantially (be sure you remind the kid behind the counter). Cut the heatshrink into tubes long enough to not only cover your label but also extend into the part of the connector which grips the cable. The advantage of labelling the cable instead of the connector is making it easier to undo said connector for visual checks without undoing the label. Some folks prefer labelling the connector itself, especially if held together with little screws which can work loose and disappear. The heatshrink then not only holds the label in place, but also the screws. Personally, I prefer to use little dabs of contact adhesive on these screws. If you do choose to label XLRs. EPs, Speakons, etc. don't bother looking for the right sized heatshrink at Dick's or Jaycars as both chains have deleted anything bigger than 1/4" jack type diameter in clear. You'll have to order it.

I used to shrink the heatshrink using either a hairdryer (too slow) or an open gas flame (too fast/uneven). Then about 8 years ago I bought a heat gun. Heat guns are like powered screwdrivers or cordless phones. They seem like an unnecessary extravagance until you own one. Then you can't imagine life without one. It's come in handy on its high setting for stripping enamel paint off old cabinets for refinishing, and very handy on low setting for emergency drying out of wet electronics (more about those circumstances later). If $60.00 seems like a lot of money for a new one, pounce on one at your local pawn shop or garage sale.

MICHAEL ORLAND

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

TURN GO BO TURN



MINI Ultra-Scan 2 200 MSD

- 9 colours built-in colour wheel
- 8 gobos, of which 4 rotating
- black-out, programmable chasing and strobing effect
- beam movement: Pan 170° - Tilt 80°
- Standard DMX 512 or 0/+10v dc input
- Philips 200 MSD lamp (lamp life: 2000 h)

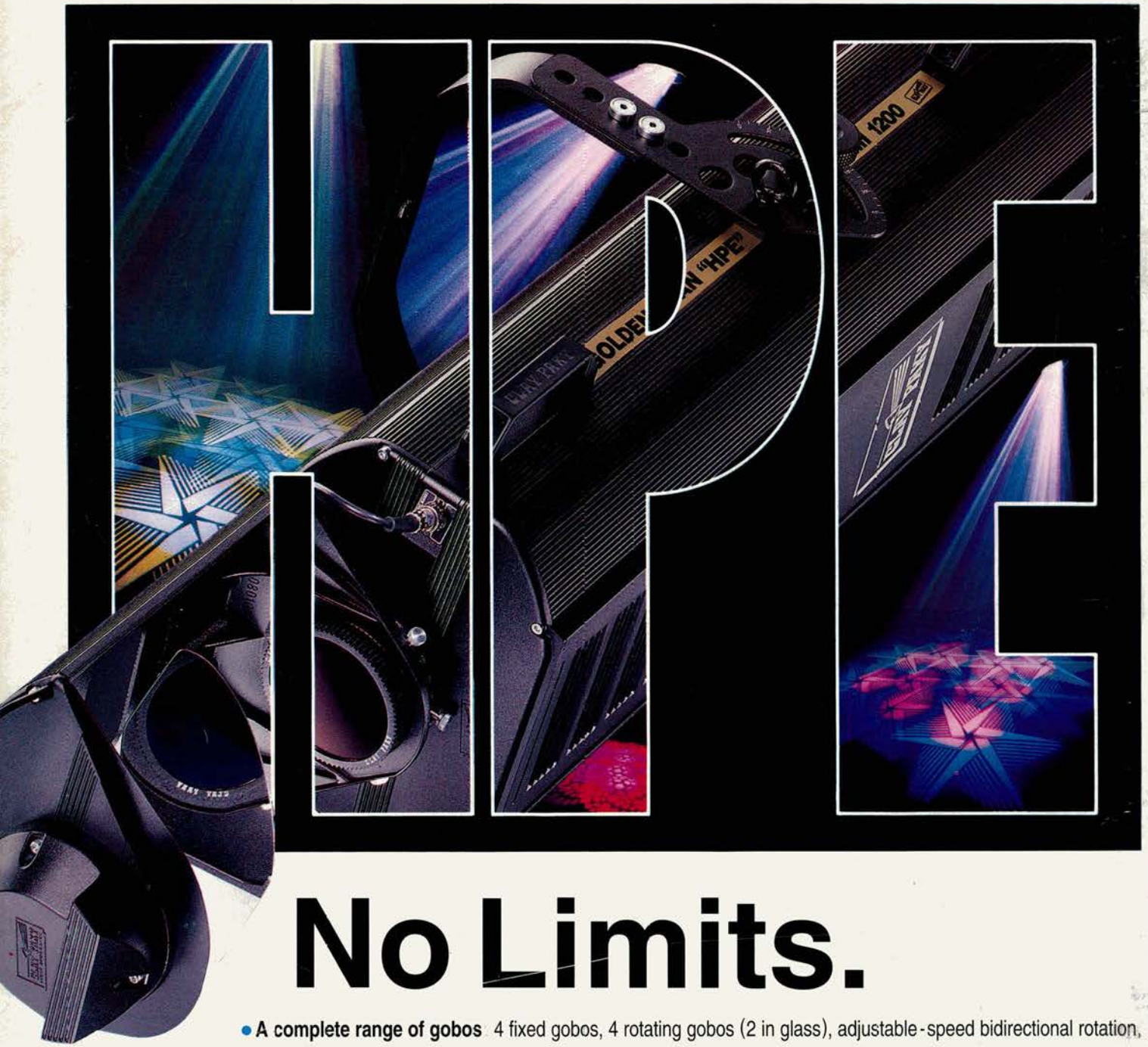
cda pty ltd
36 a clements avenue
bundoora victoria
ph (03) 94678666
fax (03) 94678667

tas

Write in Reader Service number: 103

TAS srl via Svizzera, 7 Castelgoffredo (mn) Italy tel. 0376/780497 fax 780844

GOLDEN SCAN



No Limits.

• **A complete range of gobos** 4 fixed gobos, 4 rotating gobos (2 in glass), adjustable-speed bidirectional rotation, indexable positioning, pattern superimposition, fully interchangeable gobos. • **The most sophisticated range of prisms:** 4 rotating prisms (x2, x4, 3D, "trail effect"), adjustable-speed bidirectional rotation, fixed prism (x5) which may be combined with any other prism. • **Endless colour possibilities:** three independent combinable wheels, 113 single-coloured projections, infinite multi-colour combinations, beams with two concentric or adjacent colours, 4-colour beams, Wood's light, rainbow effect. • **An optical system which meets all needs:** HMI 1200 lamp, basic 23° wide angle aperture (may be reduced to 15° by means of a remote-controlled lens), optional kit for modifying projection angles (to 12,5°-8,5°), electronic focusing. • **Control of all light parameters:** high-speed linear iris, gradual diffusion, mechanical linear dimmer (0-100%), 1-7 fps strobe effect.

Distributor:

Show Technology Australia Pty Ltd
13 - 15 Bridge Street - Rydalmere NSW 2116
Tel. 2.898 1111 - Fax 2.898 1222

CLAY PAKY SPA
Via G. Pascoli, 1 - 24066 Pedrengo (BG) Italy
Tel. + 39 (0) 35.65 4311 - Fax +39 (0) 35.665976

CLAY PAKY
PROFESSIONAL SHOW LIGHTING

Write in Reader Service Number 159