

Broderick Smith's Summer Road Story

# Connections

AUSTRALIA'S Entertainment & Technology MONTHLY

Singapore Hong Kong 30.00 Malaysia New Zealand 6.50 AUSTRALIA \$4.50 #29 DECEMBER 95, JAN '96



**Recording Studio Survey reveals rate rises and optimism**

Berlin  
Tina Turner  
Space Probe 7  
Bon Jovi



**The Projection Art of Ian de Gruchy**

**All about Video Projection: we visit the shoot out and see 60 units compared**

**RECORDERS -the HUGE buyers guide**



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When the original dbx 160X compressor/limiter was built some 12 years ago, it was built to last. After a slew of tours and out-of-town gigs, we've found that 99% of them are still on the road today. Which isn't bad. But then again, it isn't perfect. (Truth be told, that other 1% wreaked havoc on our egos.) Which is why we've designed the new and improved dbx 160A compressor/limiter. It operates simply and flawlessly to give you the legendary dbx sound by offering superb metering and a choice of hard knee or OverEasy™ compression. It also offers the best output stage for driving long lines. All this is just the right amount of tinkering and tuning to bring the dbx 160A up that extra notch. After all, you shouldn't be the only one on the road giving 100%.

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Write in Reader Service Number: 116

ALWAYS full of NEWS

NEW TECHNOLOGY: 14 pages, from: 17  
 VENUES: News 30  
 LIVE SOUND: 3 production reviews 33  
 Tour and Theatre Guide 43  
 Letters: 63  
 Duncan Fry 95  
 The PA Page, double, special! from: 138

**CLUBLAND**

8 pages, places, products: from page: 96

**33 pages of Lighting**

LDI Report, hot off the 747 to you! 104  
 Lighting Tina Arena 108  
 Neon Magic, up the skyscraper 112  
 Space Probe 7, the ride, the lights... 117  
 The Projection art of Ian DeGruchy 121  
 BUYERS GUIDE: Colour Changers 136

**STUDIOS & POST**

SURVEY: New studio category emerges: 64  
 The Tom & Gerry Show: 64  
 Posting with Supersonic: 64  
 Adelaide CD: inside story of a duper: 65  
 Adelaide studios reviewed: 66  
 National BASF Tracking Guide: 69  
**RECORDERS: The Mega Feature!**  
 \*All about recorders, by Howard Jones 74  
 \*Massive Recorders Buyers Guide: 75

**18 pages of AV**

INFOCOMM: we visit the Shootout: 45  
 Working with Video Projectors: 49  
 New AV products: 50  
 Association News: 55  
 Hire and Production News, Installs: 61

Cover: Space Probe 7 main pic by Babette Griep, designed by Cat Forcer

**SUMMER EXTRA**

**Broderick Smith's Summer Road Story:** all about the publican at Whyalla, selling CDs and why the major record companies are like they are! Page 87

**Caroline Grafton**, on: Why I do what I do: 89

**Cat Forcer**, the stressed scribe: 90

Sell Everything and move to the bush? **A fantasy demolished:** 91

**Note: Double issue.**

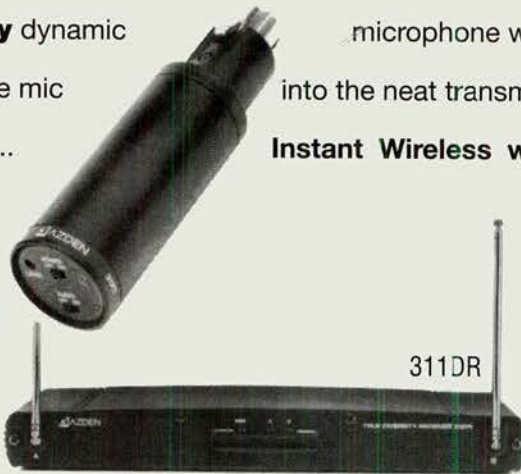
MONTHLY AGAIN FROM FEBRUARY. We stop for Christmas, which would be when a January issue would be created. Aside from the improbable of having such a thing printed, we think a January issue would be too much.

**3rd Proud Year of Independent Publication**

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DH/AMPS 295/FP4C

# Connections

DECEMBER 1995 & JANUARY 1996. Number 29

## InfoComm-the projector war!

### AV NEWS

By Julius Grafton

Every trade show proprietor's darkest moment comes just before the opening hour. Will the essential trade punters come?

At the debut Infocomm Asia trade show, held in Singapore late November, they came – and kept on coming. More than 4000 in fact.

The major attraction lay in darkness in hall two, where more than 60 video projectors and their derivatives all punched out the same image on their own screens. The comparison was assisted by a voice track and a well prepared manual. There were some surprises too!

•Full story in our 18 page AV Section, starting on page 45.

## RADIO TO BE REBORN

*Forget radio as you know it, real soon now expect downloaded material from your local broadcaster. It's clearer to understand than cable TV ever was!*

A seminar at the recent AMRA Convention in Sydney heard Graham Smith from the Australian Radio Networks give some insights into the way radio will be going sometime soon. This is an extract of what he said.

Since the advent of TV, radio usage has actually increased due to its prime attribute - mobility.

In future radio broadcasts will consist of intermittent compressed bursts of information. The information will be able to be stored in the listeners intelligent radio receivers and listened to it wherever they are – at any time they like.

Listeners will be able to edit their radio material and customise the program. Over a period of time the receiver will track your choices and store a profile of your tastes in the receiver. Much more material will be transmitted digitally in bursts from the transmitter and stored in the receiver than will ever be played back by anyone listener.

Therefore a listener will be able

to listen to what he/she wants to listen to, not what a programme director programmes. It will work like this - if a listener does

**"Microsoft is testing an RBDS receiver with a computer capable of performing a variety of tasks including audio on demand. Radio could download albums on behalf of recording companies."**

not like a particular song on a station, he/she will simply hit the reject button and the next song will come on. Hit the weather button and on comes the weather. News can be similar to an electronic newspaper, tailored to suit the individual.

(continued page 9)

## NEW TURBO PA HITS THE ROAD



*It's not every day someone spends more than a million on a new Arena sized PA - in fact, it hasn't happened for almost ten years. Mick Privitera's Australian Concert Productions have, see story on page 33.*

## Business Confidence Still High

Consumer Retail may be down this Xmas, but pro products are booming, according to our survey.

Equipment manufacturers and distributors in the pro audio and affiliated markets have this year enjoyed the greatest growth any year since the 1980's according to the Connections Business Confidence Survey for 1995.

Reflecting almost uniform growth and a busier final quarter compared with 1994, the survey indicates expectations are that the immediate national economic trend will retain some growth and trend towards 'stable' conditions in six months.

The survey was sent to 300 firms active in manufacturing and dis-

tribution of pro audio, musical products, AV, components and lighting equipment during November. 119 responded, with only four reporting negative growth for the year. Sixteen firms reported no growth, with the balance indicating growth of 15% average.

Staffing growth didn't match with reported extra business, although every firm indicating more than 5% growth had added staff.

### PRO AUDIO

Growth leaders in pro audio were Mark IV Audio (Australia), reporting 47% growth, followed

(continued over)

**MONTHLY (except JANUARY!)**

## MOVES

Sydney firm **Daylight International** are now at 4 Bridge Road, Glebe 2037. Phone (02) 660-7755, fax (02) 660-7799.

**Staging Connections** (Canberra) has new phone numbers - (06) 250-6990, fax (06) 239-1530.

## STAFF

Amber Technology has appointed **Chris Royal** to its sales team. Chris was General Manager at Graftons Sound for four years.

## AGENCIES

**LA AUDIO** is now represented in Australia by Major Music Wholesale. They make gates, compressors and mic-pre-amps, call Greg Cato at Major Music on (02) 525-4447 or fax (02) 525-4560.

**SPENDOR PRO MONITORS** are new for AWA. The range is expanding too. Call 02 898-7666.

**MARK OF THE UNICORN** has announced that Moore Music of Fitzroy (Vic) is now their distributor. There will be no break in warranty or technical service, they say. Call Moore on (03) 9419-0344.

## COMPANIES

## AMPEX reborn

The Ampex brand lives on as the Ampex Media Corporation has been sold, to be known as Quantegy Inc. The company begins its new chapter of independence with annual sales exceeding US\$150 million and 1000 employees. Ampex Media International, located in Sydney, will now become Quantegy International Inc, at the same address and with the same faces and phone numbers.

## Yamaha tops \$50m

Yamaha Music Australia will turn over more than A\$50 million in 1996, according to their report. The firm is now headed by Kevin Kobayashi, and the last reported net profit was A\$2.5m.

## JBL send Jands winner to Paris

JBL distributor Jands Electronics ran an EON contest offering prizes to draw attention to their new EON compact PA systems recently. Vince Gelonese of Bungendore (ACT) won a trip to the MTV awards in Paris, which he took with his wife Pina in November. He entered the contest at Pro Audio Supplies in Canberra.

Nashin Khan of Erskine Park (NSW) won a complete EON PA System.

## Speaker Design Course

Neville Thiele and Glenn Leembruggen will run a 26 hour Loudspeaker Design course early 1996 as part of the Sydney Uni Audio Program. Details from the coordinator, (02) 351-2686.

## Corrections

**LE MAITRE:** Lightmoves Technologies (NSW) advise they hold the master dealership for the entire range of Le Maitre Pyrotechnics and smoke machines, while another company has a dealership for a limited range of Le Maitre products. Call (02) 560-0000.

**TCP:** The Queensland TCP affiliated firms are as follows: Professional Audio and Security Systems

P/L is now Total Concept Projects (Qld), while Professional Audio Visual Hire P/L is now Total Concept Productions (Qld).

**PERFORMANCE LIGHTING & SOUND PTY LTD:** this is the correct name for this firm, not the various examples used in this magazine recently! Contact Noel Martin on (07) 801-3110.

## Speakers Buyers Guide. Oops!

Last month's **SPEAKER SYSTEMS (PA Speaker Cabinets without proprietary controllers)** Buyers Guide carried prices for some **YAMAHA** speakers which were **PER PAIR**. These are the S112HIIA (\$1595/pair) and the S115HIIA (\$1795/pair).

*The section also suffered a terrible FUBAR between pages, some Gemini lines were deleted, along with the first part of the Jands listing. It confused the hell out of a lot of readers, who exacted revenge by calling Elaine for clarification. Here we print the full, correct text:*

**Gemini U.S.A.** Disco World  
(03) 97350588

**MB-330** 2 Way 12" Woofer - Super high density 4" x 12" horn. Carpet finish - 8 ohms - Frequency response. 40Hz-18kHz - Sensitivity 97dB - Power handling 100 watts RMS. \$325.00 ea.

**MB-370** 12" Woofer - High density horn 4" x 12" - Three 3" Motorola Piezo super tweeters - carpet finish - 8 ohms. Frequency response 40Hz-16kHz - 5 way - sensitivity. 98dB - Power handling 100 watts RMS. \$375.00 ea.

**MB-470** 15" Woofer - Ultra high density 17" x 7" horn - 6 way system. Carpet finish - 8 ohms - frequency response 35Hz-20kHz sensitivity 101dB power handling 175 Watts RMS. \$495.00 ea.

**MB-485** 15" Woofer - High density 4" x 12" horn - Two 4" super horn tweeters - Carpet finish - 8 ohms - frequency response 30Hz-20kHz Sensitivity 101dB Power handling 175 Watts RMS. \$625. ea.

**JANDS** (02) 516 3622

**SYSTEM 500** 12" 2-way utility speaker suited to permanent installation or touring use. Features include JBL drivers, 600W power handling, 100 x 100 deg dispersion, internal steel support plates for rigging points and 35mm pole mount. U bracket available as option. \$3495.00.

**SYSTEM 700** 15" 2-way passive speaker system. Features include JBL drivers, 700W power handling, heavy duty steel mesh grille with mirrorcell foam. \$2695.00

**SYSTEM 1400XL** Dual 15" passive speaker system. Features include JBL drivers, 1400W power handling, heavy duty steel mesh grille with mirrorcell foam and 4" castors on rear of cabinet. \$4995.00

**SYSTEM 80** Dual 18" subwoofer system. Features include JBL drivers, 1200W power handling, heavy duty steel mesh grille with mirrorcell foam and optional 4" castors on rear of cabinet (on touring version - System 80GT). \$2895.00

## Obituary

## Mark Forrester, Studio Guru

*The music industry lost a bright young star suddenly in a car accident during November. Jenny Morris wrote this tribute:*

**Mark Forrester, SUPERSTAR.**

The first time I laid eyes on Mark, his smile blinded me. He continued to blind me one way or another for the remainder of his ridiculously short life. Usually good looking black guys are very, shall we say, confident, so I wasn't prepared for the broad aussie accent or the humility or the warmth or the no bullshit attitude of this gorgeous person. I was introduced to him by Nick Launay, himself a talented producer, who told me so much about the endless ability and enthusiasm of this young engineer he knew. For my part, I had instantly found a soulmate.

Every time we were in the studio together, and over the years those times were many, I was charged with energy and I had a constantly moving body which just never seemed able to ignore the wicked Mark Forrester grooves that were so inevitable with him.

I never once witnessed Mark down and depressed in the studio. He simply adored making music



Joe Camilleri (left) with Mark

and he was so good at it. I'm not the only one who acknowledges that either. He was whisked away to Paisley Park by Prince where he was eventually invited to write and produce various Purple projects. He has been involved in just about every genre of music and all of it, bar none, has that Forrester magic.

On a personal note, I loved him from that first moment. We had so many good times. He was such a starchy person; always the coolest dresser and the biggest laugh, and generous to a fault with everything, especially his friendship.

I am going to miss him more than I can say.

I will never ever forget you, 'superstar'.

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## People

### PENN CHANGES

Mark & Lynne Dryden are relo-  
cating to Windsor, Ontario early  
January to run Penn Fabrications  
Canada.

This move results from the  
death of company President Gary  
Taylor in a motor racing accident.  
Canada is the centre of develop-  
ment and manufacture of Penn  
trussing and lighting systems.

On the home front, Andrew  
Rushen will be General/Sales Man-  
ager, Richard Nosworthy contin-  
ues as Warehouse Manager and  
Julie McCracken joins as Office  
Administrator.

Mark & Lynne would like to  
thank customers and suppliers for  
their support over the years.

### MULTI-CONTACT (AUST) REORGANISE

Peter Williams takes over sales in  
the sound/lighting and broadcast  
areas.

Paul Arthur moves from the Mel-  
bourne office to Sydney to take up  
the sales/coordinator job in Syd-  
ney.

John Pierre Redoute joined Multi-  
Contact recently as national sales  
manager. He comes with experi-  
ence in the european connector  
industry.

### TOPSTAGE SOLD

Steve Devine exits Topstage Pro-  
ductions after 15 years. The firm  
has been sold to NOVA Produc-  
tions (ACT).

### AWA CHANGES

Alistair Dewar has been appointed  
product manager for Broadcast  
and Pro Audio. Bob Middleton is  
now the Product Manager for  
Commercial Audio.

○○○○○○○○

## Births, Marriages

Congratulations to Paul Payton  
of F. Payton & Son and his wife  
Caroline on the birth of their 7th  
baby son, Thomas, at The San Hos-  
pital on Nov. 6, 1995.

Derek Harris retired from Multi-  
Contact Australia in November af-  
ter 20 years as a director - and the  
very next day married Margaret  
Filla, who worked at Multi-Con-  
tact. Margaret also retired, a day  
prior to the wedding.

## Industry zeros in on Sydney next April

Selling trade show space is easy  
compared to getting hoards of  
quality visitors. "The easy part is  
over, now we move into the visi-  
tors promotion" says ENTECH or-  
ganiser Caroline Grafton.

Having 100 or so suppliers  
mount extensive, modern, inter-  
active displays of more than 2000  
products in two halls at the Syd-  
ney Exhibition Centre isn't  
enough alone to warrant an inter-  
state or international trip for many  
visitors - who increasingly look to  
value added side events and semi-  
nars before committing time to  
visit a trade show - anywhere.

If the constant stream of calls  
is any indication, visitors from all  
corners of the our giant and con-  
verging industry are planning to  
visit ENTECH next April 23  
through 25th. Callers are anxious  
to establish budget costings for  
seminars and add-on events at the  
otherwise free tradeshow, with in-  
stitutions and corporate visitors  
often needing to advance budget.

While conference and seminar

topics are being finalised, but we  
can confirm at least one:

- **The megastar session.** Mix-  
ing live sound for Elvis, Bruce  
Springsteen and Barbara  
Steisland. This will be hosted by  
Bruce Jackson, president of Apo-  
gee Electronics, and winner of  
both a TEC award and an EMMY  
award in 1995 for his live sound  
prowess. Bruce Jackson will fly  
from LA to present this seminar.

This year at ENTECH the semi-  
nars will be larger and more com-  
prehensive than before, and be  
staged in a major theatre space to  
be constructed alongside the ex-  
hibit floor. Cost? Still \$10 each.

**TRAVEL:** New east coast  
showbusiness travel firm Stage &  
Screen have been appointed as  
ENTECH travel agents, call (02)  
237-2916 or (03) 9682-6166.

**AWARDS:** The ENTECH  
Awards dinner is scheduled  
Wednesday evening 24 April at  
Sydney's Metro Theatre, with su-  
perb entertainment included.

- More attractions coming soon!

## Economic Survey

(continued from previous page)

by ARX with 40%. Most firms in-  
dicating growth nominated in-  
stalled audio and contracting as  
the hottest industry sector, fol-  
lowed by the generic 'pro audio'.

AV, components and communi-  
cations specialists sounded a note  
of caution in regards to the down-  
turn in the building industry,  
where the collapse of several large  
builders in November didn't aug-  
ger too well.

### MUSIC PRODUCTS

The market for Computer soft-  
ware and peripherals is mixed,  
with some respondents showing  
some growth but more saying the  
business was down. This tallied  
with a late report from a major  
listed computer chain on the east-  
ern seaboard who say their busi-  
ness dived in November. Sales of  
sound cards and recording cards  
and peripherals are static.

Guitars and amplifiers, along  
with MI PA systems and compo-  
nents are most commonly nomi-  
nated as growth centres.

Business compared to last year  
was marked 'busier' in more cases  
than 'Same', company growth was  
less buoyant than pro audio, while  
expectations were for at least some  
growth in months ahead.

### LIGHTING

All responding manufacturers  
and distributors nominated com-  
pany growth stronger than any  
other sector, which begs further  
analysis as there were only 10 re-  
sponses from 30 firms surveyed.  
This may indicate less than uni-  
versal business growth as this in-  
dustry sector is more circumspect  
than any other, and the partici-  
pants are less likely than others  
to report static sales or negative  
business trends. -Julius Grafton.

## World Electricity

Country	Cycles	Volts
Argentina	50	220/380
Australia	50	240/250
Bangladesh	50	220/240
Brunei	50	240
Burma	50	230/250
Canada	60	120/240 & 110
China	50	220/380
France	50	220/380
Germany	50	220/380
Grt Britain	50	240 & 240/415
Greece	50	220, 220/380/127
Hong Kong	50	220, 200/346
India	50	230/400/220
Indonesia	50	127/220
Italy	50	220/380
Japan	50/60	100/200
Korea	60	110/220
Malaysia	50	230/240/415
Mexico	60	varies
NZ	50	230/400
Russia	50	127/220, 220
Singapore	50	230/400
Sth Africa	50	250
Tahiti	60	220 & 110
Taiwan	60	110
Thailand	50	220/380
USA	60	120
Vietnam	50	120/127/220

**Not here?** The COMPLETE Connections goes EVERYWHERE list of Electrical currents around the world is on our online site at MSN, see Entertainment: Trade Journals.

### DOLLAR HISTORY

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

	\$US	Yen	£	DM	\$Sin
1965	1.14	403	0.39	4.46	3.25
1970	1.12	400	0.46	4.05	3.22
1975	1.33	392	0.59	3.11	3.15
1980	1.16	251	0.49	2.03	2.52
1985	0.66	165	0.51	2.02	2.10
1990	0.77	98	0.39	1.18	1.45
<b>NOW*</b>	<b>0.74</b>	<b>75</b>	<b>0.48</b>	<b>1.05</b>	<b>1.05</b>

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

**NZ\$ at publication: \$1.13 ●**

\*At 22/11/95. All rates indicative only. Check with your bank.

## MAJOR TRADE SHOWS

- **SHOWBIZ Expo East**, Jan 5-7th New York. +1-513-8400
- **NAMM** Los Angeles Jan 18-21 1995. Call +1-619-438-8001  
USA's leading music show.
- **SIEL '96**, Paris Feb 11 - 14th. Call +33 (1) 4522 3540  
Largest sound & light show in France.
- **USITT**, Fort Worth USA. March 14-16.
- **Musikmesse**, Frankfurt March 13 - 17. Call +49-69-7575-6662  
Largest music show in the universe!
- **SIB, Rimini**, (Italy), March 24 - 27. Call +44 1323 442-747  
Worlds Biggest Disco Show, a real visual treat!
- **Broadcast Thailand**, Bangkok. April 4-7, 1996. Call +66-2503-2199
- **ENTECH '96**: Sydney April 23-25, 1996. Call (02) 876-3530  
Australia's annual Entertainment Technology show
- **AES 100th**. Denmark May 11-14, '96. Call +45-9785-1122  
Europe's leading pro audio show.
- **NSCA** St Louis (USA), May 13 - 15, '96.  
Best contracting and pro install audio gear show there is!
- **PALM China** Beijing, 25 - 28 May 1996. Call +65-227-0688
- **Infocomm International** Philadelphia, 13-15 June +1-703-273-7200
- **Audio Technology** London June 18-20
- **World Lighting Fair** Tokyo, June 20-22nd, '96. Call +81-3-3706-5687
- **SALA '96**, Bangkok, June 20 -22nd, '96. Call +662 9600-1413  
One of 2 similar but fledgling shows in Thailand.
- **PALA '96 Singapore**, 10 - 12 July. Call +65-227-0688
- **PLASA** London Sept 8-11 1996 and includes British Music Fair.  
A world-great tradeshow! Call +44-1323-642-639
- **Photokina**, Cologne Germany, Sept 18-23. +49-221-8210
- **AES 101st**. Los Angeles, Nov. 8-11, 1996. (New dates!)  
Call +1-415-558-0391.
- **LDI 1996**, Orlando, 21 - 24 Nov. Call +1-212-229-2965
- **ENTECH '97**: Melbourne Exhibition Centre, April 1997.  
Annual show, at Sydney Exhibition Centre on even years.
- **SMPTE**, Sydney 25 - 28 August, 1997.  
Biannual TV/Film equipment trade show and convention.
- **AIMS '97** - Aust. International Music Show 1997, Sept/Oct 1997.

## CASH!

The column  
by the **Beancounter**.

Last issue we ran an item on Frequent Flying where we noted the pros and cons and concluded the most cost-effective award was a Business Class air trip. The Singapore journey alluded to has now been completed by your editor, on Singapore Airlines, this is a brief diary.

Arrive an hour before flight, check in and board the easy way, from the special lounge at the last minute and bypass the queue. Carry too many bags. Get a glass of OJ or grog and a hot towel before liftoff. Get a winelist offering spirits and liquor coffees, and a menu. Served three tasty doovers with beer at 30 minutes after takeoff. Given socks and eye mask. A guy comes around and introduces himself, reading my name off a list.

Dinner commences at 100 minutes after takeoff and takes 80 minutes, it's a 7.5 hour flight. Tray with entree laid atop table cloth, hot bread offered. Into third beer at this time. Entree features several prawns doing interesting horizontal folk dancing display on plate with shrubbery as decoration. Very curious.

I got three choices of main course, and my choice was quite edible. The chair has got incline, footrest and 20 channels of video. It's way cool.

Best of all there is SPACE, and a walk down to Economy shows the contrast. -JG



### World Weather trend, **DECEMBER**

Where?	Temp °C	Rain mm		
Auckland	21/14	79	Manila	30/21 68
Bangkok	31/20	7	New York	6/-1 84
Beijing	3/-7	3	Paris	7/2 50
Chicago	2/-5	48	Perth	27/16 15
Dubai	26/14	36	Rome	13/6 93
Frankfurt	4/0	54	San Francisco	14/6 104
HoChiMinhCity	31/22	56	Seoul	3/-7 32
Hong Kong	21/15	25	Shanghai	12/2 38
Jakarta	29/23	203	Singapore	30/23 266
Kuala Lumpur	32/22	230	Sydney	25/17 74
London	7/4	48	Taipei	21/14 77
Los Angeles	19/9	61	Tokyo	11/1 61
			Toronto	1/-4 61



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# STAGE & SCREEN

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# Radio's Digital Future

(from page 5)

The information super highway will link radio to the home entertainment terminal containing the home computer and the audio and visual services - data distributed on the two-way interactive system will enable advertisers to pinpoint exactly the listeners in the desired demographic and psychographic profile for their product. Imagine a car commercial personalised to an individual listener - "John Jones, its 3 years since you bought your Pajero - shouldn't you update?" The opportunities for creative interaction between advertiser and consumer, radio station and its listeners are endless.

The radio receiver of tomorrow will be more like the computer of today. As receivers with more memory and intelligence built into them, radio will begin to provide more non-real time broadcasts that will be stored for display or retrieval by the listener. Microsoft is currently testing the concept of

providing an RBDS receiver with a computer into a digital device capable of performing a variety of tasks including audio on demand.

The device will allow listeners to select the music they hear by style, artist or specific CD - home shopping. With fibre optic cable linking households and the increased quality of sound by digital broadcasting, approximately that of compact disc, it will be possible for consumers to have their favourite album electronically delivered to their home.

When activating the record button, a number of functions will be processed simultaneously. It will download, then automatically deduct the price from the listener's bank account. Secondly, the radio station will instantly receive a credit for its advertising fee and thirdly the correct copyright fees will be distributed to the composer, artist and record company.

The viability of this has not es-

caped the record companies. Sony and Warner have entered into a joint venture in the U.S. called SW Networks which will distribute music, talk and news via satellite, radio and on-line outlets.

Other direct marketing outlets will be presented to radio in the form of value added services such as electronic couponing. Commercial radio will be able to provide advertisers with the facility to promote product discounts which will be transmitted to the receiver and recorded on a removable smart card - the consumer will then present the card at the store for electronic redemption. This will provide the advertiser with immediate accountability of the effectiveness of the campaign.

There is further potential for commercial radio to generate new sources of sponsorship revenues through data transmission to the new digital radio receiver. A considerable amount of information

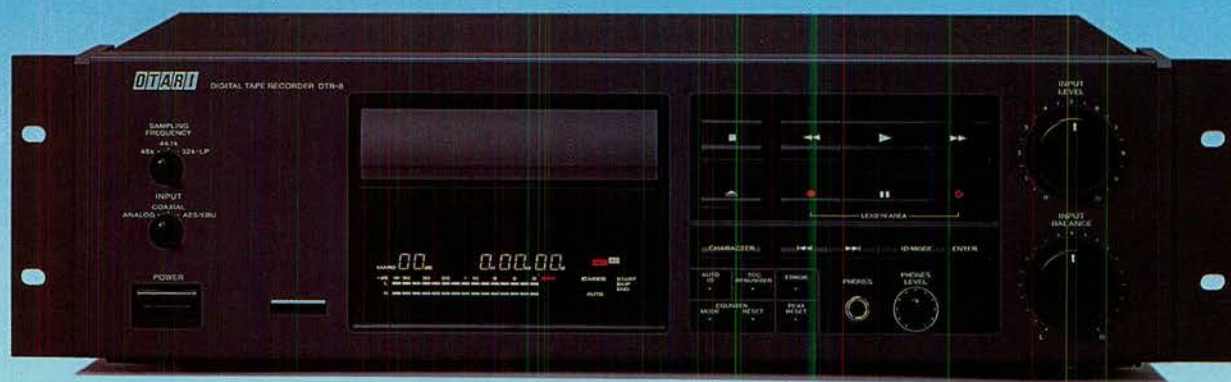
such as music details including song titles and artists, call sign as well as frequency, time, level will all be displayed on the readout.

One of radio's greatest advantages will be its availability to people's lives - at home, on the beach, at a sporting event, in the car, at work. It gives its listeners instant self gratification. It has been evident, say in the car - for years push button radios have given us choices - DSB will give people the same choice, but from radio's point of view, people will not have to change stations.

The technology exists for - say - Australian quotas, to be taken out of the regulatory system, out of the hands of programme directors and into the hands of listeners at the receiver end.

If radio's first century equates to the single engine bi-plane, then get ready for the supersonic jumbo. • *Connections would like to thank AMRA for this article.*

## Sound Credentials



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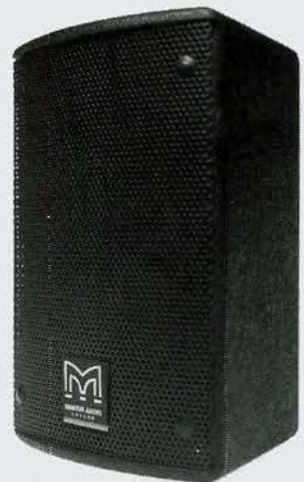
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## Successes! (and failures too)

We measure ourselves almost every day, here at Connections. Scanning the reader service card comments, talking to callers, and researching stories - we get considerable reader feedback.

✓ **CORRECTIONS:** No, not a 'great idea for a magazine title', but something we do readily. And have done this year whenever an error becomes apparent. No, you don't need to have your lawyer write us a stiff letter, Just fax us.

✗ **INTERNET:** In February we paid Next Online in Sydney \$900 to create a web page with links to Buyers Guide and Editorial features. There have been, and there still are, problems at Next Online - human and technical. When they wanted \$200 a month to maintain what was a Spartan and humble site we thought we might just re-think this. So it is no more.

✓ **MSN (ON AUSTRALIA)**  
A total contrast in style and approach vs. Next Online. We were

one of an army of Beta testers for Windows '95, and established a site. Although we haven't done too much with it, we may. Find us in the Australian Arts and Entertainment section under 'industry journals'. (& watch for a new Net site.)

✗ **MELBOURNE:** We hired a smart guy in July to establish a bureau, in October he decided it wasn't what he wanted to do. Every editor's worst nightmare.

✓ **EDITORIAL:** On the other hand, we've had a good year refining the rest of our team, who have also travelled a lot. For this issue Dan Cole went to Adelaide, Caroline Grafton to Brisbane and Miami, Nat Apostolou to Melbourne and Julius Grafton to Singapore. We've focused a bit more on AV and Broadcast, strengthened our theatre coverage and still kept our broad base of readers happy.

As always, we really do welcome your criticism and always like getting tough letters to the editor!

## Music News

With Natalie Apostolou

• **Larrikin Entertainment** have announced that they will merge with **Festival Records**. Warren Fahey the managing director of Larrikin will become joint chief executive, along with Festivals MD, Bill Egg.

• **Air Supply Re-surge**  
Graham Russell and Russell Hitchcock have been developing **Air Supply** projects at BMG Entertainment's Hong Kong division for over a year. They have a live, 20-track, karaoke laser disc-the first of its kind to add original artist video to Western music.

• **Mushroom UK's Managing Director, Gary Ashley** has resigned. Ashley has been with the Mushroom group for over 20 years, being based o/s for the last decade and setting up the UK division over two years ago.

• At the launch of Australian Music day, Ausmusic Awards were presented to **Kathy Howard, Owen Trembath, Michael Chugg, Lindsay Cliff** (BMG), **Kerry Jarvis** (Stageline Productions) and **Jackie Crouch** for services to the biz.

• **ARIA report:** Australian wholesale record sales totalled \$460m, 20 \$29m or 6.56% over 1994. CD sales account for 73% of unit sales. Up 8%. CDs now represent 80% of album sales, and Cassette sales volume is down by \$13.7 (sales value

• **Ralph Carr** the manager of Rick Price and Tina Arena, has moved his management company to Lennox House, Lennox St Richmond.

• Glenn Wheatley and John Farnham's **Talent Works** company have new details. 1st Floor, 222 Albert Road, South Melbourne, Vic, 3205. (03) 96863999/Fax (03) 96864999.

• **Cable News-Molly Meldrum** has been given his own music show on Foxtel. The Meldrum Tapes will run at 6.30pm Sunday nights.

• **NATS QUICKIES: Regurgitator** are heading to Bangkok to record their debut album for Warners... **Def FX** have got a deal with MCA Australia.... **Soul Asylum** filmed their new video at Port Stephens and Sydney's Metro gig while here.

• **Box The Jesuit** have played their final gig.... **The Angels** are on their final tour..... **Custard** have been recording in the states at the same studio as Green Day.... **d.i.g** have switched managers, joining forces with **Mark Sydow** from Big City Promotions....

• The **Red Hot Chili Peppers** have cancelled their US tour, which was to be supported by **silverchair**. Our young gits have scheduled their own US dates but are unsure about the re-scheduled Peppers tour in Feb.

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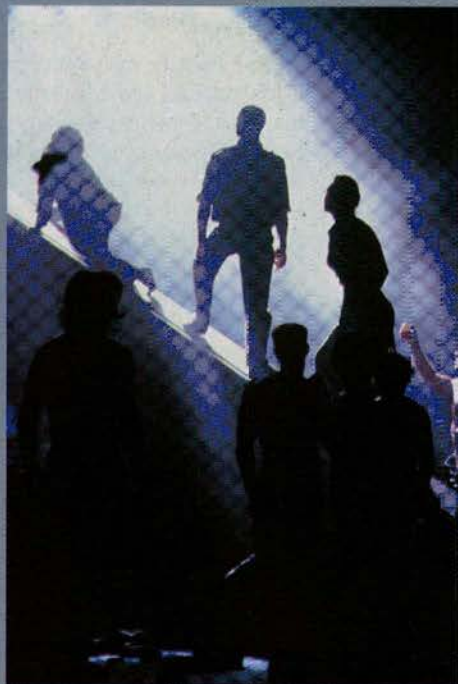
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# SHOWSCENE

## BERLIN

## CHUNKY MOVES

Photo: Branco Galica



Graeme Murphy's new work for the Sydney Dance Company, entitled *Berlin*, once again utilises the talents of lighting designer John Rayment and set designer Andrew Carter. The show is currently playing at the Sydney Opera House.

*Berlin* has five live musicians, including singer Iva Davies from Icehouse, and is put together on Digi Design Pro Tools. For the production week the Pro Tools were in the theatre so that the final mix down for the room could be done. The backing and much of the score is now going out on ADAT. The band is se-

creted somewhat within the scenery. The score mixes original music by Davies and Max Lambert with arrangements of songs such as artists as David Bowie, Lou Reed and Bryan Ferry.

Lighting comprises of eight Super Scan Zooms, eight Colourset colour scrollers, 20 cadenzas, 28 harmony PCs, 18 743's, 2 5K fresnel, 26 MFL par cans, 11 Selecon 1200's, 83 preludes, 3 Coda 4's. The Super Scans are controlled through a MA Scancommander desk whilst the Opera House Drama Theatre's Galaxy drives the rest of the lighting.

"Three old Pattern 750 beam lights are used on the set," said John Rayment. "We had to track them down interstate because nobody has them any more but they look good. I use them for their aesthetic quality as much as the light coming out of them. It's a bastard of a show because you can't get the rig in once the sets there, so the rig has to get up before the set comes in. But it's lots of fun - there's neon, live projections, UV, strobe."



Gideon Obarzanek has proven his place as the innovative gem of the new wave of dance in Australia, with his latest production *Chunky Move*. The *Chunky Move* dance company was formed early this year and premiered at the Melbourne International Festival to heightened critical approval. The current Sydney season is similarly lauded, etching the company and its choreographer/director, Obarzanek into the consciousness of the public and critics alike.

The *Chunky Move* ensemble have created an idiosyncratic production that defies the boundaries of modernity and post-modernity, challenging the sacred and the profane and defining a new turf for a plethora of ideas, imaging and performance.

Post-modern heroism seeps through both works, Gary Stewart's *Spectre in the Covert Memory* acts as a modern day remembrance of things past, while Obarzanek's *Fast Idol* is interpretive dance paying homage to animation, displaying a collage of emotion slaving to corporeal reality. Gideon's cartoon fetish is articulated as an appreciation "for their ability to graphically manifest the exterior of a character's body, distorting its form and accentuating movement possibilities to describe the inner thoughts, emotions and actions of the character."

The result is a pastiche of body scapes interacting and emitting the comic tragic and desperate aspects of devotion through the nuances of physicality and ironic visions. Obarzanek has rewritten the rules of the body as text, using his dancers/characters as ciphers articulating the rhythms of the human condition.

Sound designers Antony Partos and Andrew Lancaster created the perfect soundtrack for this parallel universe.

Lighting design by Bruce McKendry. Production Manager-Mark Mitchell Stage Manger-Annette Dale

Sponsors include *Lightmoves* and *Coda Audio*. *Chunky Move Dance Company* is assisted by the Australia Council.

♦ Nat Apostolou

♦ Nat Apostolou



## babes in toyland

The banshee howled immobilised. Kat Bjelland can capture the attention of a crowd with one penetrative glare, sans movement, an occasional studied spit and hellcat guitar work.

Minneapolis's trio of Babes are minimalist blistering rock at its most essential. Propelled by lyrics cast in bile and fury, Kat, Lori Barbero and Maureen Herman retain an almost punk ethic in terms of delivery and attitude. Kat's utterly visceral vocal delivery is peppered with feline yowls and guttural cries that belie subtly or pretence. The Bjelland intensity goes back to early days as Courtney Love's collaborator, ending in a public falling out that continues via the press, and is fuelled undoubtedly by her partner's influence, Sydney's own Stu Spasm. Babes In Toyland were on a national tour playing *Livid* and selected dates including a Henry Rollins show.

# SHOW SCENE

## BON JOVI BRAVE THE WEATHER



Photo: Serge Thomann

Bon Jovi tested fate with a run of outdoor concerts that included one in a hailstorm at Sydney's Eastern Creek Raceway. Punters compared hail welts, while the first two support bands were cancelled. Frontier Touring quickly scheduled a free show featuring the two support acts for the following night at the Hordern Pavilion. The Perth concert was cancelled due to the drummer getting a hurt hand. Meantime Video for the tour was provided by Eig Picture, who ran 7 cameras including 3 miniature XE999 devices - 2 of which were mounted on the drummer. Barco 8100 projectors were used on 15' x 12' screens. The live video producer was Tony Bon Jovi, brother to the artist.



## Melbourne Festival

The Melbourne Festival celebrated its tenth birthday this year with a record number of exclusive Festival-produced events and attractions. Some of the biggest names on the national and international stage flocked to Melbourne for seventeen days of extraordinary entertainment.

## PACIFIC NORTHWEST BALLET

The Pacific Northwest Ballet has dazzled audiences from New York to Leningrad. The Melbourne Festival saw the Australian premier of six classical ballets.

The Pacific Northwest Ballet is one of the leading exponents of the choreography of the late George Balanchine. The company's co-artistic directors Franca Russell and Kent Stowell both danced under Balanchine for New York City Ballet in the 1950s and 1960s and Russell has gone on to become one of the few répétiteurs sanctioned to mount his work on other ballet companies.

For the Melbourne Festival, Pacific Northwest Ballet premiered three Balanchine masterpieces - *Agon*, and *Rubies*, (both set to the music of Stravinsky), and *Who Cares?*, Balanchine's tribute to the work of George Gershwin.

Works by three contemporary American choreographers launched the Melbourne season and included Kent Stowell's *Carmina Burana* (pictured above) which featured the entire company of dancers and the Victorian Chorale in a Festival opening night extravaganza at the State Theatre.

Also appearing at the Melbourne Festival were acclaimed British ensemble *Cheek By Jowl* with a new production of John Webster's great Jacobean drama, *The Duchess of Malfi*. One of New York's brightest singing stars, Michael Feinstein, made his Australian debut with an evening of music at the Myer Mural Hall. The *China Beijing Opera Troup* represented the best of China's performing arts, card sharp, illusionist, master of sleight of hand, raconteur, actor, best selling author, Ricky Jay made his Australian debut hot on the heels of a sell-out season in New York.



## STILL/HERE

He is one of the most controversial figures on the international stage. He and his company have been described as 'poised on the very cutting edge of dance'. His full-length, multi-media dance-theatre work, *Still/Here*, sparked a heated debate among some of the most influential members of New York's artistic community when it premiered there.

He is **Bill T. Jones**, the *enfant terrible* of modern dance, and co-founder with his long time partner, the late Arnie Zane, of the Bill T. Jones/Arnie Zane Dance Company. The company mixes heights, weights, sexes, religions and nationalities to create a totally different ensemble.

The company's major work, *Still/Here*, is inspired by a series of 'survival workshops' conducted by Jones, who was diagnosed HIV positive eight years ago. The work confronts the theme of coping with life-threatening illness. Eminent New York dance critic Arlene Croce labelled *Still/Here* as 'victim art' and refused to review the piece on the grounds

that it would be impossible to offer an emotional response.

Premiering in Australia at the Melbourne Festival, *Still/Here* comprised of two discrete works entitled *Still* and *Here*, each incorporating dance, text, actuality interviews, multiple screens featuring the work of renowned US video artist, Gretchen Bender, high tech lighting and sound effects. Music for *Still*, composed and arranged by Kenneth Frazelle, was performed by the black American gospel singer, Odetta, and the Lark String Quartet, whilst *Here* was by Vernon Reid from the rock group, Living Colour.

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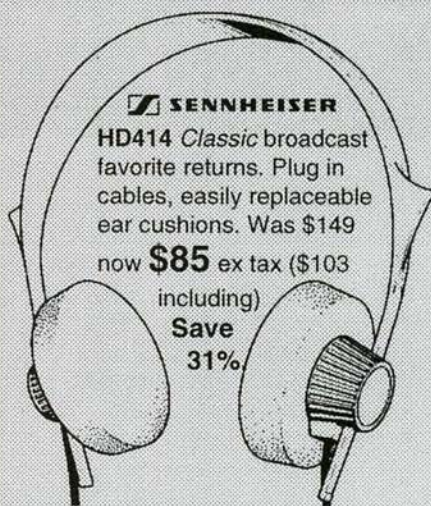
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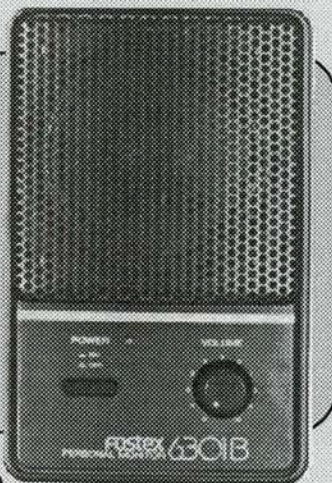
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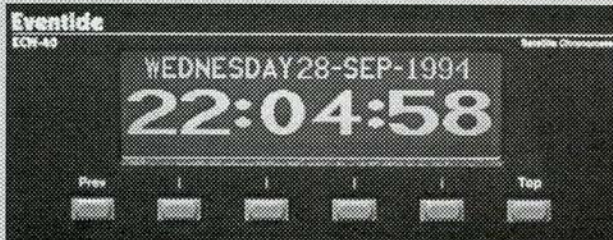
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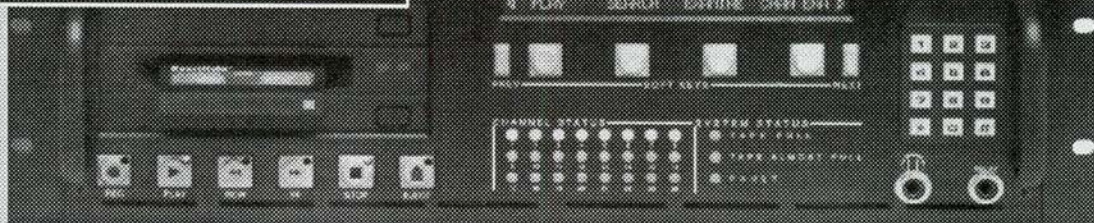


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## Greg Weaver, the Webmaster

*Nat Apostolou finds someone NetWise who actually KNOWS what they are talking about!*

Combining a background in concert production, a fanatical fascination with the X-Files and an expansive knowledge of the Internet- Greg Weaver is at the forefront of net site creation within the entertainment biz.

Starting out with the 'Who Stole the Music' stunt at the Contemporary Music Conference to connecting rock stars and site creations for record companies.

The Internet is a law unto itself. The evolution of the net as an indispensable tool for marketing and promotional purposes has generated a new industry of net gurus who can set up/connect willing disciples to the intricacies of the net as consultancy and/or design service. They are in a strong position to offer the music industry access to something incomprehensible.

For Greg Weaver the truth has never been more out there. As hire manager at Revolver Sound and Light in Sydney, Greg's after hour fascination with the net has evolved into a profitable pursuit.

"One of the things that I'm doing as a branch out from Revolver is setting up websites for compa-

nies like rooArt- and I'm also providing a consultancy for people that want to get on the net but perhaps want more of that VCR straight-out-of-the-box-plug-into-the-TV and play effect. They can use me to bypass all that stuff that perhaps they don't want to know about, or aren't going to be able to understand or get too frustrated and give up on the whole thing."

"The Internet is changing rapidly and in a few months time I may well be superfluous. But in the mean time I'm just trying to help people out and get them hooked onto the net and make enough money at the same time to pay for my own internet access. I'm just doing it to support my own habit!"

All up the immediate returns from the net are negligible, it is in the long term that benefits can be reaped. The gains from strategic promotion, unlimited access, company/product positioning are indispensable.

Greg helped orchestrate The Screaming Jets live to air and live to net album launch on August 14. The first of its kind, the event was aired on Triple J's Live at the

Wireless program in conjunction with a virtual concert, via live images being pumped through the CU-See-Me software on the rooArt Web site. The rooArt site was created and is maintained by Greg on the Geko service provider.

The Screaming Jets site had 36,782 hits the night of the concert. Over the weekend media campaign and articles in the mainstream press hits went from 4000 to 48,000.

The problems with the net at the moment are the obvious restrictions due to bandwidth, creating a slow link to the rest of the world.

"Telstra has the physical capability to increase the speed of that link. This is where we have the bandwidth problem, like a very thin hose and trying to pass a whole lot of water down it. We've got more machines on the internet per capita, per head than many other countries."

"Telecom have got all this bandwidth going to overseas countries for telephone calls, its not a problem for them to actually create great big links to the rest of the world so that the internet access

can be a lot faster the way I see it is that there's just no money in it for them. There's been no talk about updating the capacity of this link in the short term .

### Logging On/Jacking In

"At the moment the internet is not as accessible as people think it is." This is due to the different bits of software you need, we run three different applications at Connections to connect to the web and download Email. Clunky.

The cheapest net connection is where you connect up via a modem. Or you can lease a line from the service provider company. The next large step after that would be to get an ISDN line. The current charges for a standard ISDN line are \$396 to connect with Telstra at each point, with a fee of \$960 annually plus call charges.

• **Greg Weaver's Personal Internet Services** can be contacted at email: [gregweav@magna.com.au](mailto:gregweav@magna.com.au). or phone:(018) 414-960

• **Some service providers are:**  
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**HI SHELVE EQ** with 15dB boost or cut at 12kHz, **SWEEPABLE MID EQ** from 100Hz to 8kHz, and 50Hz **LOW**

**SHELVE EQ** and **LOW CUT FILTER** with 18dB/octave @ 75Hz. **ALL CHANNELS** feature **60MM FADERS** with the same precision, log-taper as the 8-Bus Series.



**CHS. 21-24 (SR24•4)** and **CHS. 28-32 (SR32•4)** are stereo line input channels with HI & LOW shelving EQ. **6 MONO AUX SENDS** per channel, 1 & 2 are pre-fader, 3 & 4 are switchable pre/post, 5 & 6 are post-fader. **Dual HEADPHONE OUTPUTS.**

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**4 STEREO RETURNS** ...also feed AUX 1 & 2 for returning effects to stage monitors.

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Write in Reader Service Number: 156

# Technology

WHAT'S NEW, HAPPENING & IMPORTANT FOR THIS MONTH



Code-named 'Oxford', SONY's new music production console offers 'off-board' processing for up to 256 audio channels. Julius Grafton reports ....

## Console 7 Years In The Making

The now trend in mixing consoles is separate control surfaces with processing handled in remote racks. We saw this at Entech last year with the Tactile Technologies console, then Soundcraft dem'd this with their 'Broadway' console for live audio at AES, while just around the corner Sony unveiled the new OXF-R3 console – unmistakably a prestige console for music studios.

The remote processor concept is logical for any console larger than a Yamaha 02R, which pretty well is close to the upper limit of what should be a completely integrated into an 'all-in-one' digital console. The 'split' console/processor rack allows expansion and also it moves the connections closer to the action. It also raises the possibility of one processing rack servicing two consoles or vice-versa. The real attraction is size, with the OXF-R3 measuring 2.5m wide x 1.2 metres deep.

Console size is a big issue, users like to stay within the 'sweet spot' and not have to zoom off to

access something, and acousticians despair trying to minimise the reflection effect several square metres of console can have on otherwise manageable control room acoustics.

Up to 256 audio channels can be accessed from the OXF-R3 control surface which is available in a standard 48:16 format. Some customisation is possible via the modular console format, but at this time is not likely to be demanded. Seven colour TFT screens display multitrack assignments, processing, cues and dynamics – and session management.

The 48 channel faders – 24 each side of the master section – can be allocated to any available channel, and also selected to control any channels aux send, input gain, multitrack send, group trim or multitrack monitor. This 'assignability' of faders means the left bank could operate a group of 24 channels while the right bank could drive monitors in a split console sense. While talking about 24's, the console has a total of 24

auxiliary busses.

On-board dynamics includes four separate processors working as independent side chain processors, for gate, expander, compressor and limiter control which can allow dynamics modelling. EQ is available on the side chain, quite separate to the five band fully parametric EQ available on the channels.

Multitrack routing is standard to 48 outputs, with stereo panning. Up to 96 outputs can be optional. Direct interface to Sony EASH recorders is standard, with the track record button on the console.

Sony claim that operator familiarity is possible within 30 minutes, a key consideration. Naturally, the real attributes of a console such as this are hidden in the ergonomics and the software. Control and creativity is the catch-cry from the development team, who have worked seven years on the project.

•About \$800k. Details: Garry Rhodin, Sony, (02) 887-6665

## Why?

### Live Mixing and THE MIDI FADER

By Nick Orsatti, Jands Electronics.



Since the inception of the MIDI age we have all enjoyed new freedom in the musical realm. But few of us realised back then what implications MIDI would have on the professional entertainment business as a whole. From linking keyboards together to run entire shows from sequencers, to controlling a studio's outboard gear, to running the wobbly mirrors in a nightclub... You get my point.

So why have MIDI implementation in a mixing console? Well, traditionally the MIDI implementation of an "off the shelf" live mixing console was scene set automation or mute scenes. The console had a number of memories (usually 128) in which you could store mute scenes, that is, a scene or snapshot of all the console's channel mute switches, and auxiliary sends/returns if you were lucky. So you would programme scenes into the console and then recall the preset scenes, in much the same way as a lighting operator would set and change lighting scenes during a show.

And now there's the Soundcraft k3 and that mysterious "datafader". Just what the hell is a datafader doing on a mixing console?

Well, those MIDIots out there will know what I mean when I say: Continuous Controller. Yes, I think I can picture the salivary

(continued on page 19)

## Yamaha's 02R has landed

The most awaited audio product this year is here, it's fully auto-everything, and it promises to shake the market. Julius Grafton discovers a mixer that isn't just for studio's

Yamaha's first production 02R mixer landed in November, while the first sale is to Trackdown Studio, we actually caught up with it beforehand at Tom Misner's SAE Technology College in Sydney, where SOS Communications were trying to get Tom to buy a mixed dozen for his colleges.

Yamaha have taken the ProMix 01 concept and gone a step further with a mixer accepting 40 inputs and boasting auto-everything at less than \$15,000.

To fully appreciate what is available here, imagine a console sized something like a PM3500 - with two full effects racks on the right. This is what you need if you attempt to do all the things 02R will do in the analogue domain.

Tom Misner was enthusiastically appraising the console, with staff hovering. "You can set every channel for delay", Tom said, the technique of 'placing' individual channels via slight time delays a recording engineer specialty. Sonic clarity and no dithering in the converters was another thing Tom liked.

The EQ section in his view was reasonably accessible. This is via turn pots at the master section, where your selected EQ may be adjusted for Q, frequency and gain. The frequencies overlap almost completely, the EQ section is 4 band.

I think Yamaha intend the 02R for mainly multitrack use, but it has a home anywhere. The four slots for optional direct digital-outputs to ADAT or DA-88 on the back make mixing to tape a 100% digital process after you've con-

nected your microphones or instruments. In fact SAE had been playing with a pair of DA-88's run with 02R, interesting as they are a committed ADAT user.

The four slots can also be used for extra inputs and outputs, while standard in's and out's comprise 8

desk is limited to mixing down 16 tracks, of course you could connect more. Alternately, you can add another 02R to get serious mixing power with the two connected together.

One aspect of 02R which the people at SAE like is the learning



balanced XLR inputs, 8 balanced TRS jack inputs, while four stereo channels take the channel and fader count to 24. You make with the final 16 inputs as digital mixdown connections via the optional cards.

Every channel has EQ, dynamics and of course several internal SPX990 type processors can be applied where required. Snap-shot automation means you change EQ, processing and effect as many times as you like, scene recall and time code automation are all as you would expect.

Faders are motorised 100mm, and the console has eight auxiliaries and eight busses.

Tom Misner says in his view the

curve. Engineer Robert Sazdov says he mastered the thing in an hour or so, and in his view it was great for education because you could set the LCD display to SHOW you the EQ and processing settings - a visual bonus you don't get any other way!

Jingles, voiceovers, dance music - I also see a big future for this thing in live and production AV, where mixing automation is cool. There are options, the meter bridge is a must, the timber sides are also very chic. But, the cost ... seriously, a worry for people selling conventional mixers, and we must wonder when Yamaha will ever mke back the horrendous R & D they entered into with ProMix 01 and now the 02R. Unless, of course, more mixers are coming!

You can do lot of things without a mixer these days too. But; "Everyone wants a mixer" says Tom, eyeing the ProTools setup in the adjacent Mirage studio. "I can do it all with a computer, but everyone wants a desk....."

**WRITE IN 206 ON READER SERVICE CARD FOR INFO**

## SALES

Even if Foxtel and Optus never turn a buck with cable TV, the boost to our industry cannot be underestimated. Here are a few examples:

- OptusVision's video operations centre in North Ryde is now monitored exclusively by **JBL** with Control 1s, Control 5s, 4408As and 4412As used throughout the editing rooms, master control rooms and studios. Jands (02) 516-3622

- Gregg Joseph from East Coast Audio reports Philips Australia recently installed 44 **Aphex** AX720 Dominators for Foxtel. AV Group installed 15 AX720 and 8 AX320A Compellers for Galaxy.

- Foxtel were first in with **JBL's** new EON range of P.A. equipment. EON was launched at a Jands dealer conference held during the recent AIMS show in Darling Harbour and a pair of the powered 15-inch EON speakers were taken straight from the launch to Foxtel for use as a self-contained playback system. The EON "plug in and play" speakers feature inbuilt amplification and a mic input, obviating the need for a power amplifier or mixer.

- **MIDAS** continues a good run with live console sales in Queensland to Australian Concert Productions (see story on page 33), a new XL-200 for Boondall and ANZ Stadium in Brisbane, through Impact Audio. Midas XL88 Matrix Mixers were also sold to Jands Production Services and ACP. Impact Audio: (07) 257-1220.

- **MARTIN AUDIO** was chosen by a Sydney touring band, 'Dr Stone' who have a complete new foldback system from AR Audio Engineering. It includes LE700 wedges powered by QSC amps and EQ'ed through SCV third octave graphic equalisers. AR Audio Engineering, (02) 299-2240.



4 slots allow optional direct-digital to/from ADAT, DA-88 and others.

## More Digidesign Options

**Digidesign** have released a number of new products which enable users to complete entire projects within the Pro Tools environment, from recording to mixdown and mastering. As well, now Pro Tools software will be available for use on multiple hardware platforms.

**ProControl** — A modular control surface adding tactile mixing and dedicated editing controls to ProTools III. It can be used as a mix controller in professional music or post production.

**Avid Audio Vision 3.5** — Now with Vers. 3.5 software, Avid features clip based real-time parametric EQ; Avid Media Processor; runs on either Quadra or Powermac; high speed DLT backup; reverse audio and sync point editing.

**New Focusrite Plug In** — A high end Digital EQ based on RED 2 Parametric EQ, and the latest version of the Rupert Neve designed Focusrite EQ. For mixing

and mastering applications

**PostConform** — This integrates with ProTools, allows importation of industry standard CMX formats; on-screen sorting of EDL elements and automatic recording and spotting of elements into ProTools. For film and broadcast post production.

Other audio editing software from Digidesign;

- Pro Tools Project — Pro Tools functionality at realistic price.

- TC Electronic Plug-In — Effects/Processing Plug-In software.

- New Companion Plug-In Architecture

- PCI Exchange Program — for up grading ProTools customers' systems.

- Audiomedia III with Session Software — provides 4 tracks of hard disk recording plus additional features.

**Contact David Corazza at Digidesign, call (03) 9817 6886.**

## Why? The MIDI fader

(continued from page 17)

glands watering already. Continuous controllers - the fun part of MIDI.

As a stringed instrument player, the continuous controllers such as the wheels, joysticks and faders usually found on the left hand end of a keyboard were always the fun part of mucking around with the keyboard player's rig. The datafader on the k3 is an assignable continuous controller, capable of controlling a myriad of parameters of other MIDI devices, all from your console's surface. Sounds pretty cool eh? Read on.

So enough of the theory, what can you control with this baby? Well, this depends on the MIDI device you connect to a k3 console. Such devices could include effects processors, samplers, equalisers and lighting consoles, just to name a few. So let's look at some applications:

### 1: Live band.

The k3 could handle channel mutes between support and main acts. It could also send programme change information to effects processors, once again limiting the support mixer's choice of patches.

Further along the effect processor idea, the datafader could be assigned to an effect parameter. For example, many stereo reverb units use MIDI to control programme changes, some also allow you to control the reverb depth in real time. So you can adjust the depth without your hands leaving the mixer! This is only one example - what you can control depends entirely on what your effects processor will allow you to control externally via MIDI.

The datafader opens up a new field - you now can have real time fader control over parameters you could only previously scroll through on a LCD display with up/down buttons or an alpha wheel!



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Brisbane Unit 10, Portman Place, 220 Boundary Street, Spring Hill QLD 4215 Tel: (07) 3831-8444 Fax: (07) 3831-8455  
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the chaps  
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Sydney's premium music / audio production facility Tiger Recording, has just updated its all new, 3 studio complex entirely to Sonic Solutions.

If you'd like to know how Sonic performs in the wild talk to Greg Devine at Tiger Recording in Sydney on 02 9922.4700

If you'd like a personal demonstration, anywhere in Australia, talk to Paul Heaton at Syncrotech Systems Design on 02 417.5088

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## Technology

### Why? The MIDI fader

(continued from page 19)

#### 2: Theatre sound.

Along with the applications featured above, the k3 adds some exciting new tools to the audio tool box. Let's look at integration with lighting systems.

All decent lighting desks have MIDI implementation but how much implementation again depends on the console. Some will let you fire scene memories or cues from programme changes and continuous controllers while others work with the MIDI show control format. Say you have a Jands Event and you've set up some timed crossfades as cues that correspond to mute scene changes on the k3 (this could also be chases or scene memories). You could set it up (within the mute scene) so that when you change your mute scene, the crossfade starts.

Another theatre application is to do with samplers. These days it is more and more common to see samplers in racks at mix position assuming the duties of sound fx replays, usually with a software based event management system overseeing. Here's where the k3's MIDI implementation really cooks.

You see, every channel mute has a MIDI note assigned to it. So when you un-mute a channel, the k3 sends the appropriate MIDI note on and when you mute the channel, it sends a note off. So un-muting the channel also tells the sampler to play the sound effect. Not bad, don't you think? And you can take your pick - you can either trigger the sample as part of a scene, do it manually, or use a MIDI event manager to do it.

But it goes on from here. Suppose you are running a software based fx manager and that's triggering the fx samples and lighting scene crossfades among other duties. Well, simply plug the k3 into the MIDI loop and not only do you get the scene mutes but also fx machine (or EQs or MIDI router/switches etc) programme changes plus real time control over any MIDI controllable parameter, whether it's the lighting crossfade or the delay time on aux 1.

The channel mute's note on/off thing also works in reverse so it acts as a gate, opening the channel when the fx sample plays and shutting it when the sample ends - all from the control of your central event manager!

For all MIDIots getting excited at this point, it's time to take a few breaths and relax. Back to the big picture - what does all this mean?

Well, what it means is with some programming done initially (read "before the show starts"), the Soundcraft k3 console helps you run a smoother show. It takes care of the more mundane tasks (such as channel muting and programme changing other devices) and gives you a unique tool in the datafader to help you be more creative with your mixes or to control other devices used in the performance. The key is integrating your system together so it works for you. If your system is working for you, then you are freed up to do what you're paid for - mixing the show!

*Nick Orsatti is a Jands Product Trainer. He offered this story as a 'how it can help you' item, we regard it as a good knowledge experience and not a 'product puff piece'.*

### Speaker Cable

Everyone has trouble finding a chunky speaker cable that will fit into an XLR connector, according to The Resource Corporation. They offer Eurocable 02N25C, with 2 x 2.5mm conductors in a coaxial style format. This keeps the outside diameter to 5.7mm, and a beefier version is also available.

Multicore speaker cables are also available for multiamp systems, the 4 x 2.5mm version has just landed, and 6 or 8 conductor versions are in stock too. The transmission factor of Eurocable is indexed inverse to the flexibility of the cable.

Call The Resource Corporation: 03 9888-6555.

READER SERVICE # 201

## SALES

• **Murray Tregonning & Associates'** (MT&A) first order received as Jands' newest pro audio dealer came from GTV 9 Melbourne.

GTV 9's news department had been looking for ENG portable audio mixers during their recent upgrade from Sony BVU to Betacam SP cameras for ENG. MT&A were contacted by news operations manager Scott James and chief engineer Geoff Tomes for a Shure FP32A to "roadtest".

The FP32A passed, and the station took delivery of 14 units to coincide with the arrival of the new Betacam SP cameras. On request from operators, they have since been modified to accept standard NP1 rechargeable NiCad (Betacam) batteries and to allow "unity gain" into the headphone monitor input on the side of the mixer from the Betacam earpiece output via the Betacam loom. This allows operators to switch their headphones between "mixer output" and "Betacam off - tape output".

• **DDA mixing consoles** are new for Mark IV Audio Australia, who have sold several recently. Topstage Productions (ACT) placed a 24 ch DDA Interface console with Audio Solutions in Canberra. The Campbelltown Catholic Club has also installed a 24ch Interface console.

• **LAVA** in Melbourne recently purchased Klark Teknik DN320 equalisers for use in their disco installations. The DN 360 is a single rack, dual 16 way equaliser with all controls on rotary pots that can then be locked away behind a solid panel.

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## Aussie MIDI to Analog Converter

The frostwave Quad MIDI-CV Plus is a rack mount four channel MIDI to analog converter, designed and manufactured in Australia.

The unit operates in three different modes. As a basic four channel converter, it interprets MIDI note number, velocity, and note on/off on any four adjacent MIDI channels and produces corresponding control voltages and gate voltages to drive up to four analog mono synths. Switches enable each channel to be either volt/oct (Roland, Moog, ARP, etc) or Hz/V (Korg MS Series). Gate polarity can be either positive or S-trigger (Moog) type. Pitch bend information is interpreted on each

channel via a 16-bit DAC and added to the control voltage to give smooth glides. There is a DIN sync output for early drum machines, locked to the MIDI tempo.

The second mode is for modular systems, with various MIDI controllers being interpreted from one channel. Eight continuous and four gated outputs are available.

In the third mode, the unit is used as a MIDI controller. Plugging a standard analog games joystick into the unit allows samplers etc. to be triggered by the fire buttons. Moving the joystick changes the notes and volume.

Apart from the obvious other

uses, the Quad MIDI-CV can be seen as a source of MIDI controlled 0-10v for lighting controllers, VCAs, voltage controlled filters etc. Much pre-MIDI studio gear such as Lexicon used this type of control.

The Quad MIDI-CV makes an ideal 'front end' for specialist effect devices, since the most difficult part, which is converting MIDI info to voltage and switching level outputs - is already done. You can use the device in reverse mode to generate MIDI info from transducers giving control voltages in the 0-5v range.

**\$495 from the manufacturers, Frostwave. Call (03) 9349-2348.**

**Write in Reader Service Number 210 for info**

## OTARI DIGITAL AUDIO FORMAT CONVERTER

Otari's new UFC-24 universal multitrack digital audio format converter allows up to 24 tracks of digital audio to be transferred from the source format to all of the most common formats used in the industry today - at the same time.

It'll convert up to 24 channel of digital audio from any one to all digital formats comprising PR, SDIF-2, ADAT, TDIF-1 and optionally, AES/EBU. Multi units may be linked.

In addition to 1:1 channel conversion, the UFC-24 also provides for selectable routing of output channels.

**Less than \$3200 inc tax, available from Amber Technology, call: (02) 9975-1211.**

**Write in Reader Service Number 211 for info**



## Mighty Midget Mixer

The cost of pro audio electronics is actually falling, witness power amplifiers. Eight years ago you would pay more than you do today for a device delivering 2 x 800w. It's true.

Techniques, circuits and savvy design are all in league to deliver lower prices, and the Phonic MM-122 mixer (above) is an example of this.

It gives you entry level plus features at well under a grand, and fits into any use where four mi-

crophones, and four stereo line inputs are required.

This includes recording and PA applications. Four track recording is accommodated.

Channels 1 through 4 have insert points and XLR's, while the following 8 channels are four stereo pairs through 6.5mm jacks. Thus 12 channels are available, with faders.

Two auxiliary sends are supplied, as is phantom power.

**•Call CMC Music 02 9905-2511.**

**Write in Reader Service Number 209 for info**

# Meyer moves into self-powered systems

Meyer Sound have introduced a new line of self powered loudspeakers which feature amplification and control electronics integrated into the cabinets. They offer performance and economic advantages as well as ease of set up and operation. The line comprises:

- MTS-4 : Full range quad amplified cabinet. It employs a a triple tuned enclosure which allows each of the three low frequency drivers its own vented chamber, creating a frequency response of 16 kHz to 30Hz.

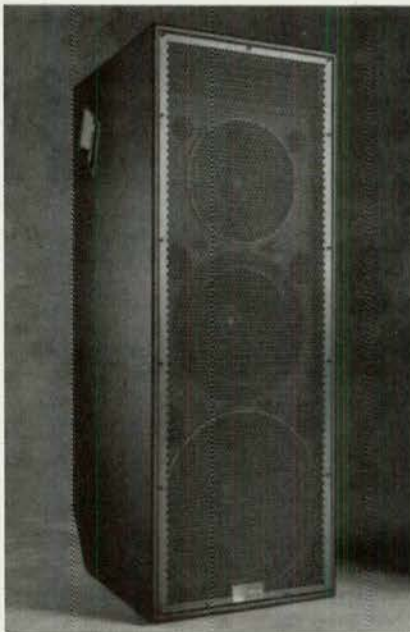
The loading of the MTS-4 (pictured at right) is an 18", a 15", 12" and a 2" throat compression driver/horn. The amplifier stage is a Mosfet, class AB/H. It has tilt wheels for easy handling, and weighs 127 kg. System Sound have this product out on the Japanese tour of Hot Shoe Shuffle.

- MSL-4 : A high power, high Q cabinet, it operates with a frequency response of 18kHz to 65Hz which means it can be used either on its own or with an

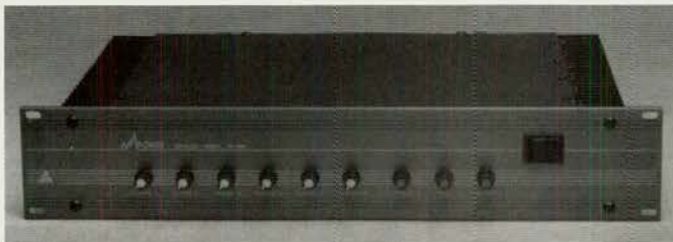
optional subwoofer to give any system better low range dynamics. This cabinet is currently in use as the main PA for several tours of 'Beauty and the Beast'.

- 650-P Subwoofer. Double 18"
- PSW-4 Subwoofer. Trapezoidal single 15" and single 18"
- DS-2P Mid-bass. Double 15".

Meyer available from System Sound, call (03) 9529-2633.



Write in Reader Service Number 208 for info



## Installer Series Takes Off

The recent release of 14 different amplifiers by Melbourne manufacturer Ampower has worked, with a high degree of acceptance both locally and overseas, they say.

The range covers models offering wattages from 80 to 400, in mono, dual channel single and multizone and 6 channel mixer amps like the one pictured.

A major attraction is the option of twin vox muting modules, available for zone and mixer amps, and the compact 2r/u tall size.

List prices inc. tax for three of the mixer/amp models are:

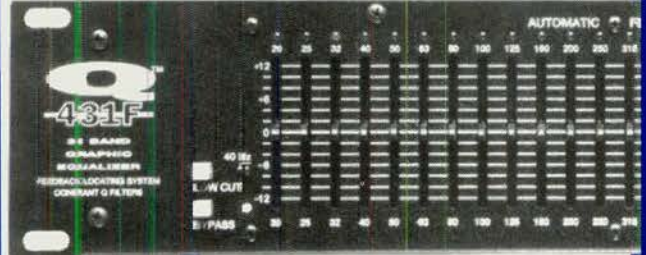
80 watt: \$765, 180 watt: \$905, and 250 watt: \$960.

\*Made and sold by Ampower, call (03) 9357-8560.



## SOUND REINFORCEMENT 431F

### 31 - BAND EQ with AUTOMATIC FEEDBACK LOCATING SYSTEM



- 1/3 Octave, 31 Band graphic EQ with +/- 12dB cut or boost.
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#### How Does The Feedback Locator Work?

When feedback occurs, the feedback locator automatically lights an LED over the correct slider to instantly tell you which frequency is to be adjusted. For intermittent feedback the LED will stay lit for a few seconds if the feedback stops before an adjustment is made. If the feedback occurs between frequencies the Feedback locator will automatically light the two appropriate LED's, with variations in the LED intensity to indicate if the feedback is closer to one slider or another.

NOW AVAILABLE . . . . . the Q431 F M monitor equaliser.

## NEW PC4-XL CROSSOVER

The PC4-XL is a totally programmable, all digital four-way crossover configurable either two way, three-way, four-way or two-way stereo. In addition to crossover configuration, the PC4-XL also functions as a Delay Line. The PC4-XL has 2 types of equalisation and limiters that were not on the previous model the PC4-X and CX4L.

Australis Australia: 88 Bourke Rd., Alexandria, NSW  
PH: (02) 698 4444



PH: (09) 837 3230  
Australis NZ: 5 Amokura St., Henderson, Auckland

## Alternative Horn Diaphragms

ESA Audio now exclusively represent Radian Audio Engineering products in Australia - a USA made line of premium co-axial loudspeakers, compression drivers, H/F horns and replacement diaphragms.

Radian co-axial loudspeakers come in 8, 10 and 12" formats, while their compression drivers are available in 1, 1.4 and 2 inch throat formats and 1.75 or 3 inch diameter diaphragms.

The replacement diaphragms feature a mylar surround, aluminium allow compression dome, edge wound aluminium voice coil and high temperature Kapton former. Each replacement diaphragm is said to offer equivalent, or better, performance than the original.

A good example is the Radian Model 1282-16 which fits a JBL 2482 compression driver. This old driver ran out of puff at 6kHz,

which is why you needed 'Bullets' or ring radiators with it. Radian say their diaphragm, used in the 2482, gives response from 500Hz to 20kHz - a radical result in any language.

For info: call ESA Audio, (03) 9562-4605.

**READER SERVICE # 202**

### NO EXPERIENCE NECESSARY

Shure's new SCM810 does automatic mic mixing easily, they say.

To minimise poor audio quality caused by multiple open microphones, the SCM810 features Shure's patented IntelliMix (TM)

circuitry which activates only those microphones being addressed in four milliseconds.

The 8 channel mixer automatically adjusts to changes in background noise and provides gain adjustment as additional microphones are activated. It is compatible with all professional wired and wireless microphones and can be linked for up to 400 mics!

Active balanced microphone and line-level inputs with adjustable EQ and a line level output are provided along with 48V phantom power, selectable for each channel. The SCM810 is available for \$4735 RRP. •Details from Jands Electronics.(02) 516 3622

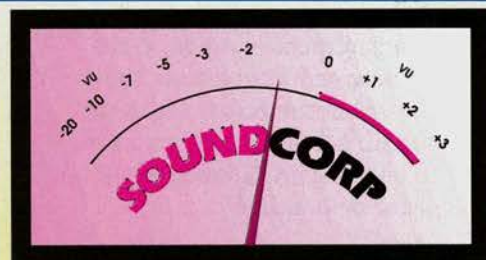
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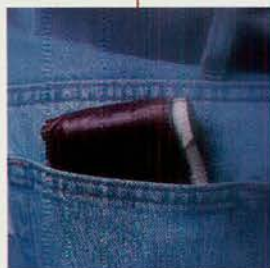


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Write in Reader Service number: 128

## From the UK: SPENDOR

AWA have announced they are the Australian distributors of the English designed and built Spendor range of monitors. They emerged from the British Broadcasting Corporation research department, designed by Spencer Hughes, for that institutions high demands for audio reference.

Spendor have recognised that audio monitoring is always a tricky element to sort out, the advent of small digital multitracks and DAT mastering has made it more so, where accuracy and listener fatigue become crucial elements.

When evaluating monitors it is hard to determine these factors at first listening. The thing is, what happens after 2 to 3 weeks of use? Listening fatigue? Accurate mixdowns?

According to AWA, Spendor monitors have been designed to avoid these problems. Spendor supplies a new approach to moni-

toring, fatigue and accuracy have become crucial and Spendor rates well in both. AWA invite you to have a listen to the range of monitors, to hear for yourself.

The range:

LS3/5A	\$1945
SP3/1	\$2175
SP2/3	\$2655
SP1/2	\$3595
SP100	\$5285
SA - 1200	\$12,400

• For more info, contact Alistair Dewar at AWA, (02) 898 7666



Model SA-1200

Write in Reader Service Number 212 for info

## 2 new Genelec's debut

The Model 1037B pictured here is a three way active monitoring system with amplifier inbuilt.

Response is 35Hz to 22kHz (at -3dB points), dimensions are 680 x 400 x 380mm, and it'll deliver greater than 126dB SPL. Loud.

It has a new 305mm bass woofer, and Genelec's proprietary 8" mid cone and a 25mm metal dome tweeter. Price: \$12,995 pair.

Then the model 1039 (pictured below) is something else - control room monitors which boast twin 15" woofers.

Mids come from a 5" cone driver, while highs are from a 1" dome unit. The amps are racked separate, the whole system costs \$29,995. Studio Connections, (03) 9646-0544.



Write in Reader Service Number 215 for info



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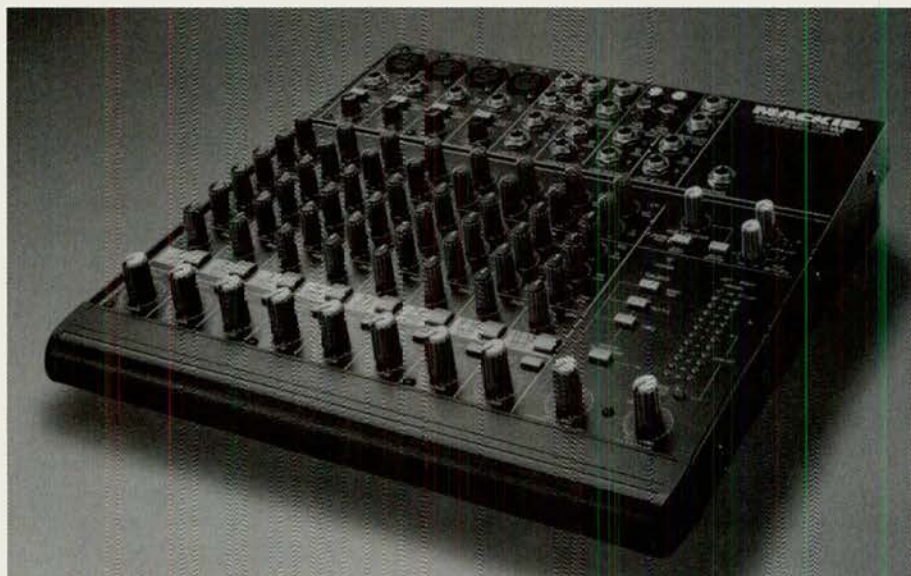
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**New Zealand:**  
Magna Techtronics (NZ) Ltd.  
Level 4, 210 Khyber Pass,  
Newmarket, Auckland.  
Phone: (09) 307 3901 Fax: (09) 307 3832



## New/Improved Mackie MicroSeries 1202VLZ Mixer

Mackie's MicroSeries 1202 has been called the "Swiss army knife" of mixers, says Mackie.

What was considered the "perfect throw pillow" is now better than ever - featuring a gaggle of new goodies (12, in fact) to better enhance your next mix or recording session.

Besides being darn inexpensive (\$995), the MicroSeries 1202VLZ is perfect for home recording or live gigs, says the Mackie PR department, itself a monolith.

Get this, they say: "And the multi-media/video applications are more numerous than all discontinued Macintoshes combined!" Love those guys! The release continues:

In addition to its new, sleek styling, same great specs as its predecessor, the MicroSeries 1202VLZ offers many new options. Here's a rundown of Mackie's new and improved mixer.

- 3-band EQ on all channels.
- PFL/Solo Switch, on each channel, accompanied by the famous blinking RUDE SOLO LED.
- Lo Cut (HPF) filter, on channels 1-4, identical to that on the 8-Bus and SR Series: 18dB/octave @ 75Hz.
- Mute/ALT-3-4 switching on all channels allows you to disconnect signals from

the main mix (MUTE) by diverting them to a separate stereo output (ALT 3/4).

- 60dB of gain on channels 1-4, via the XLR mic input.
- Virtual pad, via channel 1-4 line inputs: with the TRIM fully down there is 10dB attenuation, with the UNITY mark now at 9.00. This allows you to add lots of EQ to already hot signals.
- Control Room/Phone Source switching with level control allows you to select which signals you want to send to the Phones out, Control Room outs and meters. Not only that, but you can also route your selection back to the Main Mix.
- Balanced Inputs and Outputs everywhere (except RCA Tape interface).
- Effects to Monitor in the Aux section.
- Balanced XLR Main Outs, complete with switchable 30dB pad for connecting to Mic Level inputs.
- Aux 1 switchable pre/post.

For more information on any of the above stuff, please contact Tony Waine at (043) 291 711.

Write in Reader Service Number 213 for info

## DDA Mixers: Contractor Range

The previous gap in Mark IV Audio range of mixing consoles are fast being filled, the CS3 range is the most affordable DDA yet.

It comes in 16, 24, 32 and 40 channel frames, and has four sub groups with four stereo inputs on faders above the groups.

DDA are cunning with features, CS3 has some which we don't usually find, to wit:

- Direct output on each input channel;
- Switchable mic or line input on each ch;
- Full parametric 'Q' control on midrange;
- 6 auxiliaries with 6 rotary pots per ch;
- Individual sub group assignation.

Left, Right and Centre outputs.

These are especially useful where an in-fill or mono mix output is required.

Another good thing is the illuminated mute switch on each channel, which may be remotely accessed via a rear panel connector.



This means you could arrange for an outboard MIDI mute system or switch contact.

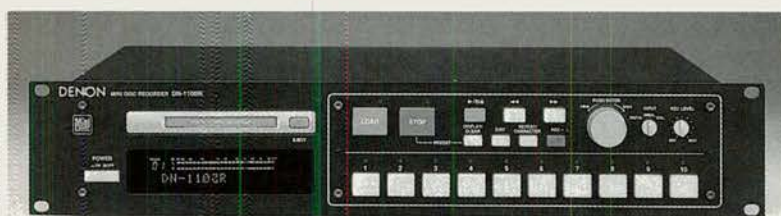
Also on offer is true solo-in-place, and the line inputs are all balanced 6.5mm.

16ch: \$7795, 24ch: \$9995, 32ch: \$12,995, 32ch: \$14,995, retail.

Details: Mark IV Audio (02) 648-3455.

Write in Reader Service Number 214

Denon's new rack mount mini-disc recorder/player expands your options, prior to now you used either a home unit, or a pro-cart sized unit. In any case the MD is a cool medium for recording sound effects, radio, and theatre audio. The DN110CR has 10 hot keys so any track can be programmed to a hot key. The naughty people at AWA didn't tell us how much it costs. Call AWA (02) 898-7666.





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- Expander/Gate
- Clipper
- Programme limiter
- Fully automatic or manual attack and release
- IRC circuit permits inaudible expansion/gating
- Switchable true stereo or dual mono operation
- Switchable external key inputs with key listen feature
- Switchable +4 dBu / -10 dBV operating level
- XLR and jack connectors



### ULTRAFEX II EX 3100

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- Improves intelligibility
- Improves and widens spatial image even beyond the speakers
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# Technology

## TUBE COMP/LIMITER

Aphex Systems debut the Model 661 Tube Expressor, a single channel tube compressor/limiter. A full feature compressor, it offers three curves - hard knee, soft knee and no knee. Auto (Easyrider) or manual (Expressor) operation too.

The High Frequency Expander (HFX) allows higher ratios without the 'dullness' usually associated with compression and limiting. HFX automatically decompresses high frequencies up to a maximum of 6dB, with user adjustable ratio and corner fre-

quency. Bass clarity is restored using what Aphex call 'Spectral Phase Refractor' - whereby the ear perceives fuller bass range.

Switchable link modes include stereo link, master/slave link, and unlink.

Operating level may be -10dB or +4dB, switchable. The Aphex 661 suits tracking, mixing, post, touring, install, voice processing and even tape duplication.

**Price: \$1498. From: East Coast Audio. Call: Gregg Joseph, (03) 9428-9797.**

Write in 204 on Reader Service Card for info



## IVIE MATRIX MIXER

This 1r/u device doesn't need a host PC to operate, just to programme. You can use remote pots or up/down buttons to control volume, remote push-button switches can control pre-programmable functions like paging,

room combining, or even rerouting and EQ changes.

There are eight mic/line inputs, any can be switched to any of four outputs. Extra units can be ganged together. • **Details: AR Audio Engineering, (02) 299-2240.**



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## SOUNDCRAFT DC2020 SURROUND



Soundcraft has introduced a multi-channel surround sound version of its recently released DC2020 post-production console.

Launched at the AES in New York, the DC2020 Surround features an integrated version of the renowned Magtrax (TM) surround sound interface and is the first cost-effective console to offer straightforward connection to four, five and six-channel surround systems with integrated monitoring, routing and dual LCRS panners.

Available in 24, 32 and 40 channel in-line formats (with or without patchbay), the DC2020 is designed for film, TV and video music production and provides fingertip control of up to eight record/replay channels plus dedicated multi-channel monitoring metering.

It features motorised faders, four-band split semi-parametric EQ, six flexible auxiliaries and the unique Soundcraft 'floating bus'

routing system. Processor-controlled replay/direct switching, calibrated monitor level adjustment and assignable speaker cut groups add to the console's flexibility.

Soundcraft's "C3" (Console Control and Communication) automation, also featured on the DC2000 and non-surround DC2020 version, controls the moving faders, SMPTE-driven automated cuts and aux sends, with integrated machine control for popular audio multitracks as well as 9-pin VTRs.

The DC2020 Surround was developed with London-based Interact Systems, the developers of Magtrax. Interact has been developing and installing surround sound interfaces for prestigious clients such as Granada Television, Anvil Productions and de Lane Lea Studios for the past six years.

DC2020 Surround is distributed exclusively in Australia by Jands Electronics. Phone: (02) 516 3622.

Reader Service Number 207

### Buyers Guides for 1996

February: Studio Monitors.  
Lighting truss rigging & flying.

DEADLINE: 15th January 1996.

# VENUES

With Natalie Apostolou

### The Quay Goes POP!

A new museum celebrating pop culture, will open at Sydney's Circular Quay during December. Located in Coca Cola Amatil Headquarters occupying two floors. Coca-Cola Quayside will chronicle the 109 year history of the symbolic product, with an emphasis placed on the liquid's presence in Australia from 1937.

Coca Cola Quayside will be launched on December 9 and open 7 days a week.

### DYNAMITE STUDIOS

Dynamite Dance Studios and Rehearsal Centre is now located at 177-179 Salisbury Rd, Camperdown (Sydney) - easily accessible to the city.

The studios are available for general rehearsals, castings and auditions, and recently hosted 'The Secret Garden', 'Hot Shoe Shuffle' and the production rehearsals for the ARIA Awards.

There are six light and airy studios in various sizes, with a number of excellent dance floor surfaces available.

All studios contain quality sound systems with CD players, mirrors and ceiling fans. A piano can be arranged.

The complex has two kitchens, two change rooms, bathrooms, spacious green room area, refreshments, whiteboard and overhead projector. Large productions can be outfitted with a production office, phone and fax.

Rates for bare-wall hire range \$20-\$30/hour, \$60-\$80/half day, and \$100/\$150 day.

Call Frank Harlow, (02) 557-7111 or fax (02) 557-8132.

### AHA AWARDS

The Australian Hotels Association presented its annual awards at the end of November. The venue awards honour excellence in the NSW area. Best Metropolitan Entertainment Venue winner was **The Collector Tavern Parramatta**.

Best Sporting Entertainment Venue went to **The Dee Why Hotel** and Best Energy and Environment Management went to The

Hotel Inter-Continental Sydney.

Selina's, Coogee Bay Hotel, received the award for Outstanding Community Service in the metropolitan area.

### DUNLOP FOR SALE

According to The Financial Review, **Show Business Australia** has put one of its Perth Murray St properties on the market for \$4.8 million. The Dunlop House property that includes **Club Rumours** nightclub has development approval for a \$21.5 million three-star hotel and is jointly listed with JLW TransAct and Royal International.

The overall development would cost would include a \$2.5 million refurbishment and conversion of the existing building plus a \$19 million dollar construction of the 217 room hotel. Phil Zoiti of JLW TransAct commented that Show Business Australia had seen an opportunity to put a hotel on the site, but would not be a developer itself.

### VENUE BITS

\***Foster's Bowling Club** is indulging in a \$1.2 million expansion, starting early 1996.

\***Waverly Council** (Sydney) has sold 5 separate retail properties to Eastern Suburbs Leagues as part of property rationalisation. The shops at Bronte Road and Ebley Street Bondi Junction were collectively packaged for \$2.6 million.

\***The 1996 World Conference on Club Management** will be held in Miami from February 10 to 18. Contact-Sanford International Travel 008 027 963.

\* Sydney based company **Pacific Gaming** in Alexandria are yielding the benefits from their choice to double the size of their manufacturing plant last year. Pacific have sealed the contract to sell 17,000 machines to Japanese pachinko parlours. With an order of 30,000 more for next year.

### VCA OPENS

The Victorian College of the Arts at St Kilda, on a 9 acre site, was opened in November.

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**T-36** The **Intense T-36** is loud and clean with directional pattern control down to 60Hz when used in a array of three or more cabinets. Because horns have a constant radiating area, they are better than direct radiating speakers, maintaining constant directivity over greater distance. A new 18" driver was developed for the **T-36**. Comparison with legendary L-36 "Portable Earthquake" horn are inevitable. The **T-36** outperforms the L-36, particularly at 32Hz! Sensitivity (1 watt/Metre) 108dB SPL (Ratec Input) 135dB

The **Intense T-250** is ultra compact, loud and clean with directional pattern control. With a constant radiating area, horns array better than direct radiating speakers, maintaining constant directivity over greater distance.

## T-250

The **T-250** employs a large diaphragm 10" driver for midrange (100 - 1000Hz). For high frequencies a large format, 2" exit midrange driver provides higher power handling and less compression than any 1" exit wide range drivers. From 5kHz up, the **NEW SS1** high frequency, high output compression driver has been developed.

Sensitivity (1 watt/Metre) 108dB SPL (Ratec Input) 131dB

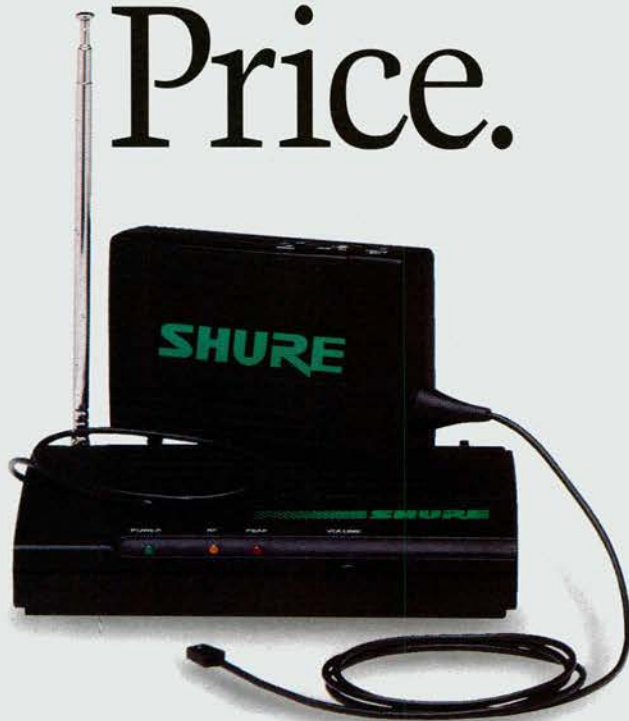


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Write in Reader Service Number: 118

# ACP's New \$1m Floodlight/Flashlight PA

*The first all-new arena sized PA system in almost a decade has been commissioned by Brisbane based Australian Concert Productions. Julius Grafton describes the whole system and talks to the proud owner, Mick Privitera*

Australian Concert Productions have commissioned their \$1 million Turbo flashlight PA system, which has just completed the Highwaymen national tour. The system represents the first all new concert PA in Australia in the past decade, and it joins a Turbo TMS-3 system well established in ACP's inventory.

The system is extremely arena capable, comprising a current total of 72 cabinets. This is more than required for your average Entertainment Centre concert. Cliff Richard toured earlier this year with a Flashlight / Floodlight system from Oceania in NZ which comprised 36 cabinets plus lows. ACP's system has 40 cabinets plus lows - with more on the way.

Turbosound developed the Flashlight system as an answer to strict environmental laws in the UK which made outdoor festivals difficult. The need was to better contain concert sound, so a cabinet capable of 25° x 25° dispersion was devised, thus the name 'Flashlight'. In general use however, this kind of tight dispersion is only really needed to 'squirt' sound to distant seats, and so the companion 'Floodlight' cabinet was created with a 50° x 25° dispersion.

Both cabinets are small, 3 way enclosures featuring horn loading and an 'axehead' style dispersion plug on mids and low mids. The idea is that low's produce fairly omnidirectional signals below 180hz, and so the Flash-Flood cabinet works up from there.

Naturally you need lows, but they can be stacked on the floor if required - or flown as well. The low has the same frontal dimensions as the Flash/Flood cabinet.

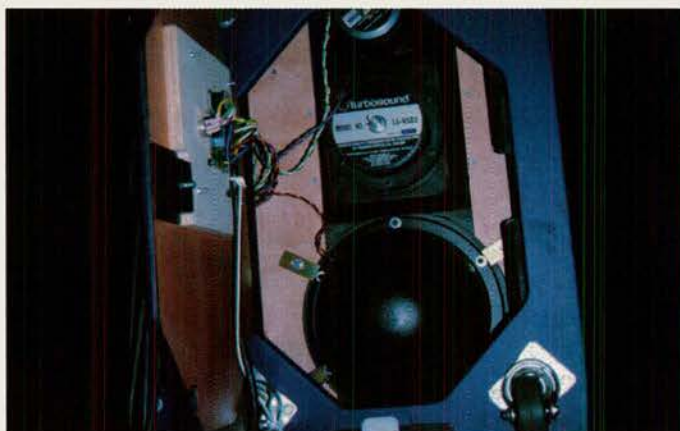
What is appealing for promoters is that due to the very compact cabinet dimensions presented by the Flash/Flood, and advances in amplifier technology, the ACP system occupies just 30' of a jumbo trailer, subject to foldback specifications. This is about half the truck space and weight required, compared to a comparable TMS-3 or other such system currently in use. Each Flood cabinet weighs 60kg, Flashlight and Low cabinets are 87kg each.

If a tour saves a truck on the road, this can equate to \$15,000 or more per week - and truck space

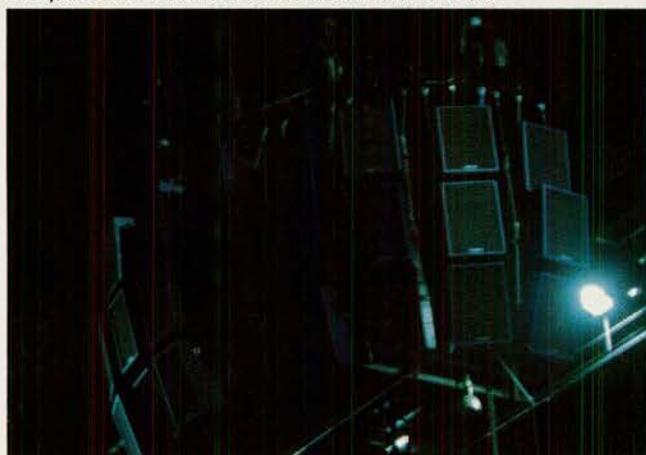
is something production managers carefully plot well in advance.

Mick Privitera owns ACP, which is headquartered in Brisbane. He showed me the system in November during the Highwaymen tour, and I was impressed with the overall package. The amplification comprises just five racks per side, each rack is loaded with just two Crown amplifiers. Thus, according to Privitera, "These Crown amplifiers are magnificent, 20 Crown amplifiers replace 120 Jands amplifiers you would need to run a TMS-3 system this size".

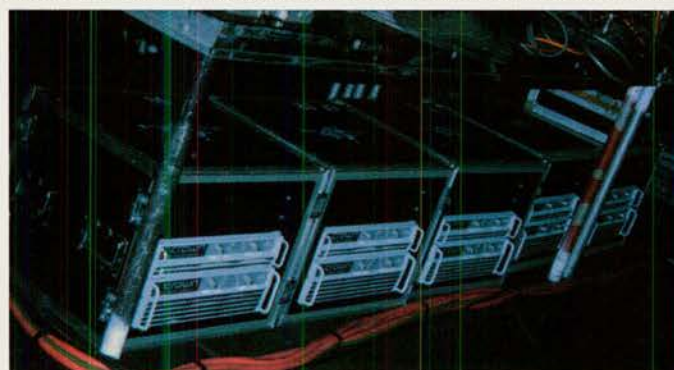
How this is done is via new amplifier designs being happy to run at 2Ω. The amps used in ACP's system are Crown MA5000VZ and Crown MA3600VZ. As can be deduced from the numbering design-



Component and link-cable access is via a neat door.



Mick Privitera with new Midas XL-3 / 48ch console, and FOH drive. Each 8600w Crown amp rack runs 4 subs and 4 Flash/Flood's at 2Ω



## New Turbo

nator, they are designed to work at 2Ω. The output per side is 2500w and 1800w respectively.

A rack of two amps is configured to run four Flash/Flood and four low's. ACP have purchased Turbo TSW 121 low's, which are each loaded with a single 21" woofer. Looking at a rack of amps, the lower amp - the MA5000VZ - drives 4 x 21" woofer speakers on one side, and 4 x 12" low speakers in 4 Flash or Floodlight cabinets on the other. The 12" speaker is set to work from 180Hz to 1.7kHz.

The upper amp is an MA3600VZ, and one side of this drives 4 x 6.5" mid/high cone drivers - which operate from 1.7kHz to 8kHz. Then the other side drives the 4 high frequency drivers, from 8kHz to rollout, where your ears hear no more. PA system compression drivers today manage about 15kHz at a few dB down.

The high/mid cone driver concept is good design and devilishly difficult to achieve for 100 different reasons, so ordinarily a horn and compression driver are used from 1.2kHz. Getting enough gain at and above this high frequency point is why, remember a high frequency diaphragm needs to oscillate (vibrate) up to one thousand times faster than a woofer down in the lows. This in turn usually re-

quires heavy duty construction and great care in the compression driver department, because the lower the crossover frequency the greater the diaphragm attrition rate. They don't like the excess heat that lower frequencies produce. With contemporary diaphragms costing around \$300 each, failures are expensive and often not limited to one alone. A whole set of diaphragms may fail together if overdriven or if the amplifier clips.

So utilising the 6.5" cone driver takes the stress off the compression driver, and thus this allows Turbo to use a 1" exit throat driver, instead of a 2" variety. This saves weight, and in turn provides a sweeter high frequency sound, as smaller compression drivers often tend to work better than larger ones. Why? I don't actually exactly know.

Turbo's design challenge was to maintain the 'Q' (dispersion) of the box at each frequency, with three different components inside. Thus crossover points, loading, component design and system drive were all part of the exponentially staggering number of variables.

As Flashlight and Floodlight cabinets have the same frontal dimensions, mix and match arrays can be created. The flying hardware is impressive, comprising a pair of top bars with a spacer. Four chain motors are required, two



*Floodlight, Flashlight, LOW's and the remote power distribution rack. These cabinets were floor stacked to cater to front and rearfill. A cut-back H/Mid cab, underhung from the flown rig can do this. ACP have ordered some.*

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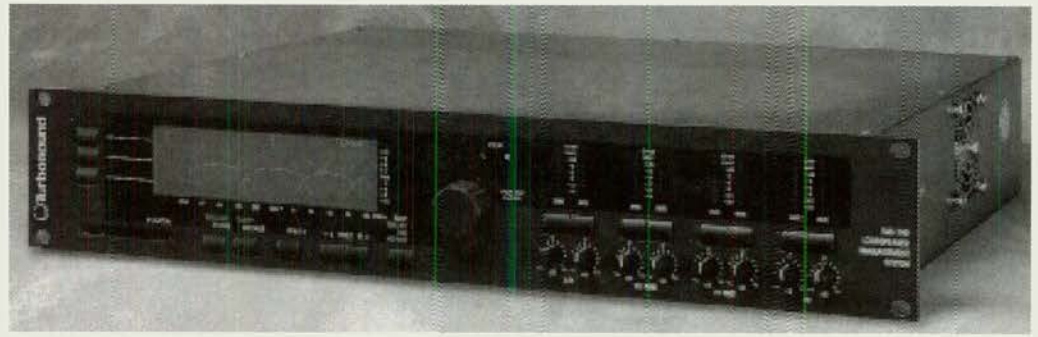
Write in Reader Service Number: 160

Connections. Dec. '95 (& January)

per bar. Under are bars for each two stacks of vertical arrays. Thus you can point each stack where you want in the left/right dimension. Each actual stack is on another smaller bar which can again be angled left or right. Then the actual cabinets can be tilted down or up according to where you fix the chains. So, a flown array can be carefully optimised to your venue. ACP spent \$80,000 on the flying hardware alone, and they already owned the chain motors!

Cabling is all new, from each rack of amps runs two cables, one for the four lows and one for the four Flashlight or Floodlight cabinets. At the cabinet end is a Speakon connector, the cabinets have an opening back door which allows access to components but more importantly, it provides a nook for a 2m long 'jumper' cable. This is then plugged into the next cabinet, from which a jumper is extracted for the next. etc. A very nice time saving feature!

Five racks of two amps still need plenty of mains, so ACP have built

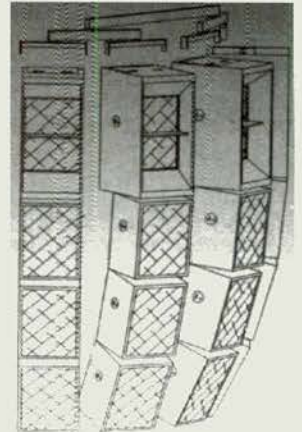


new mains distribution, one main 200 amps-per-phase board is located at the power end of the stage, while a satellite mains board is located at the opposite side for the other five racks. Foldback - sorry, 'monitors' in US jargon, is also run from here.

System control is done with Turbo digital controllers, called LMS-700's. These are a stereo, 4 way processor with crossover, time alignment, system equalisation and system protection features in-built. They operate with analogue inputs and outputs, so a simple pair of XLR's feed your left/right signals in, while four XLR's per

## Flying system

*This drawing pretty well sums up the steel. It works like this: at the top of the column a single bar pivots on the twin bars which in turn pivot on the main bar. Each bar locks in place using a spring loaded index pin which sets the horizontal angle from 0° to 40° in 5° steps. Vertical connections between boxes are made with adjustable chains and D-ring latching connectors. The low cabs at top are larger than the standard units used by ACP.*



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# TASCAM

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## New Turbo

side go off to your amplifiers.

The LMS-700 is 90% BSS OmniDrive, the essential difference is a card slot for Turbo system parameters and transformer balanced inputs and outputs. When so loaded, an LMS-700 will drive either Floodlight, Flashlight or TMS-3 systems - in fact you can also opt for mono Floodlight on one side and Flashlight on the other - all adjustable by a simple press of a button.

Thus ACP have three LMS-700 controllers in the FOH drive rack, one for Floodlight, one for Flashlight, and one for a time delay pair, in-fill, or just as a spare.

Beyond the new speakers, amps, control, rigging and cabling, ACP have invested heavily in other areas. A new Midas XL-3 48 channel console and an XL88 matrix mixer are available. Mick Privitera explained that the choice came down to the versatility of the XL-3, which can be used for monitors too. Also, some large acts insist on bringing in their own consoles, for the reason (this is my opinion, not Mick's) that some sound engineers are bone lazy, and don't like to adjust or reset a console.

Foldback has been added to substantially, with 30 new wedges built. These come in two types, a low profile 2 x 12" with 80° horn flare x 55° dispersion, 2" compression driver horn - and a single 15" and the same compression driver horn. The components are all EV, DL12X variant 12", EVX150A 15", DH1-A variant compression drivers, and DM-12

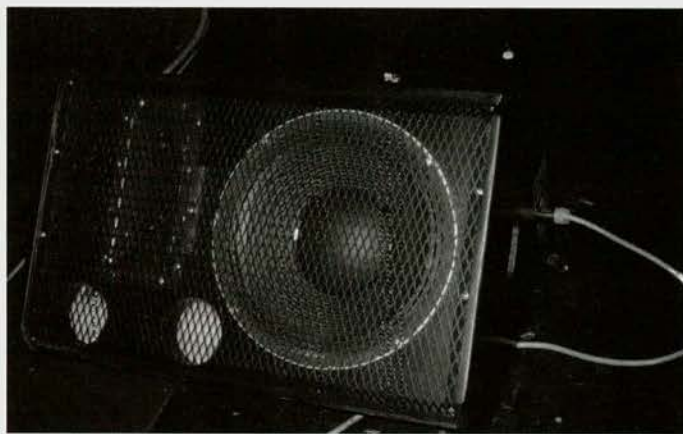
horn flairs.

The actual design origin drew some strong words from Mick, who is "deadset against people building their own boxes, you know, they say 'this is the best in the world' and so on". However for the reason that everything they tried was either the wrong shape or didn't work too well, ACP went the route many people do and designed their own monitors.

These are processed with a Klark Teknik DN800 crossover, a four channel, one rack unit device which also packs in EQ for constant directivity horns and system limiting/protection. At Highwaymen ACP had a brace of JBL crossovers installed for eight of the 12 monitor mixes, but plan to standardise on the DN800.

Foldback equalisation is with 31 band, White 3rd octave equalisers, and the monitor console used when I saw the system was the original Soundcraft 8000 40 channel unit brought in for Expo 88.

Foldback amplifiers comprised 20 Jands SR-3000's, which Mick was unkind about in terms of reliability. In fact as I was there, system engineer Dave Vinnicombe was repairing two of them. Mick states they will be replaced with either QSC Powerlite or Crown amplifiers 'soon'. As it is ACP have racked the SR-3000's five to a rack, making weight a very big issue.



### Equipment choices

Amplifiers for the main system were whittled down through appraisals, in the end the choice became between Crest and Crown. The weight won the day, as did the PIP module available in the Crown amps. This enables remote control and monitoring via a data link, and while Crest offer the same thing, Mick says the Crown system is more versatile. Output device emulation protection which means if you short the outputs it won't shut down.

The Monitors were designed after seven types were considered, including Turbo, Martin, JBL and Deltamax

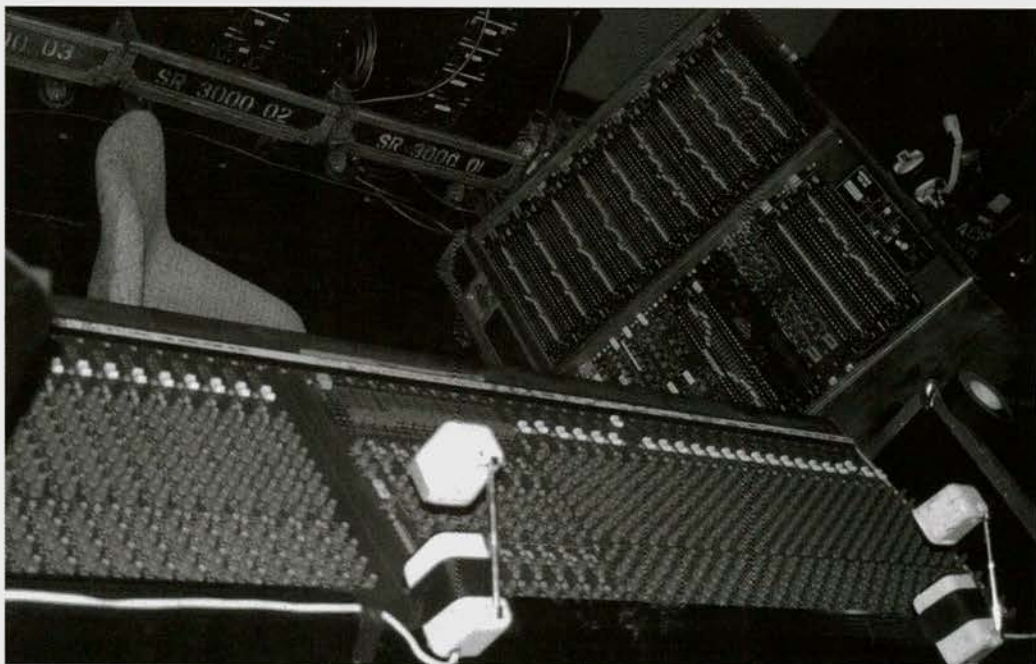
As to the Floodlight / Flashlight system, Mick was won over by the Cliff Richard tour which certainly proved the capabilities of the sys-

tem. As he explains it, in March this year he needed to make a decision either to quit ACP and devote his time fulltime to politics or push ahead for another ten years or so. I guess the links were too hard to sever!

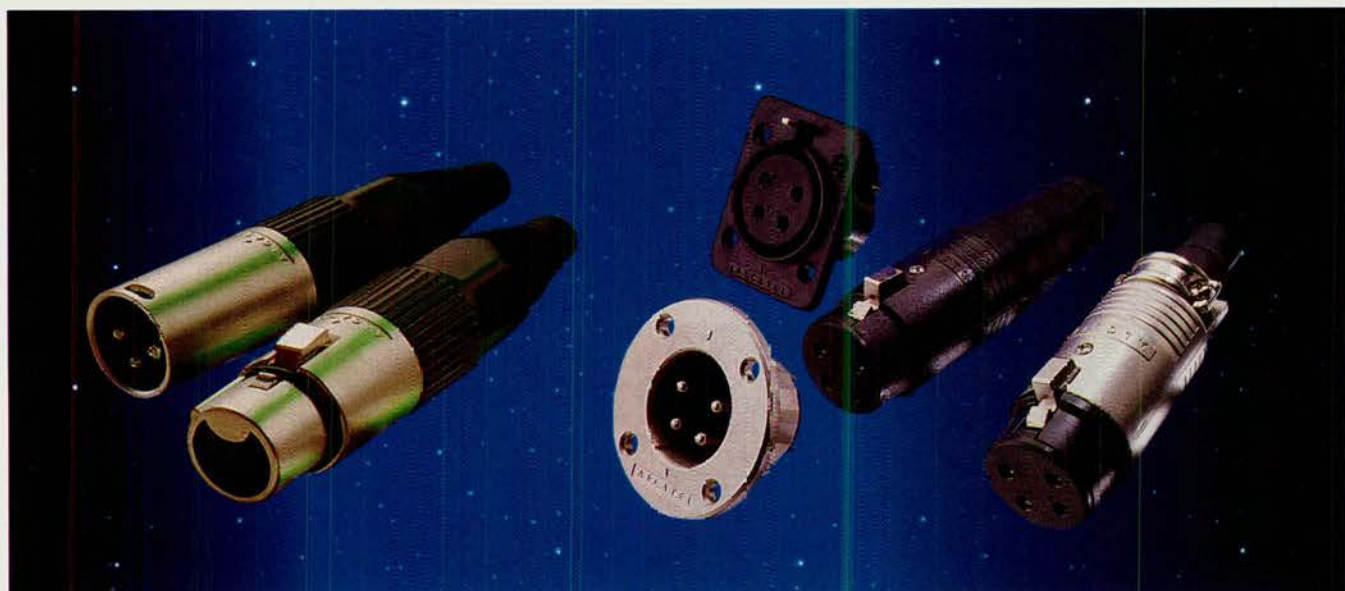
Mick says he has bought more Turbo than anybody in Australia. He won the Expo tender and sold them over 100 Turbo boxes, 53 were TMS-3's - having already owned 16 which he sold to Audix, then bought back the Expo boxes, then sold 56 to the PA People, bought 48 from AI Audio and so it goes.

Suffice to say, Mick is emphatic that if he hadn't got good service from local Turbo representative Frank Hinton of ATT Audio Controls, he wouldn't have gone this way again.

*Monitor system: Soundcraft 8000 desk gives up to 16 sends, White third octave equalisers and Klark processing is the plan. This rig had a brace of JBL crossovers. Jands SR-3000 amps are to be retired.*



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Write in Reader Service Number: 157

# Sound For Tina Arena

Steve Scanlon had worked for several years for one of Ralph Carr Management's other acts, Rick Price, before securing the position of Sound Engineer on Tina Arena's latest tour. After the Australian tour, Steve will be flying with Tina to London for her performance on the Royal Variety Show.

"Wherever Tina or Rick go overseas, I always go with them," said Steve. "I double up

as tour management to help out. It looks like we'll be doing a four month tour of America next year to launch Tina over there."

Melbourne based System Sound have provided the touring sound equipment which is quite a departure for them, being more known for their theatre work.

"I like to try different things," explained Steve. "I find that I'm very inquisitive about

things and perhaps I haven't learnt the same way as other people have. Engineering is such a passion for me, I live and breathe it. Every waking moment I'm reading or talking about it. When I find someone else who has that same passion, it's exciting. John Scandrett of System Sound has the same passion for getting the best pos-

sible quality sound and the live music industry needs that. Everyone is so used to listening to the radio and CD, which sounds very nice, that they can be disappointed at live shows.

"John was interested in buying a live system and we both love Meyer systems, basically because you can run them virtually flat and not have to EQ them much. So he went out and bought a brand new system which for me was a wish come true."

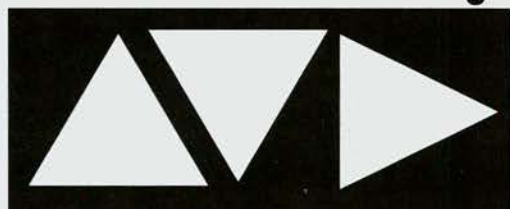
The system at Tina's show has three MSL3A's a side and three DS2's (the low mid range cabinet which look exactly the same as the MSL3A) a side. Four 650 subs a side are also running. The centre cluster consists of three MSL2's which Steve describes as very sweet and good for positioning things, getting Tina's vocal more in the centre image. The small Apogee SSM speakers are along the front edge of the stage.

"They are extremely high power hi fi speakers which give you a total transparent clarity when you're sitting in the three front rows," said Steve. "Every point in the room has been addressed. Originally we thought of flying the system but doing theatres you can get shad-



Steve Scanlon (engineer), Peter Jago and Cameron Herbert (System Sound tech's) and John O'Donnell, tour manager.

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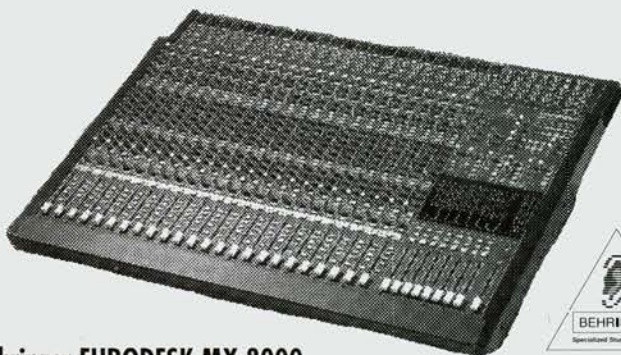
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ows under balconies and therefore you need more boxes, more horns and therefore the sound tends to change a lot in the room. The philosophy behind doing it this way was that there was just a line of three horns and they have a very wide dispersion angle and it just hits a point source. What I hear is what everybody else hears, on the top balcony they hear the same perspective because it's still the same horn."



Meyer MSL2A

Steve was using the new Cyberlogic amps that System Sound are now stocking.

"They have a lot of grunt in them," Steve said. "We run three phase power into them, there are eight channels in each amplifier, eight channels of 1600 watts into four ohms. They have digital controls on the front so it's very accurate and beautifully wired."

Front of house was a Yamaha PM4000 which Steve finds an easy console to work. Klark Teknik graphics are run over the system and Steve is a great fan of Brooke Siren compression which he uses. Omec mic pre amps are used for the vocal.

Originally, because the system is run so flat (basically just studio monitors in a big room) Steve thought it would be good for Tina to have in ear monitors so she'd get the finished product with all the reverbs and delays etc. Unfortunately they didn't get the monitors moulded to her ears and so she was still hearing some of the outside world when she was wearing them.

"I think we got a bit of the doppler effect happening there and it was effecting her pitch," said Steve. "Consequently she was hearing herself outside of herself as well as inside herself. Rather than risk that type of thing we went back to using monitors but be careful how we did it. So we ended up running two Meyer UPA's a side and that's all we're running. Because her vocal is fairly big out front and she does tend to stand in front of the PA, it's worked quite well. If we had spent the time and money to get the in ear sealed units custom made for her it might have been a different story."

All brand new Meyer wedges are built into the stage set, positioned under grills. The band took a bit of time to get used to being on different levels.

Steve is a big fan of the Beta 58 microphone which likes to stick on everything he can with a Beyer on the kick drum and Beta 57's on the toms and snare as well as a condenser on the bottom of the snare. Overheads are the AKG with CK3 capsule.

"Generally good quality condensers are fine," said Steve. "I'm not a real stickler for microphones apart from the Beta 58 and I'm open to change."

"For running the show, I have groups which are basically drums, keyboards, guitars - and I run those in my VCA' so I can control what's happening there. I have little cues for my VCA's, for example in *Greatest Gift* I increase the toms and that's all post fade so that increases the verb into the toms automatically."

"I'm a great lover of Lexicon reverb. I always keep in mind the producers perspective of the song, for example in *Burn* I have the drums backed off for the start but then when it goes into the chorus, I put them straight back but they're going into a particular compression ratio that is not like a volume increase but rather a 'perception' increase making them closer. I like to build songs although I don't use much reverb units, just one on the vocals and one on the drums. I use a delay on Tina's vocal. I don't think you need to - particularly with Tina's album which is very dry and direct sounding. I like to reproduce the album and I'll research it big time."

Steve was using a Spectrum XTA Analyser which has a sweep function to analysis the room, picking up four points in between each iso centre.

At the Enmore Theatre, Sydney, Sony were taking the opportunity to do a live recording which Steve was overseeing. Equipment included five ADATs, a SR9000, a passive split done from the monitor area which split every single channel to an ADAT channel. A little bit of compression was used to ensure a dynamic

range onto the ADAT, everything at low level is not a good thing to do. Paul Hitchins was in charge on the night.

-Catriona Forcer



System's Peter Jago at the FOH desk

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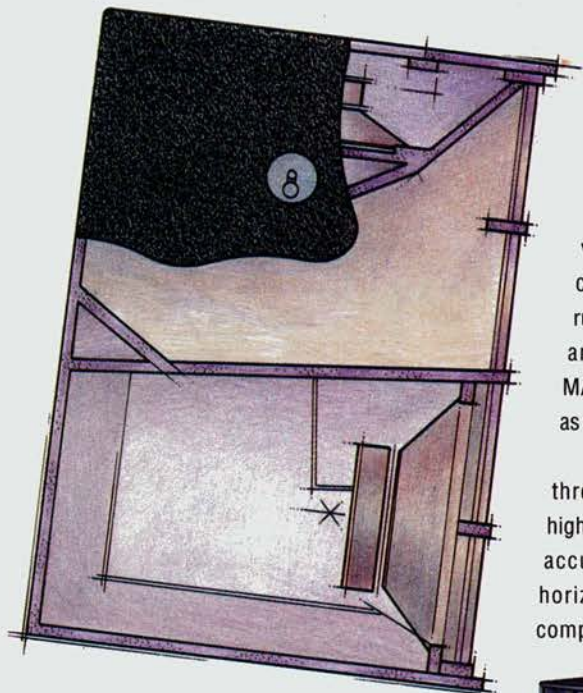
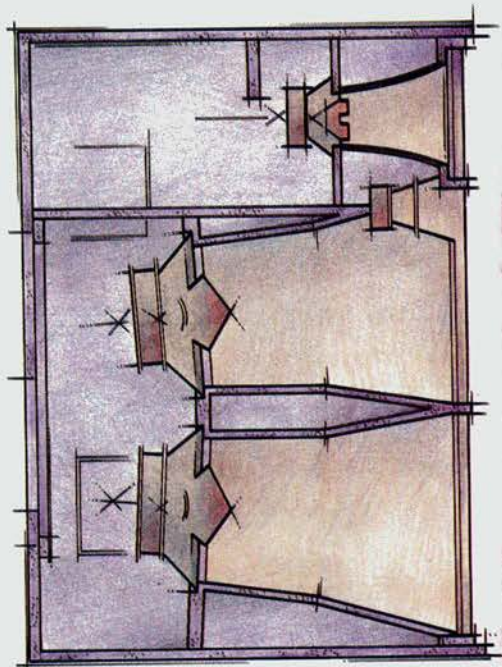
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The Wavefront 8 features a three-way horn loaded design for high system efficiency, providing an accurate 55 degree constant horizontal dispersion pattern. The component complement of twin 12"

low-mid drivers plus a unique toroidal-technology 6.5" high-mid horn driver and a 1" exit high frequency compression driver ensure that the Wavefront 8 offers true full-range performance working smoothly and efficiently down to 80Hz.

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The Wavefront 8S features a unique horn/reflex design incorporating both 15" and 18" drivers for fast transient performance and extended sub-bass. Entirely separate 15" folded horn and 18" reflex sections can be driven in parallel or powered independently. This remarkable hybrid configuration results in a dynamic sub-bass with an efficiency of 104dB. Use of a low crossover point between the Wavefront 8 full-range enclosure and the Wavefront 8S sub-bass means that you can choose whether to ground stack or fly the Wavefront 8S to suit the needs of the venue whilst not compromising the acoustic performance.

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Write in Reader Service Number 129

# The Woman In Black

How an eight channel SFX system is driven via software. Kelvin Gedye explains ....

**T**he Woman in Black is a play produced by the Victorian Arts Council and the Alexander Theatre. The play is a "ghost story" featuring two actors (Andrew Blackman and Denis Olsen) and 53 sound effects.

Your writer Kelvin Gedye is the Sound Designer and is an employee of System Sound who provided the equipment and facilities.

The sound system fundamentally comprises two Denon 951 CD players feeding into; and being controlled by a computer controlled SFX system which drives eight compact speakers placed around the auditorium. The heart of the system is the Level Control System or LCS, a U.S. designed and manufactured computer controlled sound system.

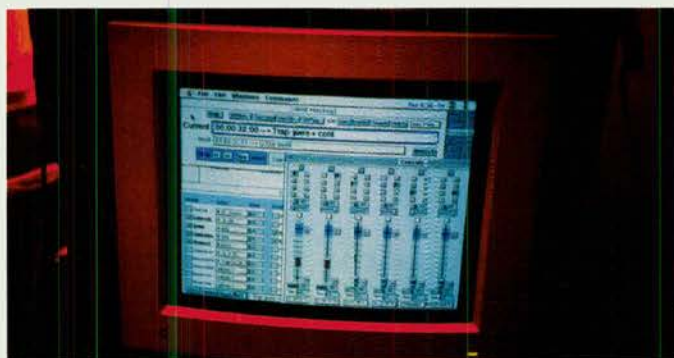
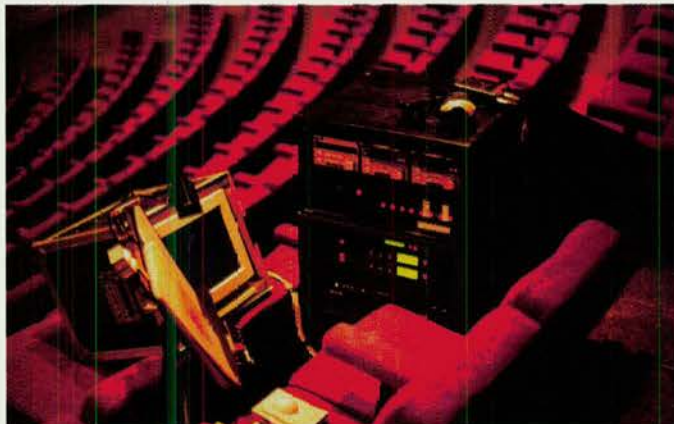
LCS is a modular system comprising "Cue Control" software which controls the LC-16 "Console" which is a fully automated sixteen input eight buss mixer and the two LM-84 "Matrix"s which are eight into four matrices combined to make an eight by eight matrix. The system is capable of driving up to four "consoles" and sixteen "matrices" which would provide a sixty-four into eight mixer driving an eight by sixty-four matrix!

"Cue Control" can also control any external device using MIDI as the communications protocol and can be controlled externally by any MIDI controller. It's conversant with MIDI Show Control, can send MIDI program change, controller or note messages as well as any MIDI string.

"Cue Control" requires a fast Apple Mac platform to run effectively and a fair amount of ram. We're using a PowerMac 8100 with 24mb of Ram but the minimum would be a fast '030 machine with 12mb of Ram.

The speakers we're using are Apogee SSM's, a compact passive two-way speaker that apart from being tiny (330mm x 140mm x 94mm, 5kg) are loud, clean and have excellent H.F. dispersion from their dome tweeter. Four Yamaha PC2002 amps are used to power the system. We're touring a total of twelve speakers (eight for the basic rig with another four for two level venues) and they all fit in one small roadcase with room left over!

LCS uses a clever concept called a "spacemap" to describe the physical location of the speaker system. In simple terms, once you've plotted the speaker positions on the screen, you can describe a "movement" using the mouse that you want a particular sound to follow. You can have up to eight "movements" occurring simultaneously through the system which makes it a very powerful package. For one cue in the show, a nightmare sequence, we have CD "A" playing a stereo voice-over mix with both left and right channels following a swirling movement (one of which is an inverted opposite of the other) whilst CD "B" is playing two mono tracks, one being a ghostly horse and cart which slowly circles the space and the other a ghostly rocking chair which moves around the stage



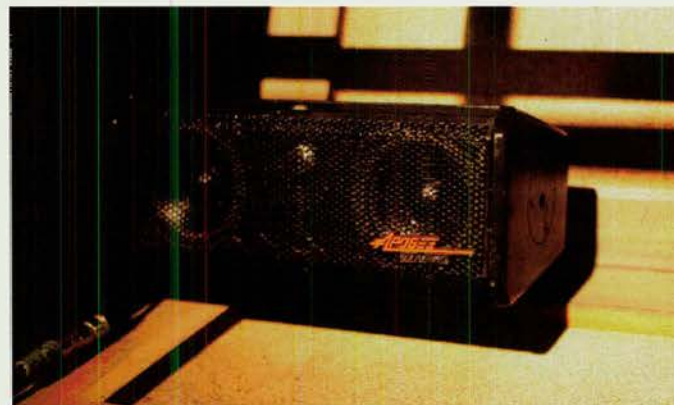
Don Eickhoff, Touring operator



area. Added to that is a stereo reverb return of all the above mentioned sources which is rotating slowly around the auditorium!

An advantage of the spacemap concept is that once you've created your "movements" for a particular venue, you only have to re-adjust your spacemap to reflect the new speaker locations in the next venue and all of your pre-programmed "movements" retain the same relative location and perspective. This

of course is extremely convenient when touring a complex sound show like "The Woman in Black" to numerous venues of varied shape and size and meant Don Eickhoff, the touring operator, didn't have to spend hours he



(from previous page)  
didn't have re-programming the show.

Almost all of the sound effects were sourced digitally, mostly from digitally recorded SFX CD's, with items that we couldn't find on CD like the various horse and cart SFX's and the ghostly rocking chair being recorded "on location" using DAT. Also the various voice-overs were recorded at New Market studios straight to DAT. All the SFX were edited and mixed by Nick Reich and myself at System Sound using the Digidesign ProTools system and transferred digitally to a Yamaha recordable CD. This meant virtually all the sounds remained in the digital domain throughout which has resulted in excellent sound quality and dynamic range with a very low noise floor- essential elements in sound effects reproduction. •

*Don Eickhoff, the touring operator, comments:*

The whole TWIB System was designed to be small and easily transported. The only two cases which are more than a 2 person lift are the two packers full of speakers and cables. These could happily stay in the truck and be unpacked as needed from there. So far this has not been necessary.

The Apogee SSM's are ideal for this tour as they are small and easy to rig and hide. The tour so far has been an exercise in "creative rigging" and no venue has totally beaten me, (Geelong came close). The fact that they pack into such a small case for travel is a bonus.

The LCS system has been very reliable. As I do not use a "desk" as such I can fit into just about any auditorium position without removing any seats or requiring a special table to sit it all on. This makes for quick ins and outs. The fact that the show operation is all basically done by LCS has meant that I have one less stress factor.

This may seem inconsequential but when doing a series of one night stands it becomes a Godsend.

The ease in which one can alter the "spacemap" in which a sound travels has also been a bonus. Some of the venues have been particularly difficult in terms of speaker position, but modifying the LCS "spacemap" has meant that the sound has had smooth "pans" and has not appeared to have jumped from one spot to another.

In the venues where I have had one vaguely intelligent person to help, I can have the system up and ready to do a show in around two hours from seeing the venue for the first time. The best bump out time for the system I achieved is just on one hour.

The four Yamaha PC2002's too have been reliable, and while it may have appeared a good idea to include all 8 sides of amplifiers into one rack, it proved more ex-

pedient on occasion to have the two PC2002's driving the auditorium speakers at the back of the house, so having two separate racks of four sides each was useful.

Touring with an entire system and not relying on venues for any equipment has been one the reasons I can have the system up so quickly and know that the levels in LCS are going to work. The only in house equipment we have used so far is the in-house Multi's, where they run in the right places.

A good fun rig to tour and play with.

- Don Eickhoff

*P.S. Prompted by the success of the T.W.I.B. experience System Sales is in the process of finalising a deal to become the Australian importers and distributors of LCS and will have a demo system available in the near future. Contact them on (03) 9529-2633.*

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SHOW	THEATRE	COMPANY	STATUS	SHOW	THEATRE	COMPANY	STATUS
<b>New South Wales</b>				<b>ACT</b>			
Two Weeks with the Queen	Wharf 1, STC <b>S</b>	Sydney Theatre Co	Until Dec 9	Les Miserables	Canberra Theatre	Canberra Phil.	Jan 12 - Jan 20
Berlin	Drama Theatre SOH <b>S</b>	Sydney Dance Co	Until Dec 23	The Mikado	Canberra Theatre	-	Through December
Cunky Move	Performance Space <b>S</b>	Chunky Move Dance	Until Dec 10	Noises Off	Theatre 3 <b>C</b>	Canberra Rep	Until Dec 9
Table Manners	Genesis Theatre <b>S</b>	-	From Dec 1	<b>Queensland</b>			
Phantom of the Opera	Theatre Royal <b>S</b>	Cam Mac	Indefinite run	Romeo & Juliet	Lyric Theatre <b>B</b>	QLD Ballet	Until Dec 9
A Passionate Woman	Marion St Theatre <b>S</b>	-	Until Dec 17	Christmas at Turkey Beach	Suncorp <b>B</b>	QTC	Nov 23 - Dec 9
Whodunit?	Opera Theatre SOH <b>S</b>	Australian Ballet	Until Dec 20	<b>Victoria</b>			
Red Riding Hood	Ensemble Theatre <b>S</b>	Reg Livermore	Until Dec 23	The Secret Garden	State, VAC <b>M</b>	-	Opens Dec 20
Miss Saigon	Capitol Theatre <b>S</b>	Cam Mac	Indefinite run	Beauty & The Beast	Princess Theatre <b>M</b>	-	Indefinite Run
3 Lives of Lucie Cabrol	Seymour Theatre <b>S</b>	Theatre de Complicite	Until Dec 16	Scenes from a Separation	Fairfax, VAC <b>M</b>	-	Until Dec 23
<b>South Australia</b>				Into The Woods	Botanic Gardens <b>M</b>	Glenn Elston	Through Dec
Haxby's Circus	Playhouse <b>A</b>	-	Dec 2 - Dec 23	Beauty & The Beast	Princess Theatre <b>M</b>	Disney	Indefinite run
Storming Heaven	The Space <b>A</b>	Red Shed Th Co	Until Dec 9	Romeo & Juliet	Botanic Gardens <b>M</b>	-	Through Dec
Cats	Festival Theatre <b>A</b>	Cam Mac	From Dec 30	Honour	Playbox Theatre <b>M</b>	Playbox	Until Dec 16
42nd Street	Arts Theatre <b>A</b>	Mayfair Th Co	Until Dec 9	Late Night Catechism	Universal Theatre <b>M</b>	-	From Dec 8

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	BAND	DATE	VENUE	BAND	DATE	VENUE
<b>INTERNATIONAL ACTS</b>			<b>INTERNATIONAL ACTS</b>			<b>LOCAL ACTS</b>		
<b>Bjork</b>	March 5	Sydney Hordern	<b>Joshua Kadison</b>	Dec 12/13/15/16	State Theatre Sydney		Dec 20	Her Majesty's <b>A</b>
	March 9	Festival Hall Brisbane	<i>Michael Coppel</i>	Dec 17	Concert Hall Brisbane	<b>Margaret Urlich</b>	Dec 9	Batemans Bay Bowl
	March 11	Adelaide Ent Centre	<b>L.A.X</b>	Jan 25	Cartoons Adelaide		Dec 18/19	The Basement <b>S</b>
	March 12	Melbourne Ent Centre		Jan 26/27	Central Club Vic	<b>Max Sharam</b>	Dec 9	Sands Narrabeen
	March 16	Belvoir Amph. Perth		Jan 29	Grand Orbit		Dec 12	Metro Sydney
<b>Celine Dion</b>	March 18	Perth Ent Centre	<b>Neil Diamond</b>	Jan 31/1	The Basement Sydney	<b>silverchair</b>	Dec 31	Bussleton, WA
<i>Michael Coppel</i>	March 21	Adelaide Ent Centre		March 29/30	Sydney Ent Centre	<b>Swoop</b>	Dec 22	Metro Sydney
	March 22/23	Flinders Park <b>M</b>		April 4	Brisbane Ent Centre		Dec 24	Revesby Workers
	March 25/26	Sydney Ent Centre	<b>Neil Sadaka</b>	April 9	Flinders Park Melbourne	<b>The Angels</b>	Dec 9	Transformers <b>M</b>
	March 28	Newcastle Ent Centre		April 18	Burswood Perth		Dec 10	Hallam Hotel
	March 30	Brisbane Ent Centre	<b>Ozzy Osbourne</b>	Dec 13-18	Sydney Hilton		Dec 12	Bridgeway Adelaide
<b>Chris Issak</b>	Jan 31	Townsville Ent Centre	<b>Pennywise</b>	March 25	Brisbane Ent Centre		Dec 13	Navigators Perth
	Feb 2	Festival Hall Brisbane	<i>Frontier Touring</i>	Dec 9	Selinas <b>S</b>		Dec 14	Cultural C Kalgoolie
	Feb 3	Newcastle Ent Centre		Dec 10	NSW University		Dec 15	Metropolis Fremantle
	Feb 4	Canberra Theatre	<b>Rage Against The Machine</b>	Dec 12	Metropolis Perth		Dec 16	Marinas Perth
	Feb 7	Sydney Ent Centre	<b>Ray Davies</b>	Dec 14	Liberty Adelaide		Dec 17	Raffles Hotel Perth,
	Feb 9	Flinders Park <b>M</b>	<i>Michael Coppel</i>	Dec 15	The Palace Melbourne	<b>The Best of the Bush</b>	March 16	Newcastle Civic Th.
	Feb 10	Hobart Derwent Cent.	<b>Smashing Pumpkins</b>	Dec 16	The Palace(all ages)	<b>Tina Arena</b>	Dec 12	Townsville Ent Centre
	Feb 12	Adelaide Ent Centre		Jan 27	Hordern Pavilion	<i>Frontier Touring</i>	Dec 14	Brisbane Ent Centre
	Feb 14	Perth Ent Centre		Jan 30	Festival Hall Melbourne		Dec 15	Sydney Ent Centre
<b>Dwight Yoakam</b>	Feb 17	Festival Hall Brisbane	<b>SwerveDriver</b>	Dec 8/9	Athenaeum Theatre <b>M</b>		Dec 16	Flinders Park <b>M</b>
	Feb 20	Festival Theatre <b>A</b>		Dec 12	Auckland Town Hall	<b>Tommy Emmanuel &amp; Rick Price</b>	Dec 11	Athenaeum Theatre
	Feb 21	Palais Theatre <b>M</b>		Dec 14	Perth Ent Centre		Dec 12	Geelong PAC
	Feb 23	Newcastle Ent Centre	<b>Vanessa Mae</b>	March 4	Adelaide Ent Centre		Dec 12/15	Footbridge Theatre <b>S</b>
	Feb 24	Sydney State Theatre	<b>LOCAL</b>	March 7	Melbourne Ent Centre		Dec 16	Canberra Theatre
<b>Green Day</b>	Feb 6	Festival Hall Brisbane	<b>Clouds</b>	March 8	Festival Hall Brisbane		Dec 18	Riverside Theatre <b>S</b>
	Feb 7	Sydney Hordern		March 11	Hordern Pavilion		Dec 19	Joan Sutherland PAC
	Feb 10	Festival Hall <b>M</b>	<b>Elevation</b>	March 14	Christchurch Town Hall		Dec 20	Civic Th. Newcastle
	Feb 12	Thebarton Theatre <b>A</b>	<b>Forster/McLennan</b>	March 20	Wellington Sports Cent		Dec 21	Illawara PAC
<b>Jeff Buckley</b>	Feb 12	Royal Theatre <b>C</b>	<b>Kate Ceberano</b>	March 22	Auckland SuperTo		Dec 28	Laycock Th. Gosford
<i>Frontier Touring</i>	Feb 13	Newcastle Workers		March 23	The Roxy Brisbane		Dec 29	Twin Towns Service
	Feb 15/16/17	Enmore Theatre		Dec 10	Sands Narrabeen		Dec 30	Nambour Civic Th
	Feb 18	Brisbane Festival Hall		Dec 14	The Metro Sydney	<b>Underground Lovers</b>	Dec 9/10	Continental <b>M</b>
	Feb 20	Seagulls Gold Coast		Dec 15	Concert Hall	<b>Weddings, Parties, Anything</b>	Dec 10	Rolling Rock Noosa
	Feb 22	Thebarton Theatre <b>A</b>		Dec 16			Dec 12/13	Tilley's Canberra
	Feb 24	Belvoir Amph Perth		Dec 18			Dec 14	The Metro Sydney
	Feb 27/28	Palais Theatre <b>M</b>		Dec 15			Dec 15	Sands Narrabeen
<b>Jimmy Page/Robert Plant</b>	Feb 24	Sydney Ent Centre		Dec 16			Dec 16	General Bourke
	Feb 27	Brisbane Ent Centre		Dec 16			Dec 17	Cambridge Hotel <b>H</b>
	Feb 29	Flinders Park <b>M</b>		Dec 14			Dec 20-24	Central H. Richmond
<b>Joan Armatrading</b>	Jan 30	Festival Theatre <b>A</b>		Dec 10			Dec 29	Margaret River Hall
<i>Garry Van Egmond</i>	Jan 31	Concert Hall <b>M</b>		Dec 9			Dec 30	Peninsula Mandurah
	Feb 2	Royal Theatre <b>A</b>		Dec 10			Dec 31	Sandringham Hotel <b>P</b>
	Feb 3	Civic Theatre <b>N</b>		Dec 14		<b>You Am I</b>	Dec 9	Liberty Adelaide
	Feb 5	Concert Hall <b>B</b>		Dec 15			Dec 15	21st CenturyFrankston
	Feb 7	State Theatre Sydney		Dec 16			Dec 16/17	Prince of Wales <b>M</b>
<b>Joshua Kadison</b>	Dec 9	Concert Hall Perth		Dec 18			Dec 31	Bussleton WA

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.

## Nat Apostolou details some forthcoming outdoor offerings....

Promoters around the traps are fully utilising the Summertime vibe for outdoor festival entertainment. This year's offerings are the most diverse and extensive yet, promising a new wave of youth culture festivities. But, the masses are afflicted with the curse of *too many* cool options.

**The Big Day Out** - Dynamic duo Lees and West are at it again for the 5th consecutive year.

Every year has been a sell-out event and this year's is going fast.

Legends on the bill include Nick Cave, PJ Harvey, Rage Against The Machine, Elastica and festival coup Porno For Pyros.

Featured drawcard is the reunion gig for Radio Birdman. Netsite: <http://starbait.bdo.com.au>. Tickets are \$55. Jan 19-Auckland Ericsson Stadium, 21-Parklands G.C, 25-Sydney Showgrounds, 28-Melbourne Showgrounds, 2-Adelaide Showgrounds, 4-Perth Oval.

**Golden Sounds- Summer-**

**sault.** Steve Pav and his Golden Sounds team have put together an epic event, that fulfils the idea of a music festival as a cultural event. Bringing out buddies-Sonic Youth, Beastie Boys, Pavement, The Amps and Foo Fighters, mixing in some local new bands and incorporating an indie film festival, skate fest and Mo Wax dance party-almost too good to be true. \$51 + BF. Dec 29-Showground



Melbourne 31-Macquarie University Sydney, Jan 2-The Spit (Douglas Jennings Park) Gold Coast, 5-Entertainment Centre Adelaide, 7-East Perth Oval Perth.

**Byron Bay Festival and Homebake.** Homebake will feature local artists such as silverchair, open air at the Belongil Fields on January 3rd. Cost \$26 in advance, \$32 at gate. Special deals are going for those

who want to blend into the Byron festival (\$48) at the same place on the 5/6/7. Saul Management have a superlative and extensive net site-[www.ozemail.com.au/~bsm](http://www.ozemail.com.au/~bsm).

**The Big Backyard's** second annual concert will be held at the Domain on January 7 (12-6pm), as part of the Sydney Festival. The concert fiscally aids the non-govt funded Big Backyard radio show. Similar concerts will be part of the Moomba and Adelaide festivals. \$21.60.

Melbourne will have the 5th **Meredith** on Dec 9/10 at the open air amphitheatre between Geelong and Ballarat. \$27-BF.

**Vibes on a Summer Day** will go national again through early January. Featuring the best in dance, Dj's and live performances.

And finally, rumours still linger re the resurrection of **Alternative Nation** this Summer-highly doubtful but....

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## Infocomm Asia

First Asian showing a success in every way

**I**nfocomm Asia comprised around 80 exhibitors in one easy to navigate hall at Singapore's Suntec City. Staged by ICIA (the International Communications Industries Association) it is the first Asian foray for the show, which is most famous for the annual Infocomm USA - a HUGE event.

Verdict: outstanding success. Reason? Lots of quality visitors, more than 4000, in fact. For a debut show this is a very good result and payoff for a lot of hard work. By contrast ENTECH '94 attracted 3,150 while the well established Pro Audio Light Asia show, also held in Singapore, managed around 4,800 this year.

The show had eight seminars which ran at least twice each, and cost S\$100 for a half day. Some were slow and less relevant than they could have been, others such as 'Mastering Computer Interfacing to Large Screen Video Presentations' were packed and pacy.

Highlight of any InfoComm is the Projector Shootout, which they hasten to assure me is a registered concept which shouldn't

be attempted by anyone else! I quickly agreed with this, after seeing the finesse and detail which went into preparing a fair, objective and bi-partisan presentation. (See other story) this section.

Plenty of Australians were there, including a party of projector end-users, said to number 100 who were lead by B & H Australia. They had all purchased one Proxima desktop projector at a reduced price of A\$9995 which entitled them to a three-day round trip! A great promotion, which exposes end-users to a trade show. This is happening more and more often, even if it does open up banal probability questions within government departments whose employees take up the offer!

Proxima junketers aside, I personally saw more Aussies than I think one would normally expect, and certainly more than the 60 who made it to PALA in Singapore earlier in the year.

ICIA say the likely outcome is another Infocomm Asia in 1997, they are delighted with the results as I imagine the exhibitors were too. **-Julius Grafton.**



## Twin Town's new AV theme

**GOLD COAST:** Re-conceptualising a major room in one of New South Wales most famous tourist clubs with-in a tight installation time frame was the task.

By Caroline Grafton

The result, a visual wonderland.

Twin Towns Services Club, recently re-opened Gaming Room is not unusually named 'Images' and whether the name or design came first: I don't know.

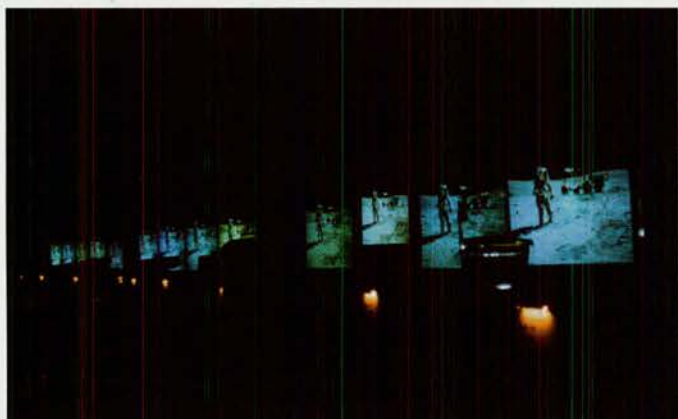
Famous for its long affiliation with live entertainment, featuring artists from The Four Kinsmen to Tina Turner, Twin Towns has finally ventured into the world of Hi-Tech with the installation of Surround Imagery, Cyberscans and an integrated automated control system that does everything including saying "Goodnight, Drive Carefully" to the clubs patrons before shutting the room down completely. The overall value of the re-vamp was approximately \$4M including the new audio/visual installation value of \$760K. Combine new AV with re-

furnished equipment from other areas of the venue and you have a technical specification encrutching on close to \$1M.

Technical design and installation was handled by Mick James (Mick James Electronics) and Paul Kelleners (Stage and Production Manager of Twin Towns) both working closely with Twin Towns G.M Russell Roylance. From conception, the project took close to eight months to complete.

Although I know most Connections readers are probably only interested in equipment specs, I have to say that Images is one of the few venues I have seen that has taken on a broader view and has successfully combined specs and decor to create a specifically targeted environment for visitors, of varying ages, both using and not using the some 270 poker machines. Surprisingly, I was so interested in all the imagery around me when I first entered the room

(cont.nued over)



The highlight of any Infocomm is the Projector Shootout, whereby any firm with any intention of participating in the market is obliged to participate. Over 60 units are lined up and fed the same signal. It's almost cruel, but it works. Full report over page.

# Projector Shootout

**SINGAPORE:** Infocomm is very much about the projected image, a tradeshow full of video projectors, LCD panels, walls, monitors and peripherals. In fact a complete tradeshow hall is dedicated to the Projector Shootout, where around 60 devices showing the same image sit alongside in a darkened hall.

I thought it would be relatively easy to go inside, browse and emerge with clear winners, Kevin Hammond of AV Experience put me straight on that one. First of all, categories were to be perused.

Data projectors naturally enough serve the primary aim of getting your computer images up and screened. The 18 units here were mostly LCD source with metal halide lamps. Side by side the intensity varied greatly, some didn't carry ANSI lumen ratings on their description cards, and one disgraced itself totally by refusing to run video motion. But, of course

the category was *GRAPHICS*, after all.

The actual source material was identical for every unit. It comprised desktop images, CD-rom photos, test patterns and video motion. This was divided into animation, black & white video, and colour video.

In the Graphics category size, weight and approach varied considerably, the CRT units obviously larger. Prices ranged S\$8,199 through S\$23,750. Lumens varied from 120 through 1000. The Proxima 2900 caught my eye as a good performer in this group, it didn't quote lumens however. Some units showed evidence that previously tagged lumens had been removed from their description cards!

LCD super-data and data-video panels were all used atop the same type of overhead projector. With costs ranging S\$5,495 through

**By Julius Grafton**

mation, black & white video, and

*(Continued, page 48)*

# Twin Towns

*(continued)*

I didn't even recall seeing pokies when I reached the control room.

The first thing that came to mind on entry to Images was The Jetsons, you know meet George and Jane etc. that futuristic cartoon with control tower type buildings. Well, all through Images are these huuuuuge columns (on which are mounted vertically, the Cyberlights) mushrooming at the top into a ceiling of carefully mottled colours presenting a space storm type appearance. This same paint effect works as a very interesting catalyst for the many colours and gobos the eight Cyberlights project across the room, the non-even coloured surface actually provides a new dimension in projection.

The room, although sounding singular, actually has two distinct but converging circles. Encompassing almost the entire outer perimeter, architecturally suspended from the ceiling, are a series of three 2 metre high cys

behind which are eight Sony 1252 projectors with cyc lights slightly forward and alternating. Big deal! I can hear you saying. Well why this is so special is that all the projectors are mounted on a dolly system. This allows amazing adaptability. The single screens can run independent imagery or converge (up to three screens) to become a wide screen offering an elaborate array of uses.

The projectors are used for varying displays including in-house advertising and promotion, mood enhancement with video clips, tourism style videos both local and international as well as displaying messages and on floor camera shots controlled once again through the integrated system.

The automated control system itself is an AMX package with software written and programmed by John White, a job that took seven weeks to complete. Craig Ryder lighting wonder guy with Twin Towns programmes the Cyberlights via the dedicated controller.

Mick James tells me "this is the

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one of the most exciting projects I have undertaken. Six of the eight projectors are time and sync aligned to produce a moving image across two of the curved video screens". Mick continues, "This is thought to be a world first in this field. Absolute accuracy was crucial and was achieved through co-operative design engineering between the onsite builders, Lindsay Electrical, Air Conditioning Contractors and our own staff. According to Mick "there were many sleepless nights before success was achieved, but through the efforts of all involved, the projection system is now a reality".

With any projection ambient light is also a concern. A few high windows yet to be curtained are a easily controlled problem, but the poker machines themselves are a little trickier. As these devices are one of the main incomes of the club obviously Mick and Paul could not totally discard them. Instead the club working with the supplier has successfully reduced the light output of each machine and is working on further reduc-

tion.

Back to the control. As stated earlier the main hardware is AMX and of course the Cyberlight Individual Controller. The software Program Manager Main Menu covers:

1. Camera
2. House Lighting
3. Cyc Lighting
4. Cyberlights
5. Video Source
6. Video Routing
7. Projector Motors
8. Video Projectors
9. Auto Override
10. Configuration System
11. Main
12. Close

This program allows the entire room to be pre-programmed for the entire opening hours from low key Imagery during the day, to exotic for early evening, a dance environment late at night, finally closing the venue down at completion of the night at 2.30am. The system can of course be over-ridden when required with the capability of returning to the pre-programmed memory.

From a separate control room

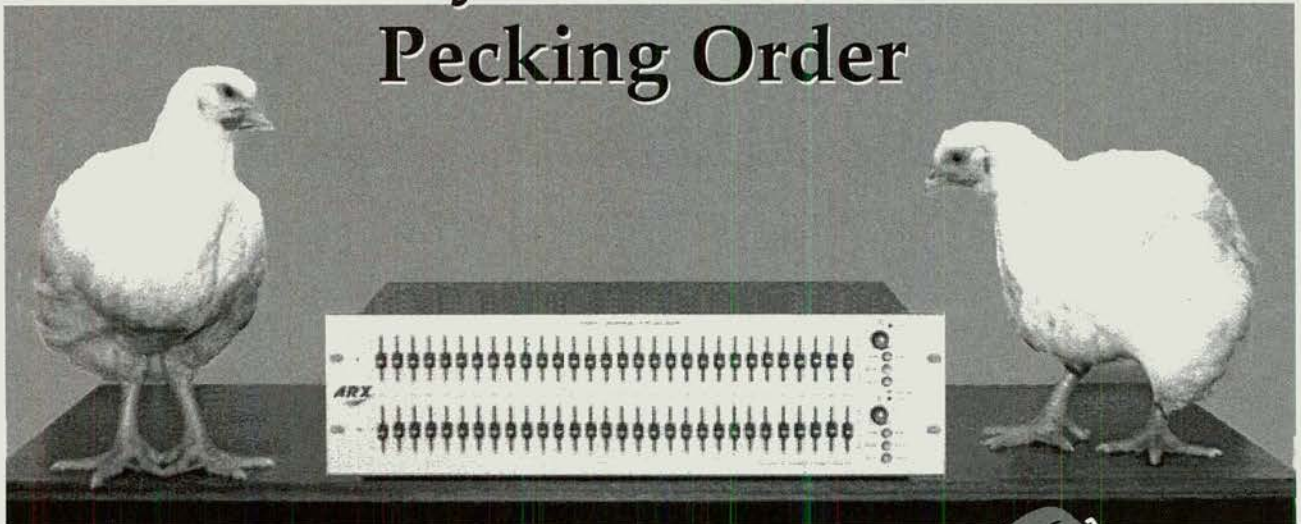
also used as the live bio box the operator can punch into any one of the presets via a 64 button control pad. This room is also designed for camera targeting and focussing on the main floor with a feed back to the main control room. With a quick edit an audio/visual announcement of a major win complete with footage of the winner can be projected across the screens in an explosion of text and colour. When live entertainment occurs, the background music system is designed to automatically fade out and return to pre-programmed levels, on completion of the performance.

• *Specifications include:*

**AUDIO:** 7 x AT1122H Cabinets; 2 x AT115 Bass Cabinets; 4 x QSC850 Power Amplifiers; 3 x Phonic Dual 31 Band Equalizers; 1 x Soundtracs Solo Live 24/4/2 mixer.  
**LIGHTING:** 4 x High End CY Cyberlights; 4 x High End CX Cyberlights; 1 x High End Cyberlight Controller; 1 x ESP24 Jands Console; 36 x 2.5K Dim-

mers; 6 x Prolight 1K Profiles; 25 x Prolight 3Way Cyc Battons; 2 x Dynalite Project 12 Dimmers; 1 x Red Devil Smoke Machine; 5 x JTM 20 Module S/H Dimmer Racks  
**VIDEO SYSTEM:** 8 x Sony 1252QM Data Projectors; 1 x Sony DC DXC - 930P Remote Video Camera; 1 x Smartwall Framestore Controller; 1 x 43 Input/54 Output Audio patch video router; 1 x Kramer 8 x 2 Video Switcher; 2 x NEC Video Monitors; 3 x P.C.s; 5 x Panasonic Super VHS VCRs  
**AMX:** 4 x C/Frames with Ext. Memory PC Touch Software. PC Comm.; 2 x 16 Button RF TXs; 1 x 64 Way Software; 1 x 8 Way Software Battery Back Up System 12V  
**PROGRAMMING** by Mr. John White of Whitenoise  
**VIDEO MOTION CONTROL SYSTEM:** 6 x Servo Controlled Projection Dollies; 3 x TSD Servo Processors; 1 x P-MAC Software System; Dowrie Crane Catenary System.  
*Contact: Mick James Electronics Ph: (07) 55 720 133.*

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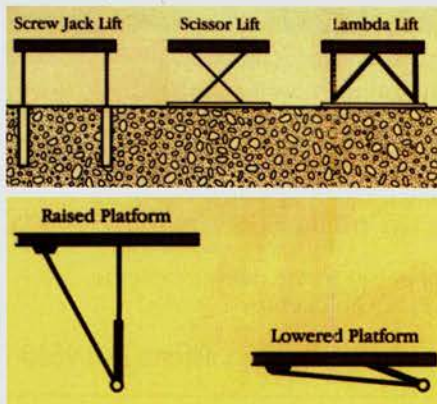
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## Projector Shootout

(continued from previous page)

\$S19,950 one tended to ponder the relevance of this category which surely only exists through ease of transport. As it is, a walk on the tradeshow floor revealed the way forward is the removable LCD screen laptop computer, of which the Ascum Cruiser was a notable entrant.

The straight video projector was in the minority with six models shown, ranging in price from \$S5820 (Sanyo PLC220P) to \$S24,750 for the Barco 701s LD. Super data-video included seven units, while Graphics-video comprised six units. Of these the NEC Multisync 9PGXTRA stacked up well as a good rental possibility, somewhat lighter and easier to setup than the Sony VPH-1272QM, according to Kevin Hammond. But, he says, the Sony is ahead in horizontal scan (15-93kHz) vs. the NEC (15-69kHz). As always, things

are never as simple as they seem at first!

The Barco 1280s offers a beautifully focussed and crisp image, albeit at the highest price in this category - \$S55,750. An honorary mention to the Electrohome Marquee 9500LC, nice unit but too damn large for rentals.

The big room had the big light valve projectors of course, this is where the Hughes-JVC 315E-SC monster held court, eclipsing the other three devices nearby. This device is as close to cinema-ready as you'll get, and punched out 2000 lumens from its xenon arc lamp. Interestingly the Barco 8100 delivered more lumens on paper and was smaller, but the Hughes offers a longer throw. Cost? \$S132,000 for Hughes (significantly cheaper than when I saw this last, one year ago) and \$S169,750 for the Barco.

### ROUTINE

Jim Cadahy from Infocomm's

organising association ICIA told me the setup period allows each participant two days to get their projector right. "Two days for a process that ordinarily takes 30 minutes. Thereafter they are out of there and can't touch". ICIA publish a rigid appraisal manual which details the integrity and consultative processes which go into establishing each Projector Shootout. Peripheral manufacturer Extron were selected by the majority of participants to provide the whole interface, switcher and distribution amplifier network.

AMX supplied the control system, Sony the Laser Disc players, and Stewart Film Screen Co provided nearly 60 screens.

### TEST PATTERNS

Test patterns tell a good story when appraising video. The Needle Pulse test pattern used at Infocomm was originally designed to test the regulation of the power supply, with the line bending to

indicate picture geometry distortion. Other flaws shown with this test include the presence of reflections which show up as additional faint vertical lines.

Plurge with grey scale shows contrast and reveals how much 'black' the projector is capable of switching out. A crosshatch pattern with circles reveals geometry and convergence.

Other test patterns included fine text on white background, a standard lumens measurement pattern, and colour test charts.

Finally, remember the prices indicated here are Singapore prices, where taxes and tariffs are low. The whole republic of Singapore is based on trading goods to other Asian nations, and so expect to pay considerably more for these products here downunder. •

**Working With Video Projectors**  
-a guide-  
starts next page

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FBX Feedback Exterminator is a registered trademark of Sabine, Inc. and is the brand name of its line of automatic feedback controllers. Covered by U.S. Patent No. 5,245,965. Other patents pending.



The SOLO is perfect for individual mic channels in mains & monitors in any of these applications:

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SLM610-03-23-95



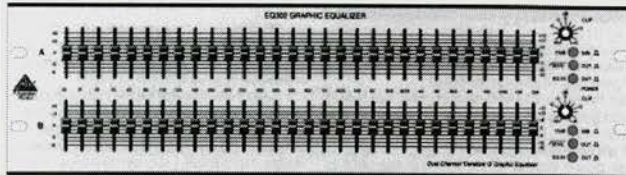
**Australian Monitor**

The Professional's Choice

## SIGNAL PROCESSING

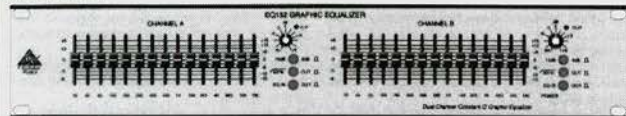
SOME OF THE RANGE...

### EQ302



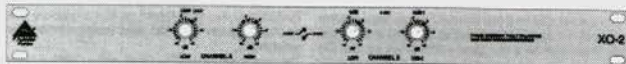
A dual channel 30 band equaliser in a compact 3 rack unit package

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## Extron Converters

If any one firm could claim marketing domination of InfoComm, it would have to be Extron. They provided infrastructure at the Projector Shootout, had a highly visible and functional stand, and smoozed the press.

However, this comes to nil if the product is dud, lucky to the ExMen and ExGirls they have a hot raft of video converters. This is where your PC or Mac can feed your common average garden variety TV, VCR or LCD projector.

The Super Emotia takes Super VGA, XGA, Mac, Quadra and PowerMac signal, then converts this digitally to useable, recordable quality NTSC or PAL, flicker free and of good, acceptable quality. They demo this, it works.

Taking input through provided VGA or Mac cables, Super Emotia converts to three output signals through their own digital chip set. The outputs are NTSC/PAL (on a single BNC connector), S-VHS (on a 4-pin din connector) and RGBS (on 4-BNC connectors).

The internal processing scans the image, determines which info it can eliminate (like the editor of this magazine, who uses less clinical methods) and processes and enhances the image to get a professional quality output signal at 15.75kHz.

So you can run your presentation without a data projector, and even dump it down to VHS. Cool huh?



## Tiny LCD Projector

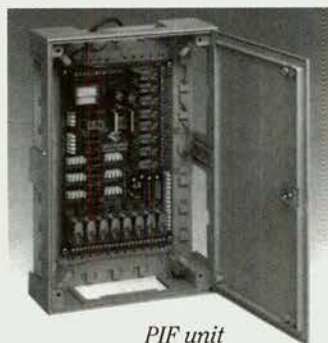
CTX offer a baby LCD projector delivering 250 lumens, that's the EzPro 500 with flip-down lens. This cute multimedia projector is most at home when fed graphics from a PC or Mac, but it does video

too. It uses a 400w halogen EVD lamp. and has built in stereo audio at 3w/ch. It gives a 57 inch image at 2 metres throw. Distributed here by MagiBoards in Sydney.



## Australian made Theatre Commander takes on AMX, Crestron

Command Systems is a sleeping giant which employs 20 people in Dee Why NSW, and who are cracking serious technology export business to Asia. They choose Infocomm to debut their Theatre Commander system, which is an integrated control system somewhat less expensive than AMX or Crestron, yet configured to do much of the controlling you may need.



PIF unit

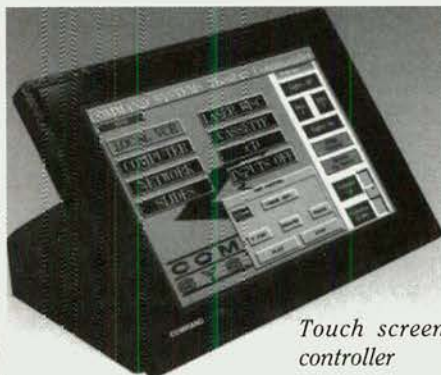
Adopting a simple approach, a colour tilt-touch screen can be used to control Theatre Commander, the screen also houses a DOS PC. You can program at the screen, or on your remote PC. You establish what you wish to control- be it lights, screen, VCR, audio, laser disc, slides or more, and like AMX or Crestron program different control routines.

These systems are common where AV control is required, because the switching and 'controlling' is remote to the touchscreen. Your typical touchscreen user is - a user - not usually a technician. In a school,

TC Unit



boardroom, function room, at a convention or even at home, a



Touch screen controller

suite of apparatus can be controlled with a Theatre Command system.

Theatre Commander is dead simple. The TC unit is a one rack unit tall device, impossi-

bly loaded with features. It has four 30w power amplifiers, mic mixer, EQ, gates, and a lot of inputs and outputs. Low level control routines are all stored on ROM within the unit. Programmable routines are accomplished at the Touch Screen controller, or may be loaded direct into the TC unit if a different controller is to be used, ie: infra-red handheld.

Four video inputs and outputs are supplied, additional video functions can be done via a linkup with the companies Video Commander system. For additional control a peripheral interface unit is available, basically a box full of contact closures and voltage ramps, it will run power to slide projectors, film projectors, (continued over)

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### SYDNEY OPERA HOUSE CASUAL SOUND, AUDIO VISUAL, LIGHTING AND STAGING TECHNICIANS REQUIRED

The Sydney Opera House is seeking casual technicians in the Sound, Audio Visual, Lighting and Staging, departments and applications are invited for any or all of the positions mentioned. It is essential that anyone seeking employment in any or all of these areas must: (1) Have experience in live theatre (2) Be physically fit (3) Be able to work at Feighis and (4) Have a demonstrated ability to work as part of a team. It is desirable that applicants meet the criteria for each position as follows:

#### Sound Desk Operator

- Experience in the operation of professional audio, sound reinforcement, mixing, playback and recording equipment relating to live theatre, concerts and public address • \$13.69

#### Audio Visual Operator

- Experience in the operation of sound, projection, video and communications equipment related to live theatre and conferences. • \$13.22

#### Lighting Operator

- Must possess good colour sense
- Experience in setting and focusing of theatrical lighting equipment and the operation of follow spots. • \$13.22

#### Stage Hand

- Experience in setting, working and striking of stage equipment in large scale productions. • \$12.46

Salary figures shown are base rates and will attract weekend/shift penalties. For information on packages and application forms please contact Kerry Williams on 250 7503.

**Closing Date:** 12 January 1996

**Applications to:** Personnel Services, Sydney Opera House  
GPO Box 4274, SYDNEY 2001

THE SYDNEY OPERA HOUSE IS REVIEWING THE CURRENT CLASSIFICATION STRUCTURE AS PART OF ENTERPRISE AGREEMENT NEGOTIATIONS. IN SOME INSTANCES THIS MAY MEAN THAT JOBS AND CONDITIONS WILL CHANGE IN THE FUTURE. THE SYDNEY OPERA HOUSE IS A NON-SMOKING WORKPLACE AND ALL APPLICANTS NEED TO COMPLETE A PRE-PLACEMENT HEALTH ASSESSMENT.

## Theatre Commander

(Continued)

fluoro lighting, screens, and give analogue lighting control output. No, there is no DMX output from Theatre Commander, nor time code.

Costs are very keen, the 1r/u TC unit is around A\$4000, the peripheral interface unit just \$500, and the Finetouch Tilt Screen around \$6000 (which includes the internal PC, into which you may plug a keyboard!)

Other options are available, and overall the system is highly useful and worthy of consideration next time you are designing or specifying almost any job.

Command Systems have also installed what they say is the largest video control system in the world at Temasek Polytechnic in Singapore. It has 44 inputs- to 500 rooms. Hats off to Ian Robertson and family, Australian innovators quietly grabbing export dollars without hype or false airs!

• **Command Systems,**  
call +61-2 9938-4811.

*The Ascrom Cruiser is a 486 laptop with a removable LCD screen & a lot of optional thingummits, like a video adaptor to accept TV, AV and S-VHS signals. Seen at InfoComm, selling for S\$7400.*

## YOU'RE NOT ALONE....

**PERTH:** You wake at four. The phone rings as you walk into your small cramped office in the tight and stuffy windowless bowels of Corporate Hotel AV-land.

Clutching an inch thick wad of Banquet Event Orders that you've just picked up from the Sales Office, you expertly and routinely trip on a snaking mic lead unwound and ready to unleash its fury on any unsuspecting visitor to this, the "AV Department."

Crew 1 stuffs runsheets and floorplans in your face, announcing set-up times have changed and cross-hire delivery times haven't been met and still the phone rings on. You clasp the banquet's two-way to your belt after ripping the

recharger out of the wall and jam the next flat battery in. Just as you reach for the office phone, your mobile rings and you remember you've forgotten to divert to the pager!

You take the call and it's Banquet Service wanting to know if there is a VCR, monitor and stand for BHP on Wednesday two months away - you'll get back to them...the answering machine has kicked in on the office phone....a new casual from Base is on the Company two-way. Are you on channel? (Are you on Channel??) You grab the other two-way; is anyone receiving? Over?

RECEIVING! "Oh just apologising for the late cross-hire delivery but so-and-so has been held up somewhere and they can't get here for another half hour". You stick it back on your belt, pass on the relevant info to your crew and divert your mobile to the pager.

The phone rings. You open the Main Job File to today and check the starting time for the job with the cross-hire. Starts in thirty-five minutes. Your jacket falls on the back of your chair and Crew 2 wants you to come to the Ballroom to meet the client. URGENT? Yes. The phone rings. Jacket on. You leave the office. The answering machine kicks in again.

By Clare Read-Smith

Back to the office. The client wants an operator. Check roster...no-one available. Phone again, answering machine. Flash one-two-three-four. Yes, there is someone available for the show but no-one for the briefing....you'll do it.

You check the Banquet Event Order on top. Tomorrow. The Log of change sheets are underneath. Yes there's one for today. You call Crew 1 with the details and Crew 3 arrives for work early!! You send him down for the client briefing and, yes, with a bit of reshuffling he can do the show. WICKED.

You log in to your computer. Bad command. You log in again. Bad command. You really don't need to log in yet. Pager vibrates. Not urgent. Yesterday's time-sheets signed and faxed.

The phone rings, your *telephone* voice, 'Good Morning, Audio Visual. How can I help you?' Rear projection? Will that be Data or Video? Four computers? VGA or MAC? Mac. Fantastic, and which function room are you in Sir? Great. OK, I'll put all this information in a quote for you and fax it through. Not necessary? It's today? (big deep breath) - NOT A PROBLEM....

*Clare Read-Smith works in a large Perth Hotel AV Dept.*



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The Meyer Sound self-powered series of reinforcement loudspeakers represents many years of acoustical research and development. By integrating the drivers, amplifiers and control electronics in the speaker enclosure, the MTS-4 has achieved what used to be impossible.

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- **Ease of setup.** The only required inputs are an AC line and a signal source. No more racks!
- **Compact size.** The MTS-4 needs no extra subwoofers, so it can do with one cabinet that which previously required several

### FEATURES

- High Peak SPL capability
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**MTS-4**

MEYER SOUND

## Working with video projection

**Video Projection is finding it's way into many new areas of theatre, music as well as the traditional area of corporate theatre, boardrooms, nightclubs and discos. While most designers and installers have substantial experience at installing lighting and sound systems, many feel that they could do with a bit more of a 'working knowledge' in the video area. Practitioner Simon Byrne shares some of his experience.**

**V**ideo projectors can be broken up into three basic categories. LCD (Liquid Crystal Display), CRT (Cathode Ray Tube), and light valve. LCD projectors use LCD panels to produce the image with a light source shone through the panels.

CRT projectors are the projectors with the three separate tubes for red, green and blue. The image is generated in exactly the same way as a television set, (electrons propelled at phosphor to produce light) except there is a tube for each of the three primary colours. Red, green and blue combine to make any colour of the spectrum.

Light valve projectors have a lamp for their light source and usually a single lens output. The white light is modulated (hence the term "Light Valve") using various means depending on the design. Large screen Liquid Crystal Display, Oil Light Valve, and Image Light Amplifier (ILA) technologies all fall under this cat-

egory.

Like everything else, the decision on what to use is usually based upon budget. The smaller domestic LCD projectors are the cheapest and easiest to set up, but their light output is normally too low for serious applications and their image is often very pixilated. At this stage, CRT projectors provide the best solution for most ap-

plications with a huge range of products to suit different needs and budgets.

For large scale video images you are getting into light valve projection. These projectors are specifically designed to provide very high light output and cost accordingly. In addition to brightness, light valve projectors do have one other major advantage in that they nor-

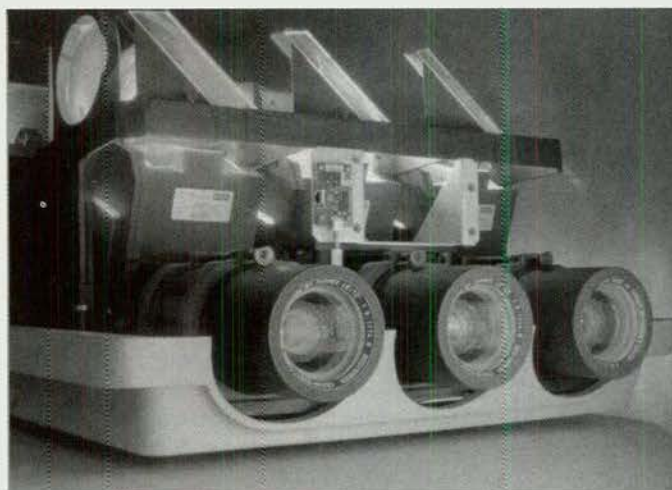
mally have more projection distance options available. With CRT's you are unable to vary the projection distance in relation to the screen, light valve's however often have zoom lenses or a range of lenses available providing more placement flexibility.

### Screens

Most projection screens today are made completely custom to your requirements. Screen size should not be beyond the capabilities of your projector and should be very flat. For video, the ratio is 4:3, that is, the screen is 4 units wide to 3 units high. Screen sizes are often quoted as a diagonal length.

To derive the screen width, divide the diagonal by 5 and multiply the result by 4. These calculations are different to 35mm slides which has a width to height ratio of 3:2. When working with video projectors it is important to have black borders on the screen.

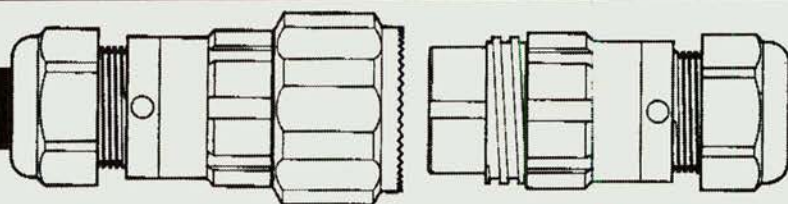
This gives a straight, defined edge to the picture. There are nu-



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## Working With Video Projection

merous screen/surface types available, unfortunately it is beyond the scope of this article to go into them in detail

### Installation

All projectors have their own characteristics that you must be aware of when planning the installation. Follow the manufacturers installation manual for projection distance, angles etc. When working with CRT projectors your projection distance will be fixed ratio of the image width. Using a tape measure, mark out on the floor with some tape where everything is to go, using a plumb bob you can then transpose the measurements to the ceiling if necessary.

If you are flying the projector ensure that is done in a safe way and try and build some flexibility into the installation. By that I mean try and ensure that you are able to adjust the angle and direction of the projector once it is installed, you will need this flexibility when converging the projector. For a permanent installation into concrete we use Uni-strut. Uni-strut is building product that is used for making ceilings and floors etc. It is a metal "U" channel that has special bolts and accessories made for it. We often dynabolt lengths of Uni-strut to the ceiling and then using the special bolts, bolt the projector's flying hardware to it. By doing the installation this way we have a track that we can move the projector anywhere on and we have spread the weight of the projector across several points.

Before the projector is mounted ensure that is in the correct mode for your installation. You might have to change some jumpers inside for ceiling mount.

### Light Considerations

Manufacturers quote the light output of their products in lumens (A unit of measure for the amount of light emitted by a source). A typical CRT video projector is around 600 - 700 lumens. Beware, a lumen is not a lumen. Like audio amplifier manufacturers, projector manufacturers have managed to come up with several standards making it extremely difficult to compare some spec sheets.

Another variable is the human eye. Your eye has a huge capacity to adjust for the environment that you are in. You might not perceive a major difference between daylight and a brightly lit room but believe me there is a huge difference that your eyes have adjusted for. Because of this it is often very hard to judge the performance of a projector and whether it will be adequate for your needs.

When planning for projector installation you need the area that the screen to be in to be as dark as possible. This is often a compromise between other aspects of the job, but needless to say there should be no direct light on the screen at all. All sources of daylight need to be

completely blacked out, projectors cannot compete. The floor often reflects a lot of ambient light, so the darker that is the less reflective it will be.

Screen size has a major impact on image brightness. Let's say you have a projector with a 600 lumen output projecting onto an 8ft by 6ft screen (48 sq feet) and you decide to increase the screen size to 10ft by 7.5ft (75 sq feet). By doing this we have increased the image area by 27 square feet and this means that our 600 lumens of output has an additional 36% of screen surface to spread out over.

If you have the space and screen for rear projection it is definitely preferable. Firstly it stops anyone obstructing the light path and most importantly it provides and image with better contrast.

Why? Well if you have some ambient light spilling on to a front projection surface the light will be reflected, as the screen is designed to do. If the ambient light falls on to the front of a rear projection surface, it will mostly pass through rather than reflecting, therefore the image contrast is superior.

### Cabling Up

Most of the principles associated with audio cabling apply to video. Do not run video with lighting, cross at 90 degrees etc.

Quality video cable and connectors are essential. At the very least use the crimp type BNC connectors, the cheapies don't last and often their impedance characteristics are wrong. It is important to use 75 ohm coax and connectors not 50 ohm. 50 ohm looks exactly the same as 75 ohm but is designed for computer networks, not video.

Video cabling is a particularly tricky earth loop source for unwary players in both audio and video systems. An earth loop hum in video is displayed as horizontal bands in the image that are slightly lighter. If you have flown your projector in a lighting truss, it very likely that you have connected your projector to 4 earth points. The first being from the physical connection of the projector's chassis, via the truss, to the lighting system and back to the dimmers, a second likely source is via the rigging points to the building (unless spansets are used and then there is no electrical connection).

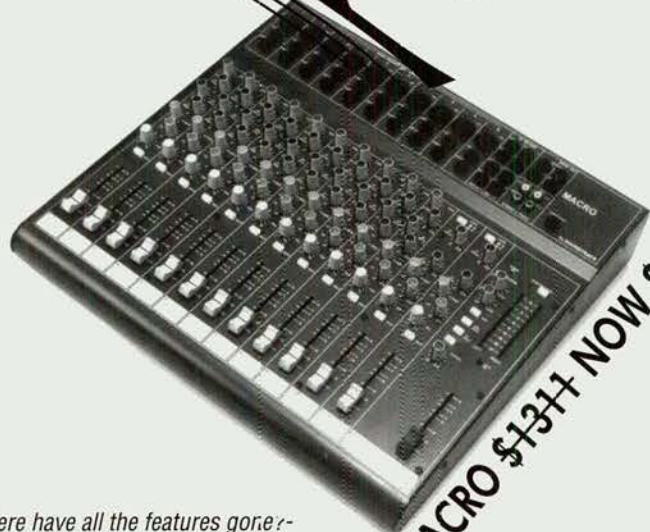
The third earth connection is via the audio connection from your video player (normally unbalanced unless it is a broadcast machine) to the audio system, and the fourth connection is via the earth pin on the projector's power plug.

As you can see the potential is enormous for earth loop noises. How do you eliminate these noises? Well firstly you **DO NOT** remove any earth pins from any power plugs. I have noticed a lot of discussion about this in Connections lately and apart from being dangerous, it is highly illegal and unnecessary. Australian



# WHOA!

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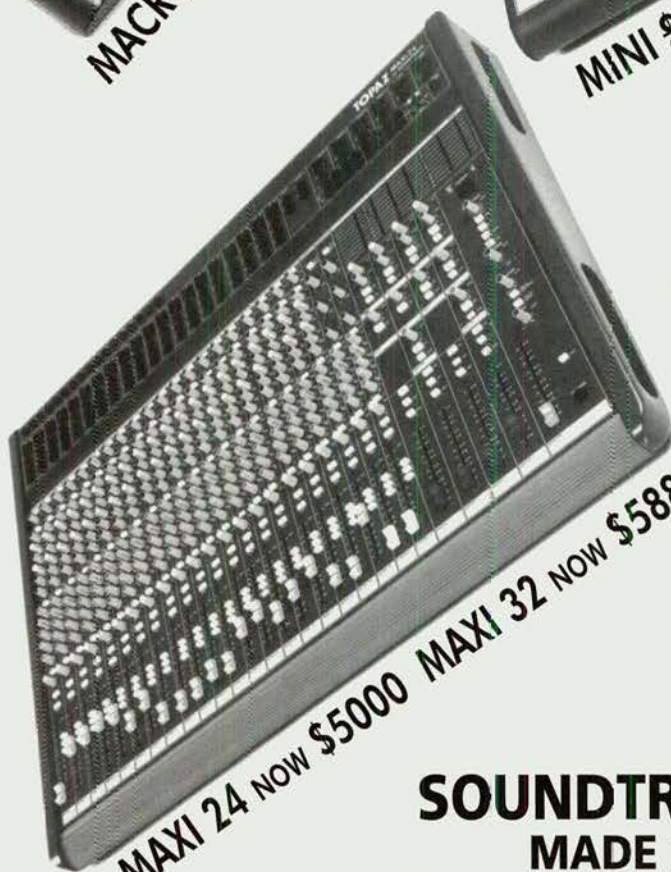
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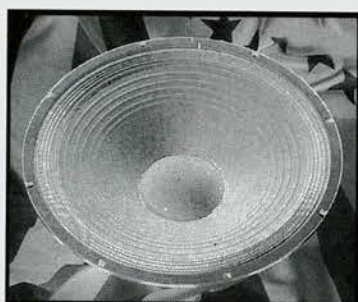


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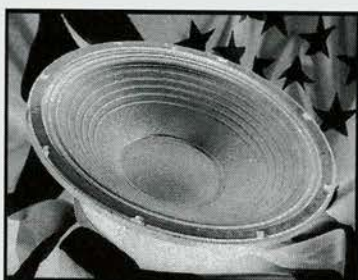


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## Working With Video Projection

Occupational Health and Safety Legislation clearly states that it is illegal to remove or disable any safety device fitted to a piece of equipment. OH&S inspectors take a very dim view of this sort of thing and will prosecute to the full extent of the law. Having said all that I will now explain the solutions.

Video isolation transformers between the projector and the video source are very worthwhile, but often not affordable. So when mounting the video projector try and electrically isolate it from the truss. We use electrical tape over the pipe and then fit the clamp, also ensure that your safety chain does not make an electrical connection. Instead of using chain you might consider using small slings available from rock climbing shops. The breaking strain of these things is 3000kg and they won't give you any earth loop problems!

Once the projector is mounted, power the entire video system from the same power source that audio is using. Lastly, run the audio outputs from your video player through a couple of DI boxes with earth lift switches.

### Convergence

The last part of the process is the convergence. Converging is the process that "lines up" the primary colours with each other. You will not be able to properly converge a projector if it is not correctly installed. All CRT projectors have at least one or more in-

ternal crosshatch pattern generators. The patterns allow you to easily see the adjustments that you are making. Some projectors must have a signal running into them for the crosshatch to operate.

You must have full blackout to converge a projector and blackout time should be written into the production schedule. Unfortunately it is not possible to line up properly while lighting are doing a focus!

Green is always the centre tube in a projector and is the reference colour. Manufacturers have different procedures for the products and you should follow their procedures for lining up, but the main rule of thumb is to have green absolutely perfect before converging red and blue.

You will have more difficulty with getting blue sharp than the other colours. There are two reasons for this. Firstly the frequency response of your eyes is not flat, it dips out substantially around blue (the peaks are at green and red) and secondly manufacturers often deliberately defocus blue slightly. By defocusing blue they can get a bit more gain from the tube.

• *Simon Byrne is the Managing Director of Audio Solutions in Canberra and Austage Canberra. Simon's business specialises in the staging of high quality corporate events incorporating AV, lighting, sound and production management. Ph 06 280 6331.*

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## ASSOCIATION NEWS

The International Tele Vision Association (ITVA) and Australian Presentation and Multimedia Association (APMA) have merged. A new association name will be decided virtually as you read this. More next month. Meantime, here is a report on the recent MOBIE awards.....

It was an excuse for the guests to behave like animals, but it was a very civilised evening when the International Television Association (ITVA) held its annual Mobie Awards at the Taronga Zoo Function Centre on Friday November 3rd. As the stormy skies drifted away, Sydney's skyline sparkled spectacularly (try that with a lisp!) to form the backdrop to the pre-dinner drinks and entertainment upon arrival by the performance group, Icarus.

Long time ITVA Committee member and Acting President, Bob Turnbull welcomed and introduced the recently elected APMA President, Russell Bennett, who announced this would be the final Mobies in its current format, as now the ITVA had merged with APMA, their annual Producers Festival would incorporate the Mobies, which could still retain its well-known identity.

The judging panel, led by Bob Turnbull was David Barrow, Tim Becker, Peter Blakey, Neil Brown, Martin Didsbury, Ron Furner, Harry Hall, James Knox, Andrew Ricker and Lesley Stevens.

After a break for entree, a growling Tiger sound effect brought on the host for the event, Mary Coustas' wonderful character, "Effie". She introduced us to her assistant for the evening, "Troy, the toy boy" a muscular, tanned, loinclotted, blonde demi-god, played by actor Matthew Jackson.

### **Gold Awards winners were:**

"Betrayal of Trust" produced by Bearcage Media/ATO Multimedia/T.C.M.C.

"Private Sale" produced by Brenda Kotarska, ABC Marketing.

"Women Heal Women" commissioned by NSW Film & Television Office.

"2UE Sales Presenter" produced by Wavelength Corporate Communication.

"For Your Eyes Only" produced by Acme Presents.

"It Won't Come Back" produced by Cornerstone Media/

Philip Carey.

"The 'F' Files" produced by OTEN.

"C'est la vie" produced by students, Andrew Djemal and Steven Bonanno.

The Craft Award Winners were all deserving recipients and each made an acceptance speech which drove home the importance of individual recognition. The winners:

**Camera:** Acme Presents

**Direction:** Acme Presents

**Writing:** NSW Film & TV Office

**Interactive Design:** Wavelength

**Talent:** Cornerstone Media

**Post Production:** Cornerstone Media.

The most prestigious award of the Mobies is the Grand Mobie, and some previous winners of this award have gone on to win awards internationally.

This year's Grand Mobie was awarded to an Interactive Multimedia program, created for one of Sydney's premier radio stations, 2UE by Wavelength Corporate Communication.

Produced by Belinda Lightfoot, designed and directed by Simon Venning and the Wavelength team, the program is used by the 2UE Sales Team to tailor make presentations to clients.

The Mobies reward excellence in the communication of the clients brief by video production, and with the convergence of technologies, the awarding of the Grand Mobie to an Interactive program was a popular move to embracing new opportunities for producers.

The event was organised by APMA Executive Director, Sharon Cartwright with Event Management by Ruth Constantine of Australian Corporate Events (02 9918 7520) and the combination of the venue, entertainment and format proved a winning one for the audience.

The relationship between ITVA and APMA was sealed, and the word will spread to those who didn't attend that good things can be expected from the new Association.

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**"Get a haircut & get a real Job" by Chris Speedy.**

Changing from the Band Scene to Corporate Audio Visual Events?

Ok so you know the score. You like lugging heavy things, setting up black boxes and making it all work. You started out doing your own band, or a mate's and before you knew it, you'd become the Equipment Guy.

People ring you up and say "We're doing a gig at 'The Hairy Dog', can you do PA and Lights etc. etc.?" You tell them how much it will cost and they break down in tears at the other end of the phone...they beg & plead...you do the sums again and cut your own pay to make it possible.....they say their girlfriend's ill and needs an operation and could you do it for half as much? Or for the sake of the independent music scene in Australia??

By the time the gig comes, it's always the same. You slave your butt off, get paid virtually nothing and no-one seems to realise how hard you worked.

After a couple of years of this you get left with a choice, either get a job at the bank, or figure out how to use your Live Event production skills to make a decent living.

For more and more Luggers, this means putting on the dreaded "Jacket and Tie" and entering the world of Corporate Audio Visual and Live events.

In the past this meant you knocked on doors, pounded the pavement, hustled production companies and hoped that your skills matched the job if you ever got one.

Now, at long last, there is a professional training provider that can help people make this transition from the live Music production scene to Corporate AV.

"AV Experience" provides a range of one week courses that will fill the gaps in your technical knowledge so you can handle Slide, Video & Data Projection and once you're qualified, put you on its crewing list, so you stand a chance of employment.

It also offers advanced courses for people to upgrade their existing skills in Computer Data projection & Video conferencing and other high tech operations.

So if you're having a "Twenty Something" crisis about the lugging life, then don't join the bank, get a mean haircut and head for a job in the Corporate AV industry.

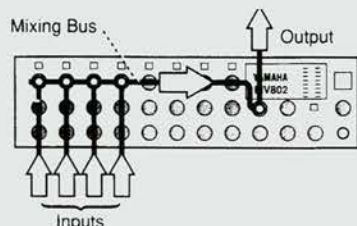
You'll still be lugging heavy things with lots of wires, and working weird hours under stressful conditions, but there will be one big difference.....you'll get paid properly!!

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by Chris Steller

## CATCHING THE RIGHT BUS (OR LEFT BUS?)

One of the most commonly asked questions when discussing mixers or multitrack recorders is 'What is a bus?' or 'What does a bus do?'. To many people this is a very basic topic, but if you don't understand those basics, the job at hand becomes just that much more difficult. Let's talk busses.



A bus is a signal path - even the most basic 4 input, mono mixer has one - which runs across the length of the mixer, spanning multiple channels. Each input channel is then connected to the bus, so that multiple audio sources can be mixed to a single output. In a stereo mixer there are two busses, left and right, with the panning control used to determine which bus the input channel will be connected to.

In a larger mixing console with 4 or 8 busses, each channel usually has a number of switches which determine the bus routing of the channel, for use with multitrack recorders, etc.

Mixers may also have auxiliary busses, which are used to route channel signals to effects processors, or for monitoring such as foldback or headphones depending on the application.

**FOR A FREE FACTSHEET ON THIS TOPIC PLEASE CALL JULIE VASILIADES AT YAMAHA ON 1800 806 413 OR 03 9699 2388**

## Presentation Monitor

New Mitsubishi Electric's monitor ideal for multi media presentations

Meetings need never be dull again with the launch of Mitsubishi Electric's stunning large screen colour monitor, the Diamond Pro 37 (model number XC3730C). Multi media presentations are said to be clear and easy to see on the large 89cm viewing area. This makes the Diamond Pro 37 ideal for sales and financial presentations created using Microsoft's Powerpoint or any other application.

As well as boardrooms, the Diamond Pro 37 is ideal for use at trade shows and exhibitions, public areas, in control rooms and teaching and training venues.

Using the Diamond Pro 37, meetings and training seminars flow uninterrupted and participants can take notes and refer to other written material.



Suitable for connection to most types of computers and video systems, the Diamond Pro 37 can display PAL, NTSC and SECAM video signals as well as computer graphics. It has a wide horizontal scanning range of 15 - 85kHz and is compatible with PC, Macintosh and Workstation systems.

The large Mitsubishi CRT uses an Invar shadow mask to reduce image distortion while dual Dynamic Beam Forming enhances focus at the screen's periphery.

The Diamond Pro 37 includes an infra red remote control and a built in audio amplifier for stereo sound and easy connection to multimedia computers.

Key Features :

- \* CRT size 96cm (37")
- \* viewable screen area 89cm (35")
- \* horizontal scanning range 15 - 85kHz
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- \* signal input: 2 RGB, 2 video and S-video, and audio for each input channel.

RRP \$16,655 (incl. tax).

• For more information and details of distributors telephone 1 800 676 020

## QUEST VG-PRO

The VG-PRO incorporates many new features requested by users. It replaces Quest's graphics distribution amplifier model VGD4.

The new design allows a single cable (GA1800MV) to connect VGA or MacII, and to loop-out to the original monitor without any adaptors being necessary.

Graphics may be blanked **without loss of sync**, to allow the operator to make changes on the source computer (via the normal loop-through connection) without the audience seeing. This function can also be remotely controlled up to 100 metres away.

Bandwidth has been more than doubled to 175MHz. All outputs are crisp and clean with very high resolution graphics.

RGB gains may be boosted up to 6dB without loss of resolution (internal technical adjustments).

Two of the buffered outputs are still on DB9 sockets (same pin-out for compatibility with VGD4 cabling) the third is now on five BNC's....

Output sync. may now be switched between Horizontal and Composite and doesn't affect the sync. on green feature.

## Entech's AV Seminars Set

ENTECH, the Entertainment Technology trade show scheduled for Halls 4 and 5 at Sydney Exhibition Centre next April 23-25, has concluded a Seminars deal with training firm AV Experience. Expansion of Seminar topics to better service AV visitors was a key request of some of the 3150 visitors to the last Entech, who were surveyed after.

While entry to the trade show floor is free, Seminars carry a \$10 charge, and usually run for around an hour in duration. Last Entech featured 36 Seminars ranging pro audio, staging, lighting, control and video projection. Further emphasis on AV this year has seen additional AV exhibitors sign for floorspace. • Call (02) 876-3530.

Automatic monitor sensing and terminating feature has been enhanced.

Quest are still offering their HQ cable, 150mm DB9 to Mac II and DB9 to VGA adaptors, and the DB95 which is the DB9 to five BNC's adaptor for use with the VG-PRO. Compatibility with the previous VGD4 output cables has been retained.

The price of the VG-Pro is \$449 inc. tax.

• Details: QUEST Electronics Pty Ltd, phone (02) 477-3596.

**Large or Small.**

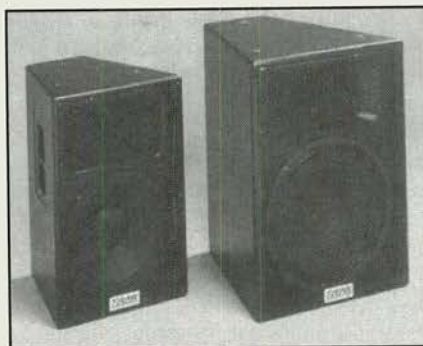
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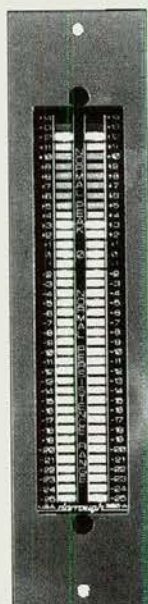
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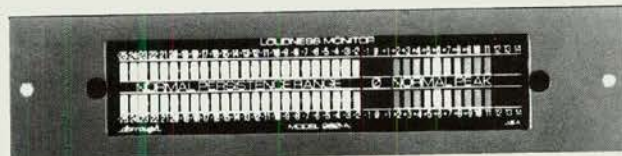


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## Rydges Hotels go ISDN for V.C.

The Rydges Hotel Group has installed Australia's first hotel network for access to ISDN Video Conferencing services.

Rydges, the largest locally owned hotel group in Australia, is aiming at the growing business guest and meetings market at eleven hotels and resorts, including properties in Sydney, Melbourne, Canberra, Darwin, Cairns and the soon to be completed Rydges Southbank in Brisbane.

Telstra, through a partnership with leading audio visual company, Intercity Staging is now able to provide hotels with complete video conference facilities and ISDN access for functions requiring external access to office databases; transferring of files and images; and high speed access to the internet.

This partnership offers hotels access to training, international booking facilities through Telstra ConferLink and the latest in video conferencing systems from Intercity Staging.

The marketing program will target professional conference organisers and corporations, and includes a fax back public directory of hotels and venues with access to video conference facilities (Dial Freecall 1800 815 040 mail box 1200).

• For more information, please contact Telstra - Peter Kiss, National Account Manager, Hospitality (02) 396 2782 or Intercity Staging - Russell Bennett, National Sales & Account Services Manager, call (02) 555 1777.

## LASERVISION WINS MULTI MILLION DOLLAR SINGAPORE EXPORT CONTRACT

Laservision has announced its latest export coup, securing a major Singapore Government deal for Sentosa Island's key attraction.

Based on Laservision's "Spectravision" control technology, the installation is centred around three main frame lasers including Laservision's latest "Stelaray" high power pulsed laser system. The three systems are synchronised with digital multi-track surround sound, a big outdoor distributed PA system, an impressive lighting rig (both traditional and underwater) and a vast animated musical fountain.

Sentosa Island's already famous Dancing Fountain feature has been substantially enhanced by the Laservision design and will now feature a Laservision "Waterscreen" on which full colour animated laser stories will be projected.

Atmospherics have also been included in Laservision's design and include traditional and heavy fog machines, water mists and dazzling pyrotechnics all precisely synchronised by a custom designed Spectravision controller.

Following last month's letter of the contract, Laservision circumnavigated the world in both directions simultaneously to source the various components required. A steady stream of Laservision's ubiquitous giant, red, eight wheeled road

cases has been seen leaving their Dural headquarters for the airport since.

After over twelve months in the creative, technical specifications and negotiation process, Laservision's production staff have less than six weeks to manufacture, ship, install

operations will undertake intensive training.

The crowning glory of the Singaporean new Multi-media Laservision attraction is a 40 metre tall Merlion (half mermaid half lion), the symbol of Singapore, with dazzling green 100 watt Laservision eyes. Visible over tens of kilometres, the Merlion will be the star of the nightly Laservision spectacular.

This latest high profile permanent Asian themed attraction firmly reinforces Laservision's position within the Australasian laser attraction industry. Laservision have thrived in the Asian market during the last five years where the expectations of their customers continually challenge their creative and technical resources.

"I look forward to the day when the Australian industry recognises and understands the capabilities and potential of our locally developed and manufactured product" commented John Eustace, Laservision's Marketing Manager.

"We are regularly taking on the Americans, French, Germans, British and Japanese and winning more of the prime installation contracts. Our product is world class, winning a 1995 NSW Small Business Award for Manufacturing last month. We see a great future for Australian ingenuity in the Asian marketplace and, with strong support from the Federal NSW Industrial Research and Development Board, will continue to promote Australian manufactured product wherever practical" Eustace concluded.

• Laservision, call (02) 651-1511.



Laservision's Attraction Designer Simon McCartney liaises with locals re headwear

and commission the attraction to be ready for Singapore's peak tourism season.

Laservision's advanced guard is already on site preparing for the arrival of the complete complement of twelve Australian technicians who will spend most of November completing the task.

Laservision's production studios are burning yet more midnight oil, fast tracking its heavy Christmas and New Year production schedule, to clear space for the pre-production and programming on the initial Merlion shows. A fully configured Laservision studio is also being established in Singapore where the work will be completed and local

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## HIRE NEWS



### Mobile Stage

**NSW:** The Isuzu (above) is loaded with Bob Watterson's PA and Lighting production, and it also is towing his stage (fully setup below). At 32' x 30' deep, the stage takes just 2 hours to setup, and is a good alternative to the Big Rig or Butler's stage. Call Bob in Newcastle on (049) 43-5622 for stage and/or production.



- **TROY Balance Corporation** have added a Midas XL-3 48 channel mixing console to inventory. Also new are a dozen QSC MX3000 amplifiers. Call (03) 9699-3844.

- **SOUND UNLIMITED PRODUCTIONS** have souped up their lighting inventory with an Elektralite CP-10 DMX controller and new Martin Roboscan 812's. Call (02) 564-2277.

- **NORWEST PRODUCTIONS** are settled into corporate conventions and lower key concert tours like Slim Dusty and Billy Connolly, although they recently did Samira, that Lebanese superstar who packed out Sydney's State Sports Centre. Norwest recently added EAW FOH speakers cabinets and QSC Powerlight 1.8 amplifiers to inventory. Call them on (02) 809-0244.

- **CHAMELEON TOURING** have added 8 Robocolor Pro 400's to hire. (02) 310-5222.

- **SYSTEM SOUND** say their new self-powered Meyer MTS-4 system has had a workout with the Sunset Boulevard launch, Melbourne

Festival, and Hot Shoe Shuffle in Japan. Also, they have added new Cyberlogic amplifiers and bought a new Meyer system which has just completed the Tina Arena tour.

- **ROSSOUND HIRE** in WA reports its best ever year in the 27 years it has been running. Founder Ian Ross says new gear includes four E-V radio wireless mic systems, thirty 20" speaker horns, 30, 60 and 120w mixer/amplifiers, ARX SX800 and SX1500 power amps, and E-V SX100 speaker systems. They also have refurbished their studio caravan, and one of their Sports Observation Caravans. Call them on (09) 457-4044.

- **STAGING RENTALS** have been ultra busy, they did the ARIA awards, and the Housing Industry Awards. At the HIA awards John Farnham made a surprise appearance, although it was anything but a surprise for the various production firms who set it up! Meri Took put his reputation on the line in designing a special lecturn to reveal the sponsors for the Sydney Organising Committee of the Olympics. But it worked! Call S.R. on (02) 519-6300.

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## News



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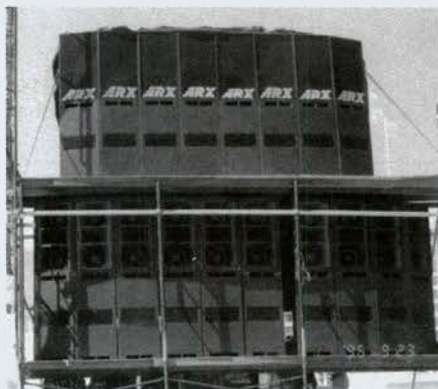
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**Gottalite & Sound** in SA have been busy, their biggest gig recently was the opening of the Planet Nightclub. They say the firm contracted to do the installation couldn't get the gear there in time. Now we sympathise, this is every installers greatest nightmare!

So Gottalite did the opening with a rental system, comprising Martin moving lights, and the imported Swedish DJ said it was equal to any system he had seen in Europe. A nice accolade. Call Gottalite on (08) 269-4524.

**ARX** have sold a large slab of concert sound equipment to Malaysia's largest audio and lighting production company, Cahaya Sdn Bhd.

This gives the firm a total of 48 ARX 212 Mid/High packs, 48 925 Low Frequency packs, plus 48 model 922 full range loudspeakers for infill and delay zones. Some pictured below.



### The Big Box Builder is Back

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## Installations

■ **Austrasound** (Sydney) have installed a background music/announcement system at AV Jennings' Discovery Hill home unit development site at Rouse Hill. It includes four Nakamichi MB4 7-play CD's delivering music to four different 'mood' zones. 16 Rocoustics out-door 'rock' speakers and 80 Atlas Soundolier ceiling speakers do the chore, run with three QSC USA850 install amps.

Other installs for Austrasound include music systems to Foster/Tuncurry Memorial Club, Sydney Aquatic Centre, Burdekin Club Kings Cross, Albion Hotel Parramatta, and paging systems in lots of places. Call (02) 872-6244.

■ **Les Jones Designs** recently installed a full sound reinforcement system including a Soundcraft Live console and Crest amps into the Rockdale RSL Club in Sydney. LJD also has installed a Yamaha sound reinforcement system into Brighton LeSands RSL Club, and a full AV system at the latest Hogs Breath Tavern at Cronulla Beach. (02) 554-3487.

■ **Troy Balance Corporation** have won a major contract for supply of more than \$250k in sound, light and AV gear to the Melbourne Exhibition Centre. (03) 9699-3844.

■ **Entertainment Installations** did just that at the Key Largo Nightclub at the Holiday Inn Crowne Plaza at Terrigal (NSW), comprising ARX PowerMax 2, Ultrasub, SS1500 amps, PowerPro processor, Acoustic Technologies 31 band EQs and a LEM DJ Star Mixer. Call Neale Mace on (043) 243-873.

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## BCEC Upset

The article in your November issue ("Competition Hobbled") by A V Graham requires a response on behalf of the Brisbane Convention & Exhibition Centre (BCEC) both for the errors and inaccuracies presented in the article, and the fact that we were not approached before its publication and given the opportunity for rebuttal or comment.

BCEC is a new facility in a highly competitive international market. We have consciously set out to provide the best available quality in all aspects of our operation.

It is our policy that if BCEC has equipment which is comparable with the client's requirements our equipment should be used. This is to ensure a level of quality and consistency in the Centre and also to provide a measure of control over the number of audio visual companies which may be operating in the 17 meeting spaces within the building at any one time.

However, it has never been the Centre's policy to deny clients use of their own technical staff, nor has it been our policy to add "phantom staff" to the client's account, as claimed in your article.

Nor has our Board ever issued a

directive in regard to policy in the above areas.

Your article was correct in stating that the BCEC's practice is not unique to BCEC and in fact is common to Convention Centres throughout Australia and overseas.

The meeting referred to in the article was an initiative of Convex (Qld) Pty Limited, the operators of BCEC, to provide a basis for discussing the policy with the industry. In fact, BCEC Management had raised this policy with the industry at least one year before the Centre's opening.

Finally, with regards to rates, the Centre's rental rates for audio visual equipment have been based on industry standards. Indications to date are that our pricing structure is very competitive with the market place.

**-Robert O'Keefe, General Manager, Brisbane Convention & Exhibition Centre.**

• *Editor responds: The article (by myself: Julius Grafton, not by 'AV Graham') is factual. I spoke with senior management in your establishment regarding your policy, which I gather tends to change regularly. I approached the centre regarding a large but tentative future booking my firm has there. AV facilities are crucial to this event. I faxed a re-*

*quest to your AV department for some rates well before our deadline, but didn't get a response for almost four weeks. The rates quote I did eventually get from your AV department looked stiff to me. \$100 a day for a wireless mic, \$160 a day for a Golden Scan.*

*The 'phantom staff' issue is misunderstood by yourself.*

*The issue with staff is that producers do not appreciate paying for your staff to supervise their own staff, ie: a sound 'operator' employed by the centre sitting alongside a sound operator brought in by a producer during a show. This is an issue raised with us by several producers. I suggest you acquaint yourself with, and finalise properly, AV Policy at your centre.*

research, they would have noticed that the new MTS-4, with all of its drivers, amplifiers, and processing included, weighs only 280 lbs. This is a mere 39 lbs more than an MSL-3A!

Weight was one of the obstacles that Meyer Sound had to overcome when introducing the concept of self-powered sound reinforcement products to the audio community and we have worked very hard to develop an amplifier and control electronics module that weighs only 30 lbs. This is a key factor in the uniqueness of the MTS-4 and believe me it is very important to consultants, designers and road managers. In addition we have mounted the MTS-4 on castors to make it even easier to transport. All of these design features were carefully considered in order to make the MTS-4 as user-friendly as possible, and to make the weight of the unit a non-issue.

I can appreciate your writer's attempt at humour, but not at the expense of the success of one of our products.

**Karen T. Anderson, Marketing Co-ordinator, Meyer Sound Laboratories, Inc. Berkeley, CA. U.S.A.**

• *I agree Karen, Buck Freeman was right out of line. I have reprimanded this individual. Please accept our deepest apology.-Ed.*

## Meyer Upset

I have just read the AES wrap-up in the November issue of Connections Magazine and I would like to thank you for mentioning Meyer Sound's new Self-Powered Series products in your review.

However I must say that I am disappointed in the editorial license that the writer took in mentioning a "hernia truss" when reviewing the MTS-4 Loudspeaker. If your writer had done his/her



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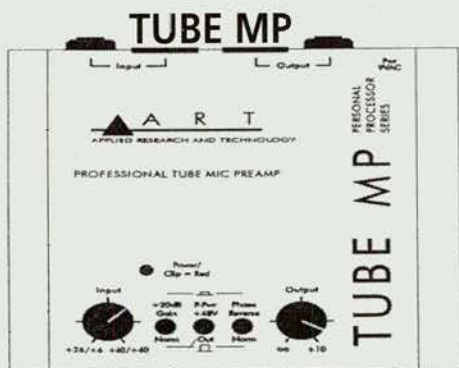


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Write in Reader Service Number: 162

## Studios Expect Rate Rises

Survey reveals new prospering category: 'professional project studios'. And, as Julius Grafton discovers, they are doing OK too!

**SYDNEY:** So the music studio business is in dire straights, right? Not according to the results of our first annual Studio Survey, which maps the shift in ground away from large expensive facilities towards leaner less capital intensive project studios.

Rate rises are not a problem either, of the 130 facilities surveyed we got 61 responses, of which just on half report rises of an average 12% this year. The number of facilities anticipating a rate rise next year was 65%, most of whom also report further equipment purchases in the pipeline.

A snapshot of these: Troy Horse will buy a console, MixMasters Lexicon 480L or 300, David Hinds Studios want ADAT and a console, Advanced Audio need 2 x Valve DI's, and CAAMA would like 4 DA-88's.

Generally while Studio owners couldn't agree if the 'state of the industry' was better, the same or worse than last year, they almost all trended towards expecting more 'anticipated business' than currently enjoyed.

We asked which equipment supplier gave them the worst support, and to our great relief found only ten responses, all of which nominated different suppliers. At the other end of the ledger, not surprisingly the question "favourite place to buy equipment" was most commonly answered with the word 'wholesale', which perhaps indicates wishful thinking!

Most interestingly, our respondent's mostly use analogue tape machines, a gaggle of machine types

were nominated, Studers, Tascam (most common), Postex, Otari, Sony and so on. Likewise console choice was the usual grab bag of Mackie, Soundtracs and again, more Tascam than we expected to find.

Finally, the sentiments of some: "All studios should start competing on quality and service" - Geoff Watson at Trackdown.

"After years learning my craft I find any idiot can buy a DA-88 and a Mackie console and be an engineer!" - Andy Parsons from Fortissimo.

"Those in this industry who continue to put in 110% effort will eventually reap the rewards" - Studio 52.

## A year in, and all's well at the Tom and Gerry show



**SYDNEY:** It's a year since Tom Misner (pictured at left) opened Mirage, the newest most expensive music studio in Australia. Boasting a new Neve VR Legend console, and more outboard than you can imagine, the place cost better than a megabuck to set up. Has it been worthwhile?

"No", says Tom, "at \$1000 a day it doesn't make money. But it's

my flagship" - and taking into account the breadth of the SAE conglomerate, it's a fair move. The simple economics say it all, at \$1.1 million in capital, Mirage needs to charge almost \$2000 per day to be a stand alone business success.

This doesn't mean Tom and Mirage manager Gerry Nixon are bad businessmen, rather it indicates where the market is at. In the last

## Adelaide puts hand up for CD Manufacturing

*Small state, but East Coast overflow boosts Adelaide CD, where it all looks easy*

**By Daniel Cole**

It's hard to credit that a 19th Century church would house a music publishing, CD manufacturing, mastering facility. This is where Adelaide CD is based.

Operations Manager Jim Mountzouris took time out of his hectic schedule to explain how the facility runs;

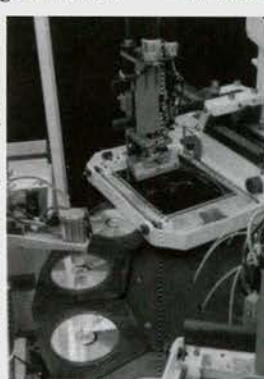
"It's the second CD manufacturing plant of its kind established in Australia (after Discronics in Melbourne). It has a capacity of 4 million CDs a year running 24 hours, 7 days a week. We usually achieve high yields and the production standards are very high."

The complex was initially set up

to cater for the requirements of the Koala group of companies. This is the publishing and record-

ing side of Adelaide CD; Koala are the people who produce the popular 'Progressive' series of music tutorial books. You may have heard of some of the titles; Progressive Lead Guitar; Guitar Method; Blues Harmonica; Saxophone Method etc. All areas of music/instrumentation are covered and all books come with either cassette

or CD which are all performed, recorded — and of course pressed — at Adelaide CD.



The CD pressing side of the operation has generated a fair amount of interest, while I was there, a run of classical CD's was being produced for a Sydney contract.

"We cater for lot of independent, private jobs and we do some large labels for Christmas. Much of the work is "in house" for Koala publishing."

## Tom & Gerry

year the facility has worked better than 80% utilisation, and the customers like to come back, they say.

Most jobs come in on ADAT, and are mixed down at Mirage, which after all is mainly a mixing room as it doesn't have a real, true 'studio' beyond the mixer. A smallish overdub room is under construction, and the main studio at SAE can be linked to Mirage, but it is mainly on the market as a Mix-down room. "It's the psychology" says Tom, "a dance act gets a contract, they want to come to a big studio".

Mirage has 24 tracks of Pro Tools, a back wall damped with Aro baffles, umpteen near and mid field monitors including Genelec 1037's, new outboard every other month, and this at moment a Focusrite 3. Then there's a new Lexicon 20/20AD in front of the DATs. You can mix hot, unity or anywhere you like at Mirage, says Tom.

The facility is booked out through February. **-JG**

## Adelaide CD

The key to being so self contained has been the accessibility of CD pressing equipment which has become easier to operate. Images of CD pressing plants with people walking around in space suits does not apply here. The machines have 'clean-spaces', however the mastering section does require more attention to cleanliness, as will be explained.

"CD Plants used to be based on a batching process where you would do 2000 CDs at the first stage, put them over there etc — this is part of the new way of working, with an in-line system; it's a self contained, self clean environment so we don't have to go in with suits, people have casual sort of gear here! The system is a clean room so it has made the process affordable; instead of 40 million you can set up a plant for a few million.

"Whilst it looks a little messy at the moment it is actually very clean. Simply, the process runs: We get polycarbonate in pellet form, this melts down and goes to

an injection moulding machine. It is then stamped, the stamper has the digital information or pattern (0s and 1s) on it. At this stage the stamped CD is transparent. From here, a robotic arm picks up the clear CD and drops it into one of two chambers.

"It is here, through an electrolytic process, that 'sputtering' occurs [sputtering electrically attaches pure aluminium onto the clear disk so when the laser has something to reflect signal back]. They've tried other alloys but aluminium is the most suitable. Finally, a protective lacquer is put over the aluminium then at the third stage it is silk screened with the label or graphic." Easy Huh? [Why then do CDs still cost \$29.95? Adelaide CD get about \$1 per disc]

"We have to keep the whole process at a constant temperature (24 deg), so we installed a cooling system through the church. When we first started Adelaide had a couple of 41 degree days and the system overheated."

According to Jim Mountzouris,

the CD plant has an audio scanner on board which detects faults;

"All discs are analysed on-line plus every fifty discs we run through an external analyser for errors, blurs, visuals, so there are check mechanisms right through the process.

CD rejections, says Mr Mountzouris, occurs either at the stamping stage, but most rejections occur after the silk screening; "You might have a beautiful CD but if the silk screening not perfect — you have to throw it away. You can get very expensive optical units but we are a boutique manufacturing plant, larger overseas plants can push through 200 million CDs.

"We had to set up this plant the hard way as the components come from different countries; the injection moulding machine is Swiss, the Uniline 2000 sputtering and CD manufacturing plant is American, and we had to source Australian components to make it all function, so it was difficult."

Every part of this once religious *(continued over)*

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Write in Reader Service number: 141

Adelaide CD (continued) space has been put to use; the side of the church is used for storage of plant equipment and raw materials, there is a large storage bay for music books, a distribution area for packaging and distribution, an art department, photograph/bromide dark room spaces and two interesting spaces, the mastering area and the studio.

The mastering area is where it all starts; from a DAT tape as Chris Foote, mastering engineer explains; "The tape must have perfect time code on it; domestic DAT machines aren't good enough, so outside mastering services are utilized by our customers to prepare the tape for us. We also look for errors on the tape itself, defects on the tape surface.

"We have a cutting machine which laser-cuts the digital code onto a master CD or "stamper" as its called, with a silver plate surface. The process from DAT tape to "stamper" takes around 9 hours."

Soon, a new music label, Krell,

will be launched. The studio housed at Adelaide CD will become the main studio for Krell Music as well as doing Koala's recordings.

"This studio is in-house for all the tuition books and is four years old now. We will convert it to a commercial music studio by moving the control room into a larger adjoining room." For this project Acoustic Engineer Chris Morton will be engaged. The studio will then be hired out to local artists who'll be keen to use a state-of-the-art 48 track digital studio."

"We have had to work around the limitations of the architecture. As well, the council has been very supportive and we have worked very closely with them.

"Adelaide CD is a totally in-house service, we have our own schedule so the customer is assured that we aren't being affected by external companies and the potential problems of relying on outside sources which could cause problems with time schedules and quality."

Call Adelaide CD (08) 346-5366.

## Making a small space bigger - the Aro Technology way

Daniel Cole visits Adelaide and misses the Grand Prix...

Chris Morton is the proprietor of Aro Technology, an acoustic engineering firm specialising in acoustic treatment and diffusers. Based in Adelaide, he has not only become a prominent acoustics consultant in South Australia but with his product and advice, has been making in-roads into other states, and Europe, with supply to studios in Cologne, Zurich and the RAF Band in the UK.

One of his more recent and challenging projects was turning an antique wine cellar into a functional studio environment. The studio is called 'Cooreega', named after the house in which it belongs, an expansive 100 year old Adelaide mansion.

According to Chris, the main problem with the project was the size of the room, so the brief was

to make the space *acoustically* as big as possible; to make the space work. This is the art of acoustic design.

Aro Technology designs and manufactures modular acoustical diffusers which work on the principles of phase interaction. Sound reflected from these diffusers is scattered over a wide angle eliminating harsh reflections and creating a more even sound field throughout the room. The Cooreega studio design incorporates a large full spectrum diffuser which gives a flat response to frequencies below the cut-off of the Genelec monitors.

The Cooreega project has worked very well; the custom design and placement of the diffusers along with architectural work, has turned the Cooreega studio



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space into a controlled 'natural' listening environment (a contradiction in terms?). To my ears, the studio acoustics had some 'ambience', which is always preferable to a rarefied listening space. The work that Aro has done is acoustically effective and visually understated. It's all on the ear.

"The room was a basic shell, but the main problem was the very low ceiling (just over 2 metres), the floor and walls are solid stone so it wasn't feasible to dig it out." Chris continues;

"What we have done is make a room within a room; it is boxed 36 mm thick MDF, entirely separate to the floor joists above.

"This was an old wine cellar, very damp. Although it is structurally sound we had to have a support beam put in. It has a couple of alcoves, originally with iron grates and the six DA-88s and power supplies are now housed in there along with the ventilation



*Coogreega - owned by Gary Turner - is a large project studio. It's a private facility. It boasts a BIG console by Langely, six Tascam DA-88's for 48 track d'igital - and more. When required, another room is the house is used as a studio. Accoustic treatment by Aro Technology.*

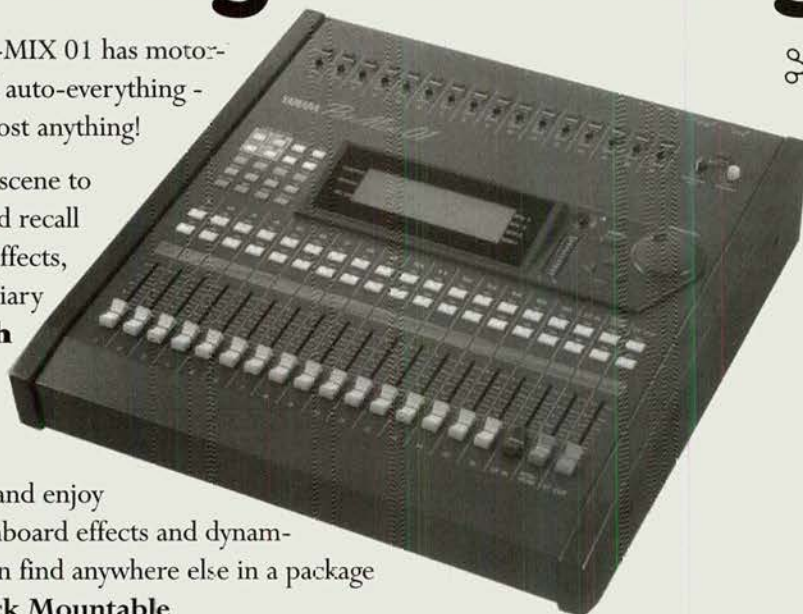
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## Coogreega

system and an emergency exit."

The studio has been in use for 2 months, and according to Chris there is still a small amount of acoustic work left to do. The owner, Gary Turner does not hire the studio out, it has been built to cater to his projects with engineer Brett Sody.

The studio features some nice equipment including a Big console by Langley, apparently brought into the space early on, before the alcove was sealed. The main entrance is a spiral rock staircase.

"We had to get all the equipment in before we finished the studio. For a while we were toying with the idea of getting a 2" 24 track but it wouldn't fit the stairs..." Says Gary Turner. (As a side issue, Mr Turner says the DA-88s have been playing up, they are now in dust free cabinets. Another story.)

Aro has completed a number of projects around Adelaide including Best FX, DiscEdits, Australian CD, Festival Centre, Convention Centre space, and in Sydney, Festival Records.

Contact: Aro Technology, Chris Morton, ph (08) 346 4199, facsimile, (08) 340 0069

## It's a Post, Post World

*Pooling resources can be a good idea sometimes — especially in the realm of freelance. This is what three sound artists/composers have done, now working together as Supersonic.*

**By Daniel Cole**

Supersonic is Paul Healy, Antony Partos and Andrew Lancaster they are all graduates from the B.A. from The Australian Film Television and Radio school, majoring in sound — they're all around the same vintage as a 1971 Holden HG (and a hell of a lot more technologically advanced).

"We all had bits of equipment in our homes, you know, the 'classic' home studio," says Supersonic co-member Andrew Lancaster,

"We realised if we combined resources we could set up an office and studio."

"As well as being a cost saving manoeuvre people tend not to take you seriously if you work from home," says Antony Partos, another member of the team.

"We have structured the set up so we can work either together on larger projects and maintain separate projects" he adds.

Supersonic is a high-end post audio production company with a broad job description. Their combined knowledge and experience

has made their work diverse. They have provided specialised audio for feature films, commercials and promos for film and TV, installation soundtracks, theatre and dance.

"We are all sound people and composers so Supersonic is really a music and sound design production house. We can do both the music and sound track layering which simplifies the process for the client.

"Sometimes these elements

don't work individually with different production houses doing different things. Here, we offer a conceptual approach to sound design. We don't do much Foley or post syncing, we leave that to other studios."

"We are all film makers, so knowing the process we encourage people to engage us at script stage to draw out the potential of the project. We have established a style of work that we want to maintain."

Each group member has experience in different fields, as Andrew Lancaster explains,

"Antony does a lot of work for the One Extra Dance Company, Paul Healy works in installation,

*(continued over)*



Antony Partos and Andrew Lancaster, in a Supersonic studio space

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# BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
<b>New South Wales</b>			
<b># Sharp Studio</b> Jeff Cripps (02) 534.4440 24 Track 1'			
Third Degree	Jeff Cripps	Jeff Cripps	Blues CD
Pleasure & Pain	Jeff Cripps	Jeff Cripps	EP
The Bens	Jeff Cripps	Jeff Cripps	Demo
Stoker	Jeff Cripps	Jeff Cripps	Demo
60's Mania	Andrew Hill	Jeff Cripps	Video S/Track
<b>Airmotion Studios</b> (02) 5506576 Kristen Wolek 24 Track Recording			
50 Million Beers	Mark Cornwall	Phil Rigger	Album
"Billal" - Docum.	Jan Preston	Guy Dickerson	Sound Track
Amazing Grace Bros	Judy Buckhouse	Shane Fahey	Demos
Thumper	Thumper	Shane Fahey	Album
Social Interiors	Shane Fahey	Shane Fahey	Album
<b>Albert Studios</b> Leesa (02) 9953 2544 48 Tk Digital			
Leoni	Craig Portells	Craig Portells	New Album
Flash & The Pan	Springate/Andrews	Sam Horsburgh	New Single
Daniel Amalm	John Springate	Bart Elsmore	New Single
Hills Christ.Life Ctr	Zszech/Fragar	Ron Davis	New Live Album
<b>Audio Cassette &amp; Disc Company</b> Clive Lipman (02) 748 6055 Cassette & CD Replication			
Twos Company	Phil Coad	Phil Coad	Album/Cass/CD
Brian Letton	Lindsay Butler	Lindsay Butler	Album/Cass/CD
Carols For You	Geoff Evans	Geoff Evans	Album/Cass/CD
Ken Plant	Ken Plant	Ken Plant	Album/Cass/CD
Science Press	Penny Conlon	Clive Lipman	CD Album
Tony Chad	Tony Chad	Tony Chad	Album/Cass/CD
<b>Bush Traks Recording Studio</b> Ruth Miller (066) 39 1290 24 Track Rec. & Multi Media Studio			
Vanya	Greg Gardner	Dave Highet	Album
Paul Jones	Jones/Highet	Dave Highet	Album
Nimbin School Band & Choirs Green/Hopkins		Dave Highet	Album
<b>Blackfeather</b> John Robinson (02) 909 2707			
T.J. Bossch	Tim/J.Robinson	John Robinson	CD
Craig McDonald	John Robinson	John Robinson	Demos
Eva Escori	John Robinson	John Robinson	Demos
<b>Charing Cross Studio</b> David Sykes (02)387 8362 - 24 Trk Neve			
Nikka Costa	Justin Stanley	Keith Cooper	Alb.Trk/Mix
Ghostriders	Rob Hirst	Keith Cooper	Album/Trk
Hanging Tree	Band/K.Cooper	Keith Cooper	Alb/Trk/Mix
Plush	Tim Powells	Davie Trump	EP Tracking
Esoteric	Steve Balbi	Martin White	EP Tracking
Leonardo's Bride	Justin Stanley	Keith Cooper	Alb. Tracking
<b>Cloud Studios</b> Liz Macleod (013) 532429 48 Tracks, CD Mastering, Super True Automation			
Wild Life	Band	Parris/Kim	CD Master
Hound	Band	Kim/M.Wilson	Live to DAT
Scott Leece	Parris Macleod	Parris/Kim	Mixing Album
Eddie Daniels	Eddie Daniels	Kim/Parris	CD Demo
Amsterjam	Parris/Band	Parris/Kim	Mixing Album
Red Back	Band	Kim/Parris	CD Demo
<b>Crystal Clear Studios</b> (02) 684 1152 David Tozer 24 Tk Digital ADAT System & BRC 32			
Strident	Dave/Band	Dave Tozer	Album
Would Goblins	Dave/Band	Dave Tozer	Album Tracks
Aust.Madonna Show	Dave/Band	Dave Tozer	Video/Demo Tks
Southend	Dave/Band	Dave Tozer	EP Trk/Mix.
Eternity	Dave/Band	Dave Tozer	EP Tracking
Neurosis	Dave/M.Gaal	Dave Tozer	EP Mixing
<b>Damien Gerard Studios</b> Contact Marshall (02) 660-8776 2 x 16/32 Track			
Gadflies	Band	Russ Pilling	Album
Draamseed	D.McCarthy	Konrad K.	Demos
Wurd	A. Brown	Konrad K.	EP
Sundogs	M.Cullen	M. Cullen	Single
Once Upon A Time	M. Cullen	M. Cullen	Tracking
Fresh	Lumsdaine/Carter	Carter	Album
<b>David Hinds Studios</b> David Hinds 065 811235 8 Track			
D.Hinds/Lyn Finch	David Hinds	Mick Dignataro	Northside Ltg.Jingle
Hinds/Finch	D. Hinds	M. Dignataro	Kempsey Toyota Jingle
Hinds/Finch	D. Hinds	M. Dignataro	F.D.B.'s Jingle
Hinds/Finch	D. Hinds	M. Dignataro	Jon's Fam. Jewellers Jingle
Hinds/Finch	D. Hinds	M. Dignataro	Vision Homes Jingle
Hinds/Finch	D. Hinds	M. Dignataro	John Patrick Mtrs. Jingle
<b>Hullabaloo Music</b> Glenn Heaton (02) 9906 2933 24 Tk. Analogue/8T Digital/Pro-Tools			
Pixie	Pixie	Glen Heaton	Single Release
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	ABC TV Sports Titles
Vanessa Robinson	Glenn Langford	Glenn Langford	Demo
Hullabaloo	Hullabaloo	Glenn Heaton	Video Release
Disney Live	Disney Live	Glenn Heaton	Disney Live Shows
<b>JMF Sound Studio</b> Ralph Esther (02) 790 4097			
Crop	Band	Ralph Esther	CD
Joanna Capetanakis	Joanna	Ralph	CD
Ligun	Ligun	Ralph	CD
Mr. James	Band	Ralph	Demo
<b>Main Street Studio</b> Rob Specogna 042 834 515 16 Track			
Shifter	Band/R.Specogna	R. Specogna	CD Album
Karen Frencham	Karen	Rob Specogna	Demos
FUGG	Specogna/Wright	Specogna/Wright	Cassette Album
Shot to Pieces	Band/Rob	Rob Specogna	CD Album
Boot Leg Brothers	Neil CVorey/Ian McKay	R. Specogna	Cassette Album
John Broomhall	John Broomhall	R. Specogna	Song & Jingle
<b>Megaphon Studios</b> (02) 550 6576 Kristen Wolek 24 Track Recording			
Mark O'Shea	Mark Moffatt	Brent Clark	
"Billal" Docum.	Jan Preston	Guy Dickerson	Soundtrack



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## Studio 52 Upgraded

**MELBOURNE:** Stunning results are reported following a nine month upgrade of the popular Studio 52 complex in Collingwood.

Studio A has a larger control room (above); large live room, and overall the entire four studio complex is doubled in size.

New airconditioning, polished timber and slate floors, and decor featuring warm colours and natu-

ral materials included.

Musicians also like Studio A as it looks down on the control room, offering a 'stage' feel.

Owners Paul Higgins and Trevor Carter finished the works after just a two week closeout, and report CD recording and production rates haven't risen as a result. A studio tour is available, call first.

Call Studio 52, (03) 9417-7707

### (POST WORLD) Continued

film sound, theatre — currently he's working on the sound for *Rosencrantz and Guildenstern Are Dead*, at the Belvoir St theatre in Sydney and the sound for a ABC documentary *Men And Their Sheds*.

I have done feature film work and a number of commercials and sound designs, including a work for the Museum of Sydney."

In their year together, they are making their presence felt.

"We did some *Coke* ads, a *Who Weekly*, a promotion piece for SBS for *Eat Carpet*. We try to only do projects that are appropriate to the style of Supersonic, that have something interesting or have sound design potential.

"At the moment we are currently working on a project for the Melbourne International Festival called *Chunky Move*, a dance piece. The commercial work offsets economically the more demanding work which doesn't have the same income, but its work that we like to do.

"Coming up is an add for Bailey's (the drink) so this will supplement the more diverse recent projects."

Although producing resources has

brought together quite an amount of equipment, their working format is straightforward, and it seems, uncluttered.

"We compose a lot in the MIDI realm and we use Cue Base for that; as well, we like the Kurzweil K2000 samplers. We also have a variety of other samplers. Some of the work is complex but we try to keep the process as simple as possible.

"After the piece is arranged in Cue Base its put onto DAT then we edit on Pro Tools, add sound effects etc. We have 16 tracks to play with here. If we need more tracks we can also combine with an Alesis ADAT."

"Our approach is to mix as we go, building up layers. It comes from doing music in MIDI: you play in the event at the level you want it. We do a lot of editing in Pro Tools so we are not using a conventional console. We have a Soundcraft Spirit and a Mackie console for basic work."

"We all really enjoy what we do but underlying this is a strategy of providing high quality composed sound arc or music to specialised or niche markets. In doing so, establishing a profile of a company that does innovative work."

## BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
Low Babys	Rick O'Neil	Rick O'Neil	Demos
Rumblefish	Guy Dickerson	Guy Dickerson	Demos
Clarion Fracture Zone	Tony Gorman	Guy Dickerson	Rec Album
<b>Mirage Studios</b>	Gerald Nixon (02) 211 3915 16 Trk Digital, 48 Trk. Digital 24 Track Analogue		
Sara Kennedy	Mirage Prodn.	Tom Misner/G.Nixon	Single,Demos etc.
John Gillard/Pepsi	J.Gillard Prodn	John Bee	Commercials
D.J. Foster	Spencer Lee	Spencer Lee	Album
Jennie Morris	Roo Art	Tom Misner	Single Mix
Telecom	Mike Stavrou	Mike Stavrou	Commercial
Cactus Child	Craig Portells	Craig Portells	Album Mix
<b>Paradise Studios</b>	Bill Field (02) 357 1599 48 Track A'log, Custom Mixer		
Clint Beattie	Mark Moffat	Brent Clark	Tracking
Finiscad	Dave Trump	Dave Trump	Demos
Gilgamesh	Band	Lien Chew	EP
Christie	Sam McNally	Chew/Bee	Single
Captain Keg	Brad Thompson	Colin Simpkins	Mixing
Dennis Burgess	Tom Kazas	Tom Kazas	Single
<b>Pathways Studio</b>	Frank K. 0419 230008 24 Trk. Analog 2 inch		
Highlands Christian Church	Curtis Mattick	Frank K.	14 Track CD
<b>Paul Bryant Mastering</b>	Paul Bryant 02.748 6055 Mastering Suite		
Kerrie Biddell	G.Bourgeois	Paul Bryant	CD Alb.Master
Galapagos Duck	Tony Ansell	Paul Bryant	CD Alb.Master
The Tornados	Pat Maloney	Paul Bryant	CD Sing.Mstr
Third Degree	Jeff Cripps	Paul Bryant	CD Alb.Mstr
Hunchbacks	M.Klarinaar	Paul Bryant	CD Mini Alb.Master
Napoleon Blowenapart	Jeff Cripps	Paul Bryant	CD Alb.Master
<b>Q Recording</b>	Gordon (02) 212 4851 24 Trk Studer, Tascam M700		
You Am I	Wayne Connelly	Paul McKercher	Album
Sista Kate	Band/R.M.	Richard Muecke	Demos
Salacious Crumb	Band/R.M.	Richard Muecke	Demos
General Mayhem	Band/R.M.	Richard Muecke	Mini Album
Quad Box	David Price	David Price	Album
Sedgwick Pie	David Price	David Price	Album
<b>Sound Level</b>	John Soane (02) 9552 3200 16 Track Digital Tascam DA88		
SHE	Joe Breen	Joe Breen	Demo
Big Mexican Dinner	Adrian Payne	Rory MacKenzie	Demo
Jeremy Chunn	Paul Gannell	Paul Gannell	Demo
Vague	Steve Waters	John Soane	Demo
Feline	Joe Breen	Joe Breen	GP ABC TV
Green Peace	Helen Carter	John Soane	Album Track
<b>Soundwarp Audio Services</b>	(02) 9905 7144 Meredith Brooks	Mastering/Post Production	
Austen Tayshus	Massive Rec.	Meredith Brooks	CD/Cass.Mstr
Various	Range Record.	Meredith Brooks	Comp.CD Mstr
Various	Canetoad Rec.	Meredith Brooks	Comp.CD Mstr
Adelaide Grand Prix	Kerrie Hayes Prod.	Meredith Brooks	TV/Racetack Segment
Bobby Beausoleil	M.Stewart Pearson	Meredith Brooks	Comp.CD Master
Rubber	Bill Syrratt	Meredith Brooks	CD Comp. Track
<b>Studio Arts Productions</b>	(042) 849128 Ed Lee. Independent Recording Studio		
Inscape	Band	Ed Lee	Mix Down/Demo
Canopy	Band	Ed Lee	
Some Sunny Day	Tess McLennon	Ed Lee	Stage Prod.S/Tk
Big New Head	Band/Ed Lee	Ed Lee	Album CD
Erica's Jive	Yep!! We're still at it.		Album CD
Basic Music Industry Skill	Course	Ed Lee	"Studio" Tutor
<b>Trackdown</b>	Geoff Watson 02.550 6890 The All New All Digital 2-32 Track automated total recall facility!!		
Blinky Bill	Yoram Gross Film	Tim Ryan	TV Series
Bananas In Pyjamas	ABC/Chris Harriott	K.Naunton/M.Barry	Album
Various	Simon Leadley	Simon Leadley	"Duality" Ambient Album
<b>Troy Horse</b>	Michael Levis (02) 557 3129 24 Track		
Midget	Paul McKercher	Paul McKercher	EP
Caribe	Fernando Boulosa	Russell Kilbey	EP
Run Silent	Colin Wright	Colin Wright	Album
Wildcat	Rene Vetterli	Bruce Waite	Album
Magic Lunchbox	Ernie Lunley	Bruce Waite	EP
<b>Velvet Sound</b>	(02) 264 3420 Dave McCunn 32 Ch. 24 Track 2"		
Gondwana Land	Charlie McMahon	Tony Wall	Album Tracks
Unholy	Unholy	Tony Wall	EP
Creative Vibes	DJ Soup	Frazer Stuart	Remixes
Solar	DJ Soup	Frazer Stuart	Remixes
Cactus Child	Craig Portells	Craig Portells	Album Tracks
Circus	Ted Yanni	T.Wall/T.Yanni	Album Tracks
<b>Wirra Willa Studios</b>	Will Rout (02) 605 1203		
Kimberley Johannes	Kimberley	Will Rout	Backing Trks.
Arthur Eisenberg	Arthur	Will Rout	Demo
Angela Teagle	M.Campbell	Will Rout	Demo
Canticle Prodn.	C. Vine	Will Rout	Spoken Word Masters
<b>Woolly Mammoth</b>	Mik Sanning (02) 557 2721 16 Trk. Digital W/Midi		
&i	&i	Brett Sullivan	Album
Jaz	Meston/Paisley	Paisley/Sanning	EP
Gaia Films	Jenny Kendall	Nik Sanning	Sound for film
Phylum	Lungren/Phylum	Nik Sanning	Demo
Vince Panetta	Panetta	Nik Sanning	Demo
<b>Queensland</b>			
<b>Advanced Studios Noosa</b>	Rod Watts (074) 424 233 24 Trk. Dig. 32 Ch. Mackie		
Dan Gibson	Dan/Paul	Paul Cheeseman	Album Tracks
Nadine Williams	Paul/Nadine	Paul Cheeseman	Demos
Dol & Ross	Paul,Doc/Ross	Paul Cheeseman	Mix Album



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# Videos



**SHAPE YOUR SOUND WITH:  
 REVERB & DELAY**

The techniques you need to shape space where your sound happens. In Delay, you learn to create custom flanging, phasing, echo and chorusing. Dozens of musical examples, animation and demos.



**SHAPE YOUR SOUND WITH:  
 MICROPHONES**

The best way to mic drums, guitars, pianos, horns, strings and vocals. Clear demo's showing advantages and disadvantages of mic types and design. Deals with stereo miking. Dozens of musical examples, animation and demos.



**SHAPE YOUR SOUND WITH:  
 MIXERS & MIXING**

Tom Lubin takes you through a 16 track recording mixing session. Learn how to route signals in and out of a board, hear and see what Tom is on about via demos and animation.



**SHAPE YOUR SOUND WITH:**

**EQUALISERS, COMPRESSORS & GATES**  
 Use EQ to OPEN UP your sound & make room for instrumental texture. Examples show use of Compressors and Gates to create your own unique sound. Demos, animation and advanced graphic displays help you understand what goes on.



**SHAPE YOUR SOUND WITH:  
 MULTITRACK RECORDING**

Tom builds a song, step by step, taking you through the recording and overdubbing process. Learn the techniques needed to make top quality recordings, regardless of how many tracks you have. Examples, demos and graphics assist the process.

**HOW** can you make your recordings sound more like a record? How can you get your sound the way you want it? SHAPING YOUR SOUND, hosted by producer and engineer Tom Lubin, is a series of videos that bring professional recording studio techniques to muso's, engineers and home recordists. Each tape is packed with demonstrations, computer graphics and live musical examples. SHAPING YOUR SOUND provides a complete course as well as an ongoing reference tool. Each tape comes with a reference foldout and index.

- \$59.50 each (5 different titles available), at least an hour each.
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**JULIUS GRAFTON TELLS ABOUT TOM LUBIN**  
 "He came to Australia from the USA with a HUGE CV detailing his achievements in the recording industry. Then he became an Aussie and has been involved in education, recording, and products. Best of all he doesn't talk down to mere mortals like me (and you). Tom is very highly regarded as a recording guru, and although these videos were made back in 1988- 1990 they are spot on today!"



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# Wearable Art

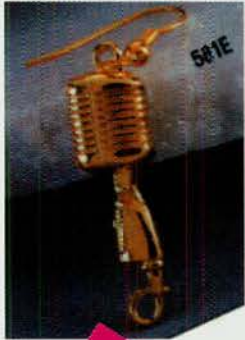


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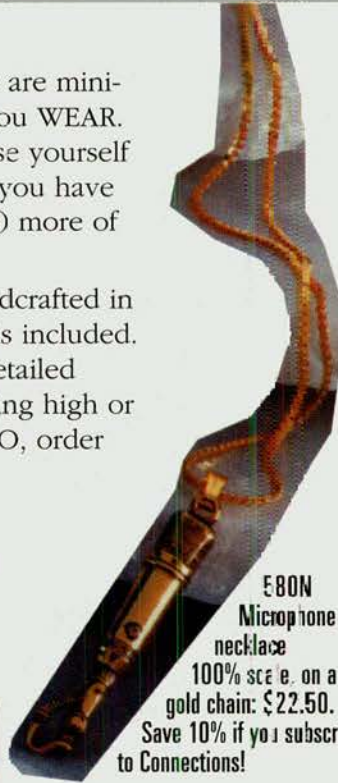
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SHORT SLEEVE: \$14  
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# Things & BOOKS!

## The CD \$29

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



## The Best of Duncan Fry

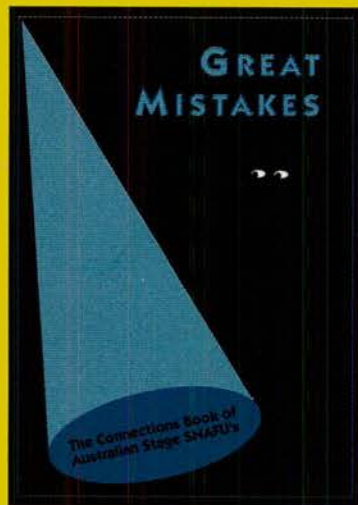
Connections Magazine popular columnist Duncan Fry chronicles his road stories, including some XXX rated, never before published! Durk writes about life at the gig, after the gig, and nowhere near the gig- it is sometimes a chronicle of the world through Duncan's eyes. Duncan Fry ran his own PA and Lighting rigs through the 'golden era' of the Australian Rock Industry. Today he is co-owner of ARX, the Australian PA equipment manufacturer.

## THE BEST OF DUNCAN FRY



Australian Road Stories

100+ pages, \$15.00



## Great Mistakes- the book!

Great Mistakes, the Connections Book of Australian Stage SNAFU's is where readers like you and me confess. "If it can go wrong it will" is the theme of these short stories, and there are more than 20 of them. The show must go on, and it usually does, but some of these blunders are almost predictable, and often really funny too. All home grown..

*You asked for it, here it is!*

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## AUSTRALIAN MUSIC INDUSTRY BOOKS

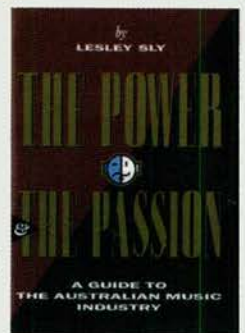


## AMID \$15

15th edition, July '95. This is the Australian Music Industry Directory, published by Phil Tripp at Immedia. Has 253 pages, thousands of contacts. \$15.00, in stock, order now.

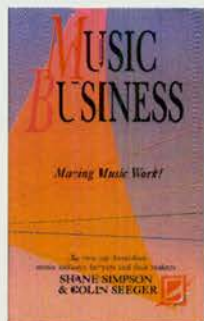
## The Power & The Passion

By Lesley Sly. \$45, 392 p. 1993. Over 150 industry powerbrokers were interviewed for this book, which takes you to the heart of the music industry. Mixes art with money! \$45.00, all books are usually in stock



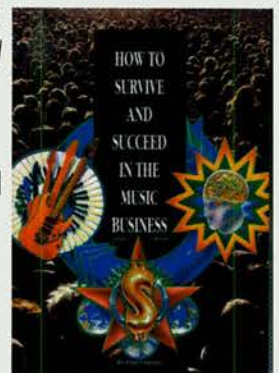
## Music Business Making Music Work

492 pages. By Shane Simpson and Colin Seeger. \$49. 1994. Written by two music industry lawyers, this book is unique because for once you get lawyers spreading knowledge rather than hogging it! Yes, in addition these guys are highly regarded too! Wonders never cease. If you hope to make a living from music, then you need this book to navigate you through the minefield of The Deal, Management, Copyright and 1001 other details sent to fry you. \$49.00, in stock.



## How to Survive and Succeed in the Music Business

By Paul Christie. 130 pages, A4 sized. 1994 \$39.00. Christie is an older rock musician who made good by being street smart. He flogged the Party Boy concept, played with many leading bands, and this book is really his operations manual. For this it is unique and down to earth. \$39.00 in stock.



## Hums & Buzzes Explained \$9



By Laurie Nethercote.  
NORMALLY \$12.95 - special price: \$9  
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.

## 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.

## Live Sound Mixing \$35



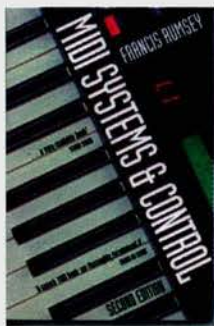
By Duncan Fry.  
This Australian publication is in its second edition and has sold well around the world, and has an easy style. It deals with everything PA in a matter-of-fact manner, and is a good reference work for those of us who forget what we know! 176 pages.



## Concert Sound \$48

By David (Ruby) Trubitt, 166p, written 1993.  
This is a very useful book, Connections say that if you are interested in, or work in, the live sound field, get it! details touring sound

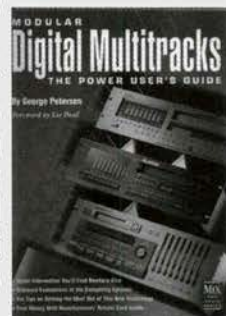
for bands like U2, Stones, Van Halen etc. Has gear tips, rigging, pix of major systems, and is well put together! Illustrated.  
What more do you want? A large format book.



## MIDI Systems & Control \$55

2nd edition. 1994. By Francis Rumsey. A book about... MIDI, yes, but for ANYONE who wants to understand the principles of MIDI control, also useful for people who design devices. Heaps of diagrams and illustrations, deals with implementing MIDI in studio, musical and lighting equipment, mixer automation, and jhas info on latest additions to the MIDI spec. 204 pages.

## Modular Digital Multitracks \$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.

## Making the Ultimate DEMO \$32



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

## Tech Terms \$19



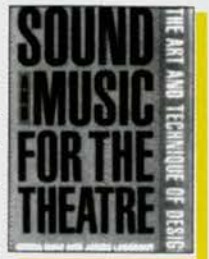
George Petersen and Steve Oppenheimer. 50 pages. 1993. For a quick, accurate definition on using music technology, this is for you. The practical dictionary of audio and music production terminology, explaining 300 of the most commonly misunderstood words and phrases. Get savvy!

## Project Studio Blueprint \$53



The essential do-it-yourself guide to help you put your studio ideas onto paper, and get them into reality. Budget the costs of building and maintaining a project studio, and create the best studio acoustics for your location. Deals with proper installation of audio connections and patch bays, and has a section on trouble-shooting equipment and connections; and on sound proofing. 236 pages.

## Sound & Music for Theatre \$44



By Kaye and LeBrecht.  
Contemporary guide to theatrical sound, detailing the creative opportunities and practical considerations for composers, technicians and sound designers. Features chapters on researching and selecting sound materials, developing the 'sound plot', building audio cues and working with theatre co's. 196pp, 1992.

## Sound for Picture \$36



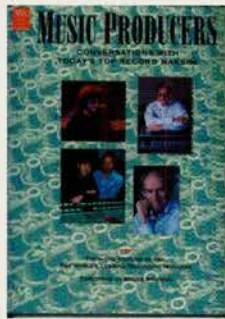
From the editors of MIX. 134 pages, 1993. An inside look at audio production for film and TV, with audio post. Details many recent productions. Includes a special section on sound effects, with case studies. 134 pages. Large format book, illustrated.

## Studio Seconds \$19



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 too!

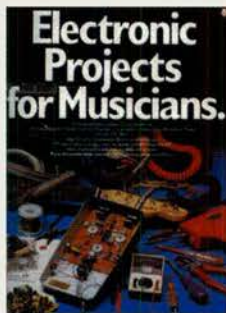
## Top Music Producers **\$39**



Editors of MIX Magazine talk to 24 top producers, including Don Was, Phil Ramone, Jeff Lynne, Daniel Lanois and others. They tell how they got started, how they mediate between artists and labels, what equipment they prefer, analog vs. digital and much more. 128pp, large format.

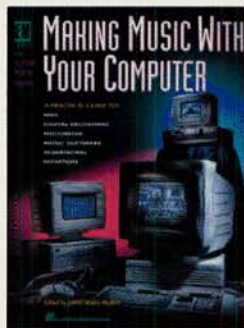
## Electronic Projects for Musicians **\$39**

This book is for anyone with a bit of skill and a soldering iron! Build your own preamp, compressor/limiter, ring! modulator, phase shifter, noise gate, talk box, tuning standard and 20 other things. Said to be easy to understand. 220 pages.



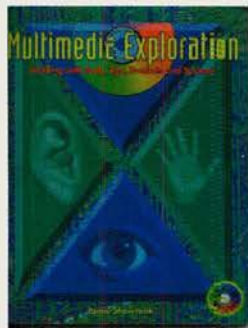
## Making Music with your Computer **\$39**

Whether you're a computer user entering the world of music and sound or a musician searching for the right computer, this book will bring you up to speed and help you get the most out of today's modern music technology. An Electronic Musician book. 128 pages.



## Multimedia Exploration **\$66 WITH CD**

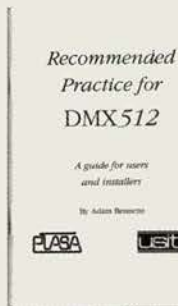
Explore multimedia technology with this book, written especially for network managers, corporate readers and developers of multimedia technology. Explains how to use resources and develop CD-ROM titles. Deals with MIME messaging, standards and reviews desktop conferencing products. Comes with Metatec Natilus CD-ROM for PC. 312p, 1995.



## 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. And, it's written by an Aussie and published in Australia. All books usually in stock.

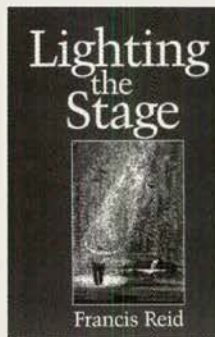
**Subscribers save 10% on all books!**



## Rec. Practice For DMX512 **\$19**

By Adam Bennette. 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 authoritative study of the standard Lighting Control protocol.

## Lighting The Stage **\$36**

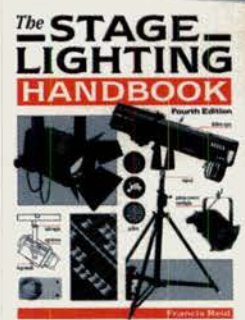


Previous books on stage lighting have tended to concentrate on the factual aspects of design and technology. But for young lighting designers and all those concerned with lighting - directors, choreographers, set designers, costume designers, stage managers and specialist technicians - the equipment and the design processes are only the start. It approaches stage lighting from the human angle. 114 pages, 1995. By Francis Reid.

## Control Systems For Live Entertainment **\$79**



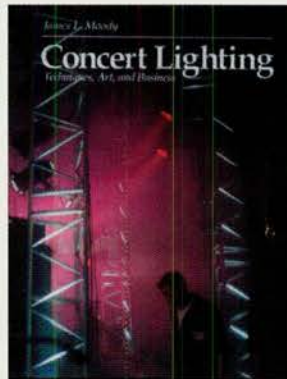
Walk into most large shows today and you see computers at work. All too often systems for lighting, sound, staging and machinery are not connected. This book discusses how different systems can be integrated, and details most different protocols in use today. Invaluable, says Connections editor. 292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



## Stage Lighting Handbook **\$39**

Fourth Edition, by Francis Reid. The Standard guide to stage lighting. The book appeals to beginner and pro alike, and in this fourth edition incorporates recent advances in technology. The material on the process of designing and implementing the lighting for a production has been completely revised. In 1974, Connections editor Julius Grafton read the first version of this book and went out to light a professional stage play. It's true, it can be done, and this book will help you do it! 208 pages. Plenty of helpful drawings.

## Concert Lighting Techniques, Art & Business. **\$79**



This hard back, large format book is a quality item, the first book we have seen to deal solely with large scale concert lighting. Author James Moody is the ideal person to write this, he goes beyond the tour and discusses applications of concert

lighting equipment, techniques to other fields including film, theatre broadcast TV and corporate theatre.

Some quotes: "down to earth, honest, easy to understand, information not found in today's books on lighting. This man KNOWS concert lighting".

This book has colour pix, sections on overseas touring, pre production, business, stage design, dealing with problems and much more. 'Highly recommended by Connections'. 190 pages.

## Connections Contacts **\$9**

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## BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
<b>Grevillea Recording Studios</b>	Malcolm Jacobson (07) 3262 8422 24 Trk. Analog/16 Digital/CD Mastering		
Grinspoon	Ramesh/Band	Ramesh Sathia	EP for Oracle
Grinspoon		Malcolm Jacobson	CD Mastering
Edwin Morrow	Edwin	Malcolm Jacobson	CD Mastering
Karyn De Vere	Phil Manning	Malcolm Jacobson	CD Mastering
Crow Films	Owen Johnston	Bruce Jacobson	Mix S/Trk for Doc.
Gregg Arthur & Vince Genova	Malcolm Jacobson	Malcolm Jacobson	Demos
<b>Outlaw Recording &amp; Records.</b>	070 576 742 or 018 772 380 Jerry Reinisch Adat 16 Track		
Soul Gypsy's	J.Reinisch	Uncle Jerry	Mini Album
Red Eyes	J.Reinisch	Uncle Jerry	Album
Gert Admiral	G.Admiral Jr	Uncle Jerry	Demo
<b>Sunshine Studios Leon Prescott (07) 844 6844 36 Channel Neve</b>			
Andy McDonell	Lachlan Magoo Goolid	Lachlan	Album
Strange Fruit	Leon Prescott	Leon Prescott	Demos
Sean Sennett	Leon Prescott	Leon Prescott	Album
<b>Taramalin Sound Allen Lahey (07) 208 9736</b>			
Johnny Hucker	Johnny	Allan Lahey	Album
Mark Tempary	Mark	Allan Lahey	Album
Verdigris	Band	Allan Lahey	Demo
Rick's Cafe	Allan	Allan Lahey	S/Trk for theatre
Double Barrel	Band	Allan	Album
Feebles Junky	Dave Atkins	Dave/Allan	Album
<b>Vandersound Studios Eric Vandersande (075) 468100</b>			
Lae Ford	Lee	Eric Vandersande	Demo
Joseph Schofield	Joseph	Eric Vandersande	Demo
Angie Fitzgibbins	Angie	Eric Vandersande	Demo
Julian Brown	Julian	Eric Vandersande	Demo
Woodhill	Ken Bird	Eric Vandersande	Demo
Grain	Ken Bird	Eric Vandersande	Demo
<b>South Australia</b>			
<b>Bayfield Sound Studio Andrew Bayfield (08) 223 7211</b>			
Dyasingh	Nigel/Band	Nigel Sweeting	CD
Paul Jewell	Paul	Nigel	CD
Rob Pippan	Rob/Andrew	Andrew Bayfield	Video S/Trk
Ganga Giri	Ganga/Nigel	Nigel	CD
<b>Disk-Edits Neville Clark (08) 340 1377 Digital Editing &amp; Mastering</b>			
Adel Chamber Singers	C.Crossin	N.Clark	Album
John Hayles	J.Hayles	Neville Clark	CD Master
Streamer	Band	Neville Clark	CD Master
The Miltons	Band	Neville Clark	CD Master EP
JBE	C.Davies	Neville Clark	CD Master
2CC Adel Girls Choir	T.Sexton	Neville Clark	Demo/Loc.Rec.
<b>John Reynolds Recording Studio Nick Love (08) 410 3C44 16/24 Track Digital &amp; 16 Trk 1" Analogue</b>			
Lachlan McLeod	Svencis/Mcleod	Alex Svencis	CD Album
Andrew Firth	Sikorski/Firth	Sikorski/Love	CD Album
Dead Ringer Band	Band/Sikorski	Sikorski/Love	CD Album
Polly-X	N.Love/G.Masen	Love/Masen/Sikorski	CD Album
Finn/Hoy Hoy/S/Liners	F.Lang/N.Love Prod.	Sikorski/Love	CD Alb. Comp.
Chunky Custard	N.Love Prod.	E. Sikorski	Promo & Comm.
<b>Mixmaster Productions Mick Wordley (018) 822 986 24 Track Music Environment</b>			
Peter Coombe	P.Coombe	Mick	Album Tracking
Push Button Sun	Band/Steve	Steve Fieldhouse	Album
Nick Vall	N.Vall	Mick	Album
P.Signeri	Band	Steve	EP
Kinetic Playground	Band/Mick	Mick	Mix Album
Price of Silence	Band/Mick	Mick	Album
<b>Powerhouse Recorders Kim Horne (08) 364 5669 24 Trk. Analog, 8 Trk Digital, 8 Trk H/D</b>			
The Undecided	Band/P.Kolomitsev	Peter Kolomitsev	Tracking Album CD
Aliens from Planet Wcrshp	T.Elliott/Ad.Yth.Alive	Tony Elliot	Album CD
<b>Victoria</b>			
<b>Allan Eaton Studio Robin Gray</b>		(03) 953 40752 48 Tracks	
'Shine'	David Hirschfelder	Robin Gray	Film Score
Sun Valley		Robin Gray	Film Score (China)
A.F.I. Awards	Paul Grobowsky	Robin Gray	TV Themes
<b>Belair Sound (03) 9563 7887 Danny Olesh 32 Tk., 24 Trk anal., 8 Trk.Digital</b>			
Violet Hour	Simon Segal	Simon Segal	Album
Jonestown	Simon Segal	S.Segal/R.Smith	Live EP Remix.
Kavoos	Kavoos	Daniel Olesh	Album
Mark Crocker	Mark Crocker	R. Smith	Album
<b>C'est Ca Audio-Visual Services Moira McCourt (03) 419 1506 Auto 24 Trk.</b>			
The Walking Wounded	Tim O'Connor	Siiri Metsar	Single
Penelope Swales	Penelope	Siiri Metsar	Songbook
Jane McCracken	Girl Zone	Siiri Metsar	CD EP
Cloe Hall	Girl Zone	Siiri Metsar	CD Comp
Gillian Bartlett	Girl Zone	Siiri Metsar	CD Comp
Ma Ma Hoffo	Girl Zone	Siiri Metsar	CD Comp
<b>Fortissimo Andy Parsons (03) 9699 5811 24 Track Analogu 2"</b>			
Blackeyed Susans	Andy Parsons	Adam Quaife	Live Recording
Greg Champion	Greg	Melita Jagic	Mixes
Ulie	Ulie	T.Courtney	EP Tracks
Rochelle	B.Northey	Andy Parsons	Demos
<b>Gotham Audio Tom Kehoe (03) 987 99400 SSL Console/Sony 48 Track Digital</b>			
Jane Rutter	Reggie P.Bowman	Michael Letho	Mix Album
Christine Anu	Tony Cohen	Tony Cohen	Mixing 'Live' Shows
Merril Bainbridge	Ross Fraser	Aaron Humphries	Mixing
Nikki Nichols	Doug Brady	Doug Brady	Album
Motional	Dean Jones	Aaron Humphries	Album Mix

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## BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
<b>Newmarket Studios</b>	Graeme Fraser (03) 9329 2877 2 x 24 Track		
The Preachers	Band/R.Dillon	Robert B.Dillon	Album
Chris Lewis	Chris Lewis	Chris Corr	Album
Jane Clifton	Jane Clifton	Graeme Fraser	Album Track
Brian Peterson	Peter Coughlan	Graeme Fraser	Album
Alex Burns	Alex	Robert Dillon	Demos
<b>RB -X (Australia)</b> (03) 94296199	Bevan Quelhurst 24/48 Trk	Rec. SSL Cons.	
Genius	Matt Thomas	Matt Thomas	5 Track EP
Greg Champion	Greg Champion	Melita Jagic	Cricket Songs
Club Vegas	Casino Promos.	Mark McDougall	Stage Show S/Trks
Ruyton Girls Grammar		Martin Pullen	School Album
Ginkgo Biloba	Mark Schneider	Stewart Day	EP
Steve Cromb	Steve Cromb	Mark McDougall	Mixing
<b>St. Andrews Studio</b>	Mark McCormack (03) 583 2341 24 Track & 16 Trk Studio		
Mortification	Steve Rowe	Mark McCormack	Album
Monarch	Band	Mark McCormack	Single
Arcane	Band	Mark McCormack	EP
<b>Studio 52</b>	Paul Higgins (03) 417 7707, 32 Tracks Studio A/ Studio B ADAT 8 Track		
Camomille	Trevor Carter	Trevor Carter	Album Tracks
Stonefish	Band	Trevor Carter	EP
Remedy Stone	Trevor Carter	Trevor Carter	Demos
Soul Promise	Helen Hopping	Trevor Carter	Demos
Pepperland	Rowan Jarl	Rowan Jarl	EP
Amon Rah	Band	Rowan Jarl	Demos
<b>True Form Music Services</b>	Neil Gray (03) 9391 0907 12 Track Analog, 8 Trk. Digital		
Bacterium	Band	Neil Gray	EP
Violette	Sean Miljoen	Neil Gray	Demo
Danny Lah	Neil Gray	Neil Gray	Demo
Politenessman	Glenn Lewis	Neil Gray	Pre Prod. EP
<b>Wombat Road Studio</b> (051) 454204	Barry Clissold 24 Trk. Plus full Midi Facilities		
Lee Forster	L. Forster	Barrie Clissold	Demo Trks.
Salvation Army	P.Roberts	Barrie Clissold	Comp.Album
New Generation	D.Lee/Band	Barrie Clissold	Live Demo
A Tractor Prodn.	B. Baker	Baker/Clissold	Jingle Tracking
Jam Inc.	Clissold/Band	Barrie Clissold	Demo Tape Trks
Lindsay Hammond	Hammond/Dick	Barrie Clissold	Pre Prodn.Mix
<b>Northern Territory</b>			
<b>CAAMA Music</b>	Stan Satour (089) 529202 24 Track - 40 Input Auto Desk (Langley)		
Warumpi	Mark Ovenden	David Lumsdaine	Full Album
Raven	David Bridie	Stan Satour	Single
<b>Kakadu Studios</b>	Ken Hutton 089 411344 24 Track, Mobile, Digital Mastering		
David Blanassi	Ken Hutton	Ken Hutton	Trad.Abor Songs
Ershula Yovitch	Ken Hutton	Ken Hutton	Youth Album

## BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
St.Johns College	Ken Hutton	Ken Hutton	N T.School Bands
Mimi Band	Ken Hutton	Ken Hutton	Album
Sunrise/Littlestick	A.Murphy	G.Courtney	Comp.Album
Milingimbi Festival	A. Murphy	G. Courtney	Comp. Album
<b>Western Australia</b>			
<b>Bonsai Recording Studio</b>	Tom Thorpe (09) 349 6029 24 Track		
Todd Roberts	Tom Thorpe		Mix Down
Syntony	Tom Thorpe	Tom Thorpe	CD
Kay/Redhan	Tom Thorpe	Tom Thorpe	Jingles
Studio Trax	Tom Thorpe	Tom Thorpe	Demos
Project X	Tom Thorpe	Tom Thorpe	CD
Glen Carelli	Tom Thorpe	Tom Thorpe	Corp.Motiv.Tape
<b>Dimension 3 Records</b>	David 3D Ward (09) 325 8707 Dance	Music Studio, S3200, CD3000, CBX5 etc	
Wizard 'N' Oz	David 3D Ward	Dean Pearson	The Power
Power Lines	David/J.Strickland	Dean Pearson	Tempest (New Rel)
<b>Planet Sound Studios</b>	Contact John Villani & Denise Preston (09) 382 2211 48 & 32 Trk. Digital/24 Trk.		
Gary Edmonds	Nunzio Mondia	John Villani	Single
Flanders	Band	Williams/Villani	EP
Wayne Simmons	Wayne/John V	John Villani	Album Mix
Sh-Boom Singapore Airlines	Spencer/Taylor	Les Williams	Jingle 50yrs.Celeb.
Sh-Boom	Spencer/Taylor	Les Williams	Jingle Mix
<b>Poons Head</b>	Rob Grant (09) 339 4791		
Sagg	Rob Grant/Band	Rob Grant	EP
Spank	Rob Grant/Band	Rob Grant	Album
Love Bites	Rob Grant/Band	Rob Grant	Demos
Atomic Marshmallows	Rob Grant/Band	Rob Grant	Album
Beaverloop	Rob Grant/Band	Rob Grant	Album
Six Mile High	Chris Dickie	Chris Dickie	EP
<b>Troppo Sound</b>	Mick Connolly 091. 922 394. 24 Trk. Dolby S	Dat Master	
Thunder Mutts	Band	James Edwards	Debut Album
Pigram Bros	Band	Brett Lyons	Album
<b>Witzend Recording Studio</b>	Alan Dawson (09) 331 1818 16 Track		
Freud's Pillow	Band/Alan Dawson	Alan Dawson	Album
Mad Tenants	Band	Alan Dawson	Demo
Stephen Charles	Stephen/Alan	Alan Dawson	Mastering
Two Minute Noodles	Alan Dawson/Band	Alan Dawson	Mastering
Andrew Robins	Andrew	Alan Dawson	Demo

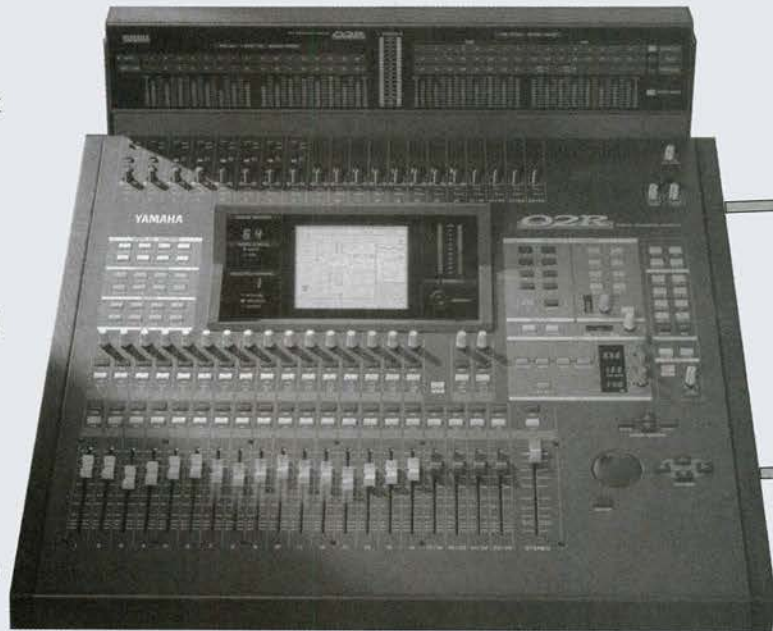
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# Digital audio from here....

**Yamaha's new 02R digital mixer** continues what the Pro Mix 01 started. Fully automated everything, motorized faders, tonnes of onboard features, totally low price! Suits project studios, post, AV – makes any mixing job, fast & simple!

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- ✓ 16 outputs ✓ 8 Auxiliary sends
- ✓ 4 band parametric EQ on each channel on each snapshot!
- ✓ DIRECT digital output to DA-88, ADAT, AES/EBU and Yamaha via optional cards
- ✓ Full processing on every input
- ✓ SMPTE
- ✓ MIDI
- ✓ 20-bit AD-DA .... and 1000 things more. (And easy to use!)

02R shown with optional meterbridge and wooden sides



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See our Internet site: <http://www.amfd.com.au/soscomms.htm>

## DIS IS NOT DE SAME AS DAT

ON THE WORKBENCH  
with Howard Jones

Ask yourself this question: why is one DAT recorder worth \$1500 whilst another is worth \$15000? No really - take a moment and think the issue through. Which components could possibly be so expensive as to make one machine worth 10 times as much as another? Is it the converters? Maybe the cheap DAT has poor quality converters?

Perhaps it's all the built-in capabilities of the high-end unit - the ability to record timecode, monitor off-tape etc. Or could it be the DAT mechanism itself - maybe the expensive machine somehow has a better engine under the hood?

Well, the truth involves all of these areas plus others besides.

The point I want to make is that-  
(a) there is a difference and:-  
(b) there is a reason for the dif-

ference.

This line of thought was brought up for me by a comment made recently by a client. Here on the workbench we're playing with DATs every day, so we know that some DATs are more equal than others. It's silly, I realise, but I sometimes forget that customers don't have the same intimate knowledge of their machinery as we do.

The comment made by this particular client made me see that, to him, all DATs were basically alike. After all, they are, aren't they?

You stuff a little tape in here, record gorgeous noise-free 16 bit audio on it, spit the tape out and - hey presto! - your next record is waiting to be pressed. Why on earth would you pay extra money when anyone knows that you can pick up a DAT for cheap?

A timecode, monitor off-tape etc? Well, of course, there's a lot more to it than that.

In the first place, you have to assess your requirements - this applies to any piece of equipment you're thinking of buying - and see if you can afford the right gear for the job. If you can't, that's cool - just acknowledge the fact to yourself and make your mind up to upgrade when you can. But don't kid yourself you're driving a Ferrari when everyone can see that it's a Holden.

Ultimately, however, the best satisfaction comes from correctly assessing your needs and then acquiring the right gear to meet those needs. A well-targeted purchase is a winner every time.

The year end is nigh - thanks for reading the column during 95. I hope it's been of some use, and may all your equipment stay healthy for the holidays!

• *Howard runs Studio Solutions, a Sydney based repair, supply and consult outfit. Call 02 9906-4363.*

## USING IT

**Sequencing, Hard Disk Recording, 8 track ADAT's and a Mac. Sounds familiar... interested? Then this is for You.**

**By John Zulaikha**

Sorting out practical recording solutions must be lead by those that have been beyond and returned to tell the tale. Michael Allen is aflame about the ongoing war between tape vs. hard disk, and drops some gems to assert that *both is better*. He explains how to get more than just the sum of two.

The core of Michaels system includes a **7100 Power Mac** with an **Audiomedia II** card running **Logic Audio** with **2 ADATS** into an analogue **X2** mixer. The attraction: to achieve more useful creative power for less money outlay is the real bonus of this approach.

Michael records straight to tape

*(continued over)*

# ....to here!



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# RECORDERS - THE FEATURE

## USE IT

(continued from prev. page)

even though he also has a hard disk facility. This carries real cost, time and labour saving bonuses - like not having to spend the time and effort to back up a mega hard disk. Tape is still the cheapest storage medium by far - having it on tape also means you can take it to the best studio you can afford to mix. Also, he says 2 ADATS are cool, because you can digitally clone your masters for safety.

Michael is also in the habit of striping his MIDI sequences to tape, for the convenience of not having to wake up his Mac or MIDI gear just to do some recording - which gets him out of that non-linear MIDI/disc mentality.

The stereo mix is used for monitoring purposes and vocals, guitars sax whatever, are recorded straight to tape against that guide.

Need more than 4 non-linear tracks to do random access work? An Audiomeia II card gives Michael 4 tracks of high quality

hard disk recording and playback, but he is not limited by that. If he wants to add more disc tracks he can, even though he only has a 4 track digital card, because he has a Power Mac.

Logic Audio supports Apple Sound Manager, and Power Macs with stereo 16 bit in/out can process more tracks without any additional hardware - except for a hard disk of course - but there is a drawback.

Audio access to the Mac are via stereo mini-jacks in/out, and even though they are full 16 bit machines, the A to D converters are not great, compromising on signal to noise and frequency response. Inputting and exporting via a high quality digital card solves this.

You can pump as many non-linear tracks as your Mac can take (up to 16 or even 24 with some configurations) monitoring through the Macs stereo outs, eat up all your hard disk space, do the backup download ritual and then

find a Pro Tools III TDM system with separate outs to get to your premium quality, maximum flexibility. Then, back to the real world spending money at your favourite mixing studio.

For example, Michael might grab a whole lot of backing vocals off his ADATS and pull them all up in the computer - via the digital card - and within Logic, do random access work. Note the Audiomeia II card can only transfer 2 tracks at a time, but 8 track transfers can be achieved with other digital interfaces

"If you've got both, (tape and hard disk) then you have freedom. For example, let's record 2 whole tracks of sax material against a stereo guide or loop - just like a groove and a bass line and stuff - the sax player can play little bits and phrases against that groove to hard disc - which I can cut, paste, reshape and print to tape - or go straight to tape.æ

æBy doing both and having choice, I now have a whole lot of

source material - I can pull stuff of the tape put it on the computer, re-tune the sax parts, whatever, and dump it all back to tape."

Today the costs of Michael's set up would be approximately - \$15k for 2 new ADATS - \$5-8k for a Power Mac plus extra hard disc \$2k - Software \$1.5k - Digital Card \$2k and an analogue Mixer, well, you've probably got one. \$25k approx. all up sounds pretty neat.

Considering this package could just about fit in a rack and put in the hands of a suitable madman, who could question the recording production facilities power, flexibility and quality?

Now this set up is within reach, so the opportunity to create has never been better. You're all excused for not knowing how to do it, but now you do.

• Michael Allen is a Product Specialist and Clinician for Electric Factory, who sell some of these products. He can be contacted at E.F. or preferably via E-mail: [mallen@geco.com.au](mailto:mallen@geco.com.au).

# MIX ME A DOUBLE

## DMS 22 Dual Mic Preamp



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

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

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

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

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

For pristine stereo recordings direct-to-tape or hard disk, make it a double: the DMS 22.

# DMS 22

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## RECORDERS— THE 1996 OVERVIEW

Trade Report by Howard Jones

The old year is rapidly drawing to a close, with the new year now frighteningly close. Our minds turn to long hot days in the sun; Test cricket and holidays. You may be pondering the purchase of a new toy for the home studio or simply wondering about all the different kinds of equipment which now call themselves recorders. A perfect time to settle down over a few cold drinks, get out your bumper edition of Connections magazine and enjoy our survey of recorders!

We can look back over the course of the year and see that many new products have come along which substantially extend the concept of what makes a recorder a recorder. The widespread application of digital techniques has seen the introduction of recorders as varied as the MiniDisc at one end of the scale to multi-track PC based recorder/editors at the other. Meanwhile, old formats have been revisited with even the humble old cassette gaining some new legs. Let's see what's been happening here....

As ever, it's best to break a big topic like this into logical groupings so I've chosen to separate recorders into stereo from those that are not - this has the effect of neatly corralling off CD recorders, MiniDiscs, DATs, cassettes etc. from the rest. Since the requirements and applications of

the former are distinctly different to the latter, this seems fair enough.

Stereo recorders are almost universally used for the mastering of a final mix. They are also the standard choice for film recordists and those who need to capture sound effects, location sounds etc. The predominant format for all these applications for the last several years has undoubtedly been the DAT recorder. Starting life as a purely consumer format, DAT has sprouted capabilities far beyond those of mortal tape. The advantages are: 16 bit digital recording quality; cheap, easy-to-store tapes; worldwide compatibility. Disadvantages are: can be expensive to repair, slow to access tracks compared to disc-based systems; copy-prohibit still widely encountered. Portable DATs are limited by battery life but can be as superb as studio DATs. Studio DATs range from what is essentially a digital cassette recorder to units which record timecode and offer extensive DSP functions.

Recent newcomer is the MiniDisc. MD also encompasses both portable and studio models. It is based on a recordable disc format and uses data compression to allow a decent recording length. The advantages: near instantaneous access to any track; limited editing on some models; easy storage of discs; re-recording possible.

## Buyers Guide

Hard disk recorders, cards, software and systems requiring a HOST PC or Mac. Prices are retail inc tax at 15/11/95 (unless noted).

**ADB**  
Mainly Multitrack  
03.9558 1155

**MultiWav PRO AES/EBU & S/PDIF Digital Card**  
Direct Digital sampling and Transfers, Real time digital format conversion, software upgradeable, 1/4" Phone jacks for S/PDIF and coax. \$995

**DIGIDESIGN**  
Sound Devices  
02.283 2077

**Protool III**  
Macintosh based hard disc recorder with 16-48 tracks of record/playback. 8-64 channels of I/O & integrated digital mixing & TDM DSP effects. \$13,500

**Session 8 (Protools Project)** Macintosh based hard disc recorder with 8 tracks of record/playback & 8 channels of I/O. Upgradeable to Protools III. \$4995

**Session 8 (P.C.)** A P.C. version of Session 8 with ability to link ADATS for up to 16 channels of playback. \$4995

**Audiomedia II**  
Macintosh Nu-bus card with up to 4 channels of playback & digital I/O. \$2350

**DIGIGRAM**  
Amber Technology  
02.9975 1211

**XTrack System** P C  
Based multitrack digital

audio editor. Utilizes industry standard MPEG compression base system 2 in/2 out including PC & 15 hour track storage. \$11,500.

**FOSTEX**  
Syntec International  
02.417 4700

**DMT-8** The Fostex DMT-8 Track digital multitracker allows a true digital recording, direct to a hard disk - holding up to 12.5 minutes, over 8 tracks at an affordable price. \$4495.

**IQS**  
Mainly Multitrack  
03.9558 1155

**Software Audio Workshop (SAW)** 4 Simultaneous Stereo (8) playback tracks; Live automated non-destructive mixing Sample Rate conv. between 44.1 & 48kHz/ 22 & 44.1 kHz, SMPTE sync MIDI region & play sequence trigger capable, Reversing & Looping and more. Includes Utilities Rack 1. \$995.

**Software/Audio Workshop Plus** 16 Simultaneous Stereo/Mono playback tracks, Live automated non-destructive mixing and panning, Real-Time Effects, Sample Rate conv. between 44.1 and 48kHz/ 22 & 44.1 kHz, SMPTE sync MIDI region & play sequence trigger capable, Reversing & Looping and more. Supports up to 4

Sound Cards for Recording and Playback. \$1795

**LOGIC AUDIO**  
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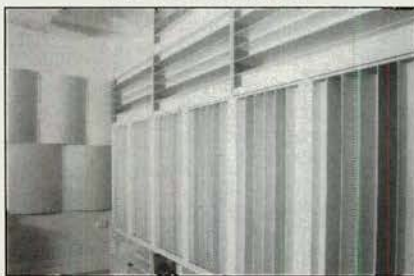
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# Buyers Guide

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**SOUNSCAPE ELITE** Electric Factory 041 931 6876

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**SPECTRAL** Australian Audio Supplies. 043 291711

**Spectral Audio Prisma** Allows up to 8 channels of simultaneous record and playback. Extensive editing features, extremely fast and intuitive to easy PC platform. \$6995.

**Prisma Music** The

new software interface designed for Audio Prisma. All controls on screen. No drop down menus makes for fast easy operation. Comes with Audio Prisma.

**The Translator** Allows direct digital between spectral workstations and ADAT & DA58. Also allows ADAT to talk directly to DA88 translator plus includes 4 AES/EBU outputs. \$1995.

**Audio Engine** Allows up to 16 ch of simultaneous record/playback. Has full on board DSP with dynamics control. Runs under Windows on PC. \$16,995.

**YAMAHA** Yamaha Music Aust. 03. 9699 2388

**CBX-D3** Simultaneous 2 channel record, 4 channel playback; intelligent processing; 48/44.1/32/22.05kHz sampling; digital out; built-in freq. converter. Compatible with Cubase Audio (PC) Logic Audio (Mac) \$1995

Multitrack tape recorders, analogue.

**FOSTEX** Syntex International (02) 4417-4700

**FOSTEX G24S/G16S** The Fostex G series multitrack recorders feature built in Dolby 'S' noise reduction along with a variety of auto location functions. The G Series can also be synchronized to VTR/MTR. GS165 \$20,999, GS246 \$27,899

**Fostex R8** The Fostex R8 is a 1/4" 8-Track multitrack recorder featuring Dolby 'C' Noise reduction and full Midi synchronization with optional MTC-1. The R-8 combines outstanding audio quality with easy to understand operation. \$5649.

Digital recorders and modular digital multitracks, integrated, NOT requiring host PC.

**Akai - Australis Music Group** (02) 698 4444

**DR4D** Four track digital recorder which allows zero degradation of sound, easy to use, editing functions. Options: Hard disk expansion, SCS1 interface, midi Interface, SYMPTE interface. \$3995

**DR8** High quality 16-bit linear 8-track simultaneous recording and playback. Sampling frequencies: 48kHz, 44.1kHz, 44.056kHz, 32 kHz, advanced 1 bit, 20 bit 8-times oversampling. Two digital audio outputs and inputs. Convenient Jog/shuttle Zero degradation of sound quality, easy to use editing functions copy, cut, insert, move, DAT compatible. 16 channel mixer function, 109 locale points. Options: Hard disk expansion, SCS1 interface, midi Interface. \$5995

**DR 16** 16-track hard disk recorder. 8-track simultaneous recording and 16 track simultaneous playback is possible. Sophisticated editing functions. An internal 16-channel digital mixer offering control over level, pan and two aux sends. All mixer settings can be memorised for instant recall. SCS1 port standard. Options: EQ16 digital EQ board allowing parametric EQ'ing of each channel, midi interface. \$8995

**ALESIS** Electric Factory 03 9480-5988

**ADAT** 8 Track on SVHS Tape >60 minutes record time. Single sample sync accuracy. 8 Channel optical digital interface. Over 70,000 sold worldwide. \$6999.

**ADAT xt** Next generation A/D & D/A converters. Super fast tape transport. 44.1kHz & 48kHz recording supported. 10 on-board locate points. Autopunch in/out with rehearse. Built-in track delay/move facilities.

**FOSTEX** Syntex International 02.417 4700

**Fostex D5 Digital Master Recorder** The Fostex D-5 satisfies the demands of the consumer and semi professional market. The D5 includes optical input and output I/D editing function, AES/EBU digital interface. The D-5 offers outstanding quality at a breakthrough price. \$3559

**Fostex D10 Digital Master Recorder** The D-10 is a professional DAT recorder providing advanced features for precise tape control, program location & audio production. Large Ram memory allows immediate start and high quality stereo scrubbing. \$6529

**Fostex D-25** The Fostex D-25 digital master recorder features synchronization 16M bit Ram RS422 and parallel interface. The D-25 has all necessary functions for any professional application. \$13,995

**Fostex D-30** The Fostex D-30 with chase sync function to master timecode built in two RS422 ports, wideband timecode reader/generator. The D-30 offers a variety of functions and features as the best production tool. \$18,995.

**HHB PORTADAT** Audio Sound Centre 02.990 14455

**PDR1000** Portable 4 Head DAT recorder, 48v mic powering, selectable frequencies, Ni-Hyd batteries, charger, power supply and carry case. \$9090

**PDR1000 T/C** Portable 4 head time code DAT recorder, AES/EBU and SPDIF, complete with accessories. \$13,200.

**OTARI Amber Technology** 02.9975 1211

**"RADAR"** Compact, hard disk multi-track recorder available in 8, 16,

or 24-track formats. All with full remote controller. Simple to use. (Just like a tape machine) but with full random access, editing etc. \$40,000 (24 track)

**PANASONIC Studio Supplies** 02.9957 5389

**SV3700** Panasonic DAT recorder. 2 Head Rack mount, Balanced analogue, AES/EBU - SPDIF, Error rate readout, Jog Wheel, High performance A-D converters. \$3395

**SV4100** Panasonic DAT recorder. 2 Head rack mount, balanced analogue, AES/EBU - SPDIF, Co Ax, error rate readout, RAM start, Assemble editing external sync, 20 bit equivalent DAC \$4895

**ROLAND** Roland Corporation Australia 02.982 8266

**DM800 Digital Audio Workstation** Eight channel, 300 virtual tracks, extremely portable with built in faders, digital EQ, RGB/S-Video/Composite Video screen output and comprehensive SMPTE facilities. \$7995

**SONY** Sony Australia Ltd. (02) 887 6666

**PCM-7030** Timecode DAT Recorder. 4 Head, 4 Motor Tape Transport. Timecode chase and RS-422 9 Pin remote operation. Instant memory start +/- 12% Varispeed and electronic editing capability. AES/EBU Digital I/O and Reference Video/Word Inputs. \$18,150.

**DTC-A8** DAT Recorder. Analog, SPDIF & Optical Inputs & Outputs, 48 kHz and 44.1kHz sample rates via analog & digital inputs. 32kHz long play mode, 4 motor transport, Super Bit Mapping, headphone output with volume control. \$2699.

**PCM2600** AES/EBU, SPDIF & Optical and Balanced Analog Inputs & Outputs, 48kHz & 44.1kHz

sampling on all inputs. 32kHz Long Play Mode, 4 Motor Transport, Super Bit Mapping, headphone output with volume control. \$3775

**PCM-800** 8 Channel Digital Audio Recorder. "DTRS" Format. 16 Recorder Multi Operation. AES/EBU Digital I/O. Balanced XLR Analog I/O. Auto Punch In/Out Recording. Adjustable Crossfade time. \$14,380

**TASCAM** TEAC Aust. Pty Ltd 03. 96442 442

**DA-20** Budget unbalanced rack mount DAT with S-DIF 2 I/O's remote included, song title capability. \$2174

**DA88** Highly regarded hi 8 format 3 Track digital recorders w/- 2 hr. recording, inbuilt (opt.) sync capability for Midi SIMTE time ref. up to 16 machines lockable (128 tracks) balanced and unbalanced connectors. \$11,500.

**DA-60** 4 Head synchronizable DAT recorder w/- time code and 9 pin controls, inbuilt RAM buffer for instant start & editing. Rack mount, AES/EBU I/O's, XLR balanced Analog I/O's. \$10,570

**DA-30MKII** 2 Head DAT w/- AES/EBU & SPDIF I/O's plus balanced and unbalanced connections. Rack mount and shuttle control. \$3636.

**STELLADAT** Audio Sound Centre (02) 990 14455

**Portable timecode DAT recorder** Rugged aluminium Swiss design, modular and upgradeable, fully optioned professional recorder. \$22,500.

**VESTAX** Moore Music 03.94190344

**HDR6** The best value, stand alone hard disk recorder in the world. Including 540 meg. hard disk, mixer, EQ with sweepable mids, FX sends and returns. \$3995.



<Tascam DA-88

# RECORDERS - THE FEATURE

## Overview. (continued)

far only found in studios and mastering houses. It looks, however, like the pundits were correct in that the price of these is slowly coming down and we may see them in wider use in the near future. Most of the latest models will also play a disc. The advantages: 16 bit digital recording; universal replay compatibility; blank media now becoming very cheap; cheaper to use than DAT for glass-mastering. Disadvantages are: expensive to buy; expensive to repair; uneven quality of some blank media has led to playback problems; no editing; no re-recording.

The cassette deck has not yet faded from view. Despite the advent of the high quality digital devices referred to above, the cassette still has something going for it. Most manufacturers are still making them and finding ways to improve the audio with techniques such as Dolby S. It is clear that pre-recorded (music, not spoken word) cassette tapes are on their last gasp, but cassette as a recording medium looks like going for years yet.

Also-rans in the stereo recorder category: DCC - virtually still-born from the factory. It's doubtful whether even Phillips believe in this format any more.

All manufacturers seem to have accepted that DAT has killed the analogue open-reel two track, but maybe someone, somewhere is still making one that I haven't heard about.

DASH format machines are the recorders of choice in the top end multitrack studios, but DASH two tracks never really happened. Again, with DAT now so entrenched, it's hard to imagine anyone spending the money on a DASH to track.

That's a whirlwind overview of stereo recorders. Let's take a look now at the multitrack recording scene. The kind of equipment on offer here is so varied and so powerful as to beggar belief. When you look at what was the accepted norm a few years ago as against what is now possible you realise that we truly live in interesting times. Hang on... isn't that an old Chinese curse?!

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Again, to make the analysis a little easier, let's introduce some categories into the discussion. This kind of division makes it easier to think about what your primary application is going to be, and whether a given category of recorder will best accomplish what you need to achieve.

The most obvious division is between tape-based and disc-based systems. I've used the word 'systems' here advisedly, because the disc-based recorders in particular should no longer be thought of as simply a replacement for a multitrack recorder. A great number of the available disc systems also offer you a mixer, an editor and a signal processor all in one package. As a result, they may cost more but they also offer you more. And don't forget that some things which are commonplace for a

disc-based recorder can't be done at all, or only with great difficulty, on a tape-based recorder.

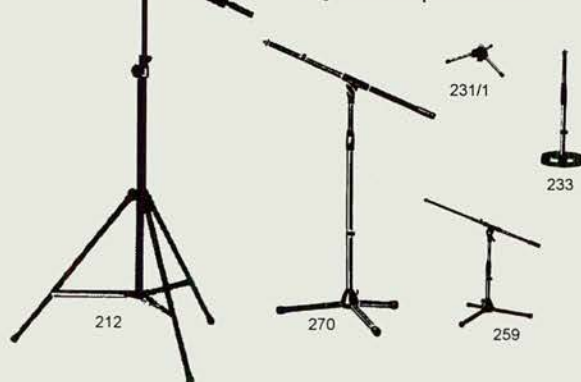
The tape-based systems can be classified into those using cassette tape, those using analogue tape and those using digital tape. The cassette multitrackers have been around for a long time now and are still supported as a format. Tascam, in particular, have continued to release new models and build on an established base of users. The advantages: relatively cheap to buy; cheap to maintain; cheap media; pretty portable; built-in mixing and EQ functions; easy to use. The disadvantages: quality limited by use of cassette tape as the format; runs the tape at double speed; reliant on dbx or Dolby to achieve acceptable noise figures; you pretty much have to mixdown on the same machine.

The cassette multitrackers are easy to operate and when used with cunning can produce very good results. They are relatively cheap to purchase and the ongoing costs are low.

Multitrack analogue recorders were originally defined by the 2" 24

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## Overview (continued)

track machines produced by various manufacturers, on which I suppose better than 90% of all albums in the last 25 years were recorded. Now these machines are virtually only available second-hand, Sony having discontinued their 2" machine and Studer and Otari probably contemplating the same course of action.

Recorders based on narrower tape formats heralded the start of the whole home/project studio scene but their future is also looking limited now that modular digital multitracks have come along.

The main player here is Fostex who still offer the G series 16 and 24 track recorders and the R8 8 track. The advantages: lots of tracks on one piece of tape; backwards compatibility with older recordings; analogue sound. The disadvantages: expensive to purchase, can be expensive to maintain; relatively high tape costs; slow to access tracks; analogue sound.

The ADAT ushered in the era of the modular digital multitrack and the MDM is now becoming an increasingly important recording tool. There are two camps: the VHS-based ADAT and the 8mm format DA-88. Each format was originated by a particular manufacturer but is now supported by others. ADAT is considered to be slower to spool than DA-88 and offers a shorter recording time, but generically all MDMs have pretty much the same pros and cons.

The advantages: cheap to purchase, easy-to-store tapes; digital quality recordings; easy to synchronise; relatively portable; some simple "editing" available. The disadvantages: can be expensive to repair - the mechanical deck has about the same life expectancy as a DAT, but you'll obviously go through an MDM a lot quicker than a DAT; failure can be instant and without warning; compatibility can be a problem depending on which format you've gone with. MDMs have caused something of a revolution; some people think that they are a transitional technology, but in the meantime there's a hell of a lot of recording being done on these devices.

The only multitrack digital recorders on offer for the pro market are the DASH format machines. Made by Sony and Studer these units offer exalted, high end performance. Sony is about to announce an extension to the format which will allow for recording at greater than 16 bits.

Advantages: industrial strength performance; digital quality; low tape cost; worldwide compatibility. Disadvantage: expensive.

And so we come to the disc-based systems. These range from very simple sound-capture cards to sophisticated recording and editing systems. Most require the use of either a Mac or PC to function as a host, but some come as a stand-alone system with their own hardware and controller.

Most of these recorders come with extensive Graphical User Interfaces which present a great deal of both display and control information. Those recorders designed around a GUI must then choose between using a mouse or a dedicated control surface with faders, jog wheels etc.

Some of these recorders seem to have started life as a storage device and have evolved towards musical applications, whilst others seem to have followed almost the reverse journey. The advantages: instantaneous track access; digital recording quality; associated DSP, editing and mixing functions; most systems offer a very large number of virtual tracks; repeated editing without degradation; non-destructive editing with many levels of undo; most systems are easily tied into sequencers and synchronisers; high speed dump to CD-R; usually easy to upgrade hardware and software.

The disadvantages: trade-off between the amount of audio able to be stored against cost of SCSI storage drives; difficulty/cost of backing-up audio; no standard for interchange of files; most systems have a limited number of physical tracks they can get on and off the drives at the same time - an audio bottleneck; some recorders cannot drop in on a partially recorded track; most systems are not well sorted with respect to aux sends; catastrophic failure more likely than with an analogue recorder; too many competing systems - some will probably disappear.

Disc-based recorders exist now in a very wide variety of abilities. Not all of them will have the particular advantages or disadvantages referred to above. You will notice that most of the disadvantages relate to the expense of technology and that, as the cost of hard drives in particular comes down, these systems will become more and more attractive. Read on - you're sure to find a recorder to suit your application!

## Recorders - Cassette based multitrack

### FOSTEX

Syntec International  
02.417 4700

**XR-3 Multitracker** The XR3 is the first Multitracker available with an inbuilt mic, added features include an easy to use "ping pong" record function and flexible input capacity. The XR-3 allows easy operation and quality recording. \$879

**Fostex SR-5 Multitracker** The Fostex XR-5 has numerous features such as 4 input including 2 mic and 2 band graphic equaliser on each channel and Dolby 'B' N/R making it a diverse and high quality four track recorder. \$1069

**Fostex XR-7 Multitracker** The Fostex XR7 multitracker is ground breaking in both price and performance, having 6 inputs including 2 mic, two speed variation & two band graphic equalizer per channel. The XR7 has essential functions with ease of use. \$1399

**Fostex 380S** The Fostex 380S having superb sound quality and ease of operation. This bringing a new definition to four track recording. \$2579

### TASCAM

TEAC Aust. Pty Ltd  
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**Porta 07 Mini-studio** - 4 Track cassette recorder w/-4, input mixer w/-high & low EQ, FX sends, trim, Tape Cue, DBX N.R., +/-12% pitch, sync out, remote. Punch in/out facility and Sub in Jacks for stereo midi inst.equipment feed. \$799.00

**424 MkII Portastudio** - Successor to 424 Portastudio, featuring 4 Track deck, 4 Mono & 2 Stereo in's, 4 XLR mic ins, 3 band MID sweepable EQ, 2 pot 2FX Snd., 2 Auto Locate, Auto punch in/out, Monitor out etc.\$1299.

**488 MkII 8 Track Portastudio** - w/- 12 input mixer, high speed recorder, DBX type 2 N.R. 2 x Phantom powered XLR mic ins, 3 band EQ, 2 indep. FX Sends, 3 auto locate points, Auto Punch in/out, Sync in/out, 2 Track in. \$3300

### YAMAHA

Yamaha Music Aust.  
03.9699 2388

**MT8X** 8 Track recorder/ 8 channel mixer, 2 aux sends/stereo returns; directs outs, 3-band EQ. Inserts on Ch 1 & 2, 2TR in, dbx NR, high speed pitch control, auto punch, 2 mems, 2 locate points. \$2995

**MT4X** 4 Track recorder, 4 channel mixer, 2 aux sends, stereo returns; 3 band EQ, 2 speed pitch control; dbx NR; direct outs autopunch, 2 mems, 2 locate points. \$1095.

**MT50** 4 Track recorder, 4 channel mixer, 1 x aux send, stereo return; dbx NR, 2-band EQ pitch control; high speed \$849.

## MINIDISK, CD-R

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**DN1100R new MiniDisc** Rack mount 2RU, full editing, 10 Hot Keys to access any programmed track instantly, 25 pin parallel port. \$4,050.

**DN045R** New unique MiniDisc Replicator, bypasses ATRAC compression, copies discs without loss, 74 minute disc copied in 20 minutes, optional computer control for track selected copies. \$6710.

**DN995R MiniDisc** As for DN990R, plus time/date stamping, separate sync I/O, enhanced editing, RS422 & RS232 control,

comes with ACD19 software. \$7440.

**OTARI Amber Technology**  
02.9975 1211

**MR-10** Broadcast quality MiniDisc record/play machine. Supplied complete with full remote controller. Features include extensive editing facilities, track naming etc. \$5460.

### KODAK

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**PCD-225 SCSI CD recorder.** Robust, commercial use CD recorder for continuous use applications (ie: with Kodak transporter). \$5,490.

### SONY

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(02) 887 6666

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02.417 4700

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**VOCAL P.A.** small enough to fit in your car; 500 watts, 8 channel; from \$50. Lights also available. Delivery and operation can be arranged. B.S. Sound Reinforcement (03) 9531 1403 or 015 328 049.

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**4 x Clay Paky Miniscan 150 HTI** \$6000. Skypak Lighting (07) 3852 2757

**8 x High End Colourpro** with Controller. \$4000. Skypak Lighting (07) 3852 2757

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It was the Lightshow.

I was saved. I dropped to the floor on me knees and grabbed the first person I saw, begging for forgiveness, and to be saved from the devil.

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## Broderick Smith's Summer Story

### Episode 1.

In which my manager and I travel the modern recording wasteland in search of the Holy Deal. We seek a small cottage in which to find refuge.

Why do you sign with an independent label over a big major? The answer is generally that the big ones don't want you.

The couple of majors that I and my good friend and manager Mick Ahearne approached had passed me over. We had been feeling a little bit concerned about them anyway in terms of their questionable artistic suggestions, lack of ability to offer stock for sale at venues and fondness for spending lots of money that the artist finds impossible to pay back. (We'd heard rumours of certain flaccid 80's English pop groups working off advances as sex slaves on Mediterranean yachts owned by unsavoury international rock moguls. Where are Racey and Flock of Seagulls now? I don't know. You tell me.)

Because of the unwillingness of shops to stock items unless they charted, and commercial radio not playing anything recorded after the Beatles breaking up, there didn't seem to be much point in signing with majors. They appeared to have about as much media clout in the nineties as the independents.

### Episode 2.

In which we find Newmarket records, do a deal and make a CD. Friends turn up. The album is launched.

So the search comes to Newmarket records. Newmarket are part of the Dex music group and situated about 20 minutes from where I live which is real handy.

Daniel Desiere and Greg Williams run the Dex music group which owns Newmarket. I've known Daniel for over 20 years. He's some kind of technical genius who started off as a boffin and has slowly, with the aid of Greg, built Dex into a major cassette duplication facility, a studio equipment design group, CD mastering suites, an international CD distributor, a recording company (Newmarket) and a very good studio. They own Neil Young's Harrison desk, the one "Harvest Moon" was recorded on.

These guys live such a frugal, isolated existence, they were dealing with

Neil Young by phone and didn't know who he was. Anyway, Neil's refitting 'cos some bard booked time while he was on the road but when they lobbed at his mountain hideaway studio, they turned out to be robbers. They gaffa taped the engineer and studio manager to the piano and stripped the studio. Naturally the desk was too big so they left it behind.

Newmarket's promotion consists of a retired Swiss frontier guard with three pigeons and a squad of Inca messengers who do everything on foot. The Incas set out with my posters last November for Sydney but got arrested near Goulburn for chewing coca leaves. Anyway, we worked out something and a promotions expert will come on board at the right time to help out. The album gets underway and runs smoothly, on budget. I take a break in the middle to allow another act to do some work. I come back in and finish off. Great players, great engineer, lots of preparation. (Check the CD for people's names).

The days of goofing off in the studio are

over. Do your homework, come in, do your basic tracks, go away, live with them, come back, do overdubs, go away, live with them, come back, mix. That's basically it. KEEP COSTS DOWN!

The Melbourne launch is held at The Clifton Hill Hotel and to my pleasant surprise we manage to get a great turnout including people from Mushroom, my previous label. A good friend of mine looked around the room and couldn't work out who had a slice of my hide because of the different companies represented. It's wonderful to be loved. Mick Ahearne, my manager, sees a golden road up ahead. A wizened old roadie on speed shambles up to me outside the pub and says "Beware of glassed publicans". I see darkness and strange dark birds circling above in the night sky. The record is launched. The campaign has started.

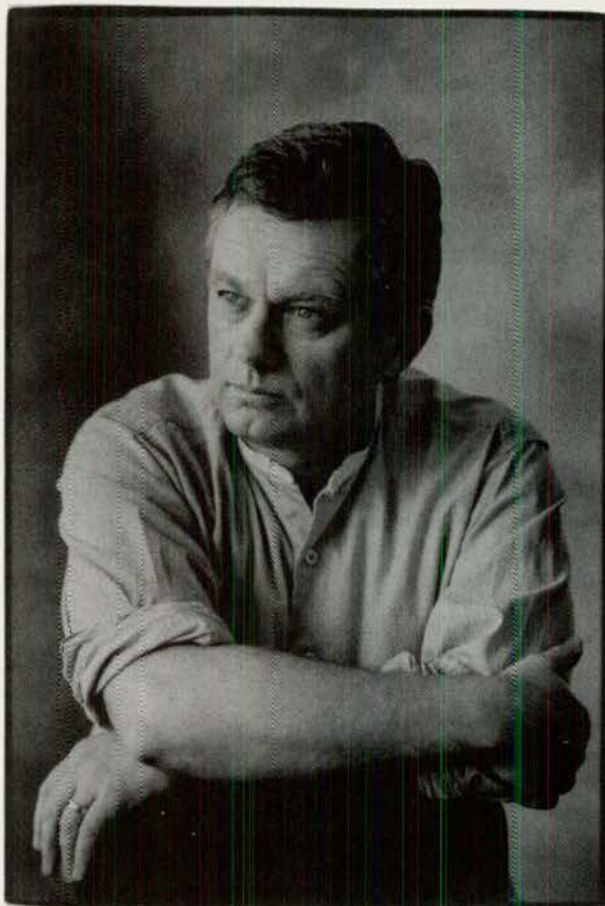
### Episode 3.

In which we find out the truth about touring in the nineties. We enter the Heart of Darkness in Whyalla.

We're off on tour into western Victoria and over the border into South Australia. We play the Harcourt winery to a reasonable crowd and sell a lot of CDs. This is a clue to selling at venues.

We run through towns like Castlemaine, Bendigo, Mt. Gambier (home of the great Blue Nile cafe owned by a former Egyptian tank commander named Hussein. Hussein once told me that if he had his 20 tanks over here he could take Mt. Gambier in fifteen minutes, an intriguing concept). A sense of impending doom falls upon me. The crowds coming to the pubs don't seem to want to buy CDs. They don't have the money and they don't carry Visa. At Bordertown we play to a crowd of none and, as we pack up, three young men joined at the head, come in and hassle us to play "Bad to the Bone". George Thorogood has got a lot to answer for.

We bypass Adelaide and head straight for Whyalla. Burnt out Volvos and shotgun blasted road signs point the way to a darkening horizon. As we enter the town a sign says "You are not welcome in Whyalla". We play one of the two main venues in Whyalla. Before we start you can sense trouble



in the air. The owner looks like he fights pitbulls as a hobby. Over 500 people stagger in from the demolition derby. We don't sell one CD. The men all chant "Chisuul, Oyuuls." The women rush the front of the stage and start screaming at the band. "Help, get us out of here, take us with you." As the roadies pack up they watch the owner and his bouncers performing primitive cosmetic surgery on a patron who seems to be quite philosophical about the whole thing.

We leave at early light and I write to the Chinese Government suggesting they make the pub ground zero. I eagerly await a reply. We get back to Melbourne.

#### Episode 4.

Album reviews start coming in. I do some press. We go to Tamworth. We see a faint light on the horizon.

We head up to Sydney where two great musicians await. We rehearse and start work. The Manly Boatshed, up the NSW north coast to Sawtell, Ballina, Port Macquarie, Kew and then into Tamworth. Crowds although small are ecstatic. Still no significant CD sales through pubs.

We come to Tamworth and the Longyard where we play all week. Tamworth takes a bit of getting used to. It's hot (we're from Melbourne) and seems to be made up of different factions, in the type of crowds, country music styles and opposing groups running the festival. I sense there is some sort of uneasy revolution going on and I try to confuse things by creating a rumour that a giant Japanese corporation wants to underwrite the entire festival with the proviso that 50% of the acts must be Japanese C&W artists and the Golden Guitar must be changed to the golden Koto. Some people actually believed me. I spot a Banana in cowboy gear greeting people off the buses. The ABC is here in a big way.

The main crowd of people don't seem to have me on their 'must see' list but as the week goes by word goes out through the media, fringe people and artists that we are worth checking out. At the Friday night show at the Longyard we turn a very big corner with a remarkable reaction from the audience present. We sell a lot of CDs and I am forever indebted to Ted and Nerys Egan and Eric Bogle. The clouds above my head momentarily disappear. We do the Saturday gig and I go to a "Post Tamworth award party" where I meet up with a lot of ex-rock people I haven't seen for years.

I meet a very charming young lady who offers to help promote the album and band. I thank June Smythe of the Longyard profusely for the week and wish her all the best. Although I sense we are a fringe act and more suited to Acoustic type festivals we will attempt to return to Tamworth. There is definitely a place for us here.

Down into the Basement in Sydney where

we draw a rapt but small crowd. Bruce the co-owner likes us and asks us back. We sell a few CDs and promise to return. One more gig at the Manly boatshed for Goff. The PR lady from Tamworth comes to the gig and is ready to help. We now have somebody on the ground in Sydney, we've sold CDs and most importantly we've made a lot of great friends.

Fact 1. The public don't generally buy CDs from pubs. They are not used to it and don't come financially prepared. They go to pubs for other reasons.

Fact 2. Wineries and festivals work and because of the current lack of media support they can actually stimulate store sales. Record store owners, take note of who is playing live near you. Check out how they went attendance/reaction wise. Order in some of their products.

Fact 3. There appears to be a generation change going on. Acts that could be relied on to fill rooms a little while ago now find it tough. There's a new generation out there of pub age who want a different kind of music. Their own. That's why young overseas acts who don't get commercial airplay fill out stadiums and top the charts. The local young acts need to be nurtured somehow. When that happens and they get national recognition, watch out.

Wineries, festivals, theatre restaurants and sit down gigs are the future for older acts. People who go to wineries are starting to want a variety of entertainment, not just jazz or sheep and damper cookouts. And they carry Visa.

Fact 4. Shops generally don't want to open accounts with a recording company for one act. It's not worth the hassle. Boutique folk, jazz shops are okay for Newmarket but the others are very tough. They keep Sony catalogues and the like but Newmarket catalogues probably get threaded with string and hung up in the dunny. If you own a store and do that with unwanted catalogues can you please make sure you don't wipe your arse with my face. Okay? That's all I ask.

God bless to you all. Wish me luck as I wish you luck. We all need it.

---

*Broderick Smith was a founder of The Dingoes in 1973. Since, he has worked the Australian music scene nonstop. He has a new ABC Music Release, 'Songster'. Catalogue 4798332-4.*

# Why I

If anyone had told me years ago, that at the end of 1995 I would be completing my third year in the world of publishing and trade shows, I would have laughed. I mean, what could a Year 10 only graduate, who enjoyed stage work, either in performance or technical capacity, have to offer the world of publishing?

The true answer of course, is NOTHING. At least not unless I was contributing to an industry I already understood and loved.

The Entertainment Industry for me has it's own persona and addiction. Addiction not so much to glamour and infamy but to the classic sense of humour, comradeship and that old sense that "the show must go on".

I hope for everyone in this industry that this 'Sixth Sense' still exists. Not just for the old school, of which I hate to admit I possibly am one (I just hate growing older), but for the new generations to whom the industry will eventually belong. What does 'the show must go on' mean? Well to me it is not restricted to live performance. Whether in TV, Music Recording, Theatre, Opera, Rock, AV, Film or Radio, it means artist, announcer, presenter, technician, driver, rigger and front of house staff, working together to produce the final magic, the ultimate magic of a successful performance.

I ask you, in what other business could you work to produce this seemingly perfect permanent setting, produced from blacks, styrene, lights, backing tapes, acoustic treatments, multiple samples/takes and props? And held together by huge quantities of visual/audible integrity and gaff tape only to produce the setting or environment for a performance, after which will be totally decapitated and moved to a new location, transmitted, released or stored for prosperity?

It is hard for those not working in the industry, "The Others", to understand the swell of adrenalin when a perfect performance has been achieved. Most of "The Others" think what we do is easy and fun. Yeah, we might party hard when the jobs done, but after the accumulation of stress that the time pressure of a performance, especially on tour or budgeted session, why shouldn't we relax? After all, "The Others" have been busy partying to the tunes and creativity of our performances.

"The Others" also think that our industry is incapable of responsibility. Irresponsible eh! If only they knew how we protected them. As well as Safety Board regulations, our industry has self-imposed regulations the bureaucracy has not yet even thought of yet. If only "The Others" knew the rigours we go through to

## Do What I Do

Caroline Grafton talks about the ethos of 'the industry'

protect them.

And we are not fiscal flakes either. Bank Managers and Lease Brokers really need to take a good hard look at our most progressive and ever expanding industry. Even my own parents and siblings could not admit that I worked in a serious business until I bought my first home. I was just fooling round having fun, even when I was off the road and running a major production, wholesale and manufacturing company.

I guess, my transition from live audio to publishing, does require an explanation. Now, as in Julius's story in this issue, he does relate to our escape from an incredibly traumatic time in the industry 'to our safe haven in the bush, our little piece of "Mosquito Coast", near Bathurst N.S.W.. Well, we built our new home with our bare hands (I personally am from a family of carpenters), on a property we had previously invested in. Then we did the fencing (without an EQ or Compressor) and over the next three years proceeded to plant some dozen trees a week. Yep! I turned GREEN.

During our occupancy, I turned some of the locals and the local council, many a strange colour. I prevented further deprivation of our previously Gold-rushed valley as well as inspiring fund raising activities for our local Walang Bushfire Brigade. I also developed my personal business skills through a contract with a local accounting firm, controlling a major Franchisee account.

So, I planted trees, fought the bureaucracy, waited for the next tour to perform their next 'sound-check' in our town and made jam. Yep! you read right, "I MADE JAM". Yes I, Caroline Grafton, did get a buzz the first time, but it truly is a terribly messy business.

So eventually of course I did get BORED and then we thought we'd pop down to Sydney for the last music show held at the Showground. Well, we chatted individually to all our ex-pats and colleagues, and decided (although I think it was a fate a'couple) that our return to Sydney was pre-decided.

Subsequently, I established a freelance ENTERTAINMENT INDUSTRY BUSINESS ADVISORY SERVICE and also became a major share holder in the production and wholesale company, 'LOTS OF WATTS'. When Julius asked me, a time later, "to join him in the revolution of Channels?", I really had few doubts. Channels, by this time, even in it's primitive form, was already an established force. The Australian industry had had no voice, for so long, it was like a revelation. My first thought, was that I would have to resign from Lots Of Watts

and my Business Service (due to conflict of interest). The second is that I would actually be working for someone else (JANDS, who owned Channels), something I had not done (in the true sense of the words) since I was twenty years old. A HARD CALL.

But never-the-less, JANDS were supportive in the (only) three "Channels" issues in which I participated. In the meantime, the re-formation and privatisation of Channels to Connections was under way. Whoops, a glitch.

We were offered a multiple year contract in the U.S. running a mag for another major industry identity. Uhm! big choice. Or no choice. When it boiled down to it, we really didn't want to bring our children up in the STATES. Myopic I may be, but Australian I definitely am. Since then I have been offered various career paths both in Oz and OS, but to date I really can't think of any place I'd rather be, but in this industry, here in Australia.

Ah!, what can I say to all the new comers to the Entertainment Industry?

Have faith in what you want to achieve. Work hard with an open mind to new technology and concepts. Steer clear of the few unscrupulous people within the industry endorsing drugs and unrealistic morals (no I am not a re-born Christian and NO - I don't want to be one, thankyou).

Avoid at all cost the overnight drive to the next gig, session or performance, too many talented people have died in the name of a promoters greed. Be prepared to put in eighteen hours a day, because until you crack the pro circuit, you will have to hold down a day job before you race off to the gig or session. And don't forget your partner or spouse. You will need, if they are not

part of the entertainment industry, to instil in he/she, that "Sixth Sense" so they can understand why it is you do what you do, when you do it.

Respect the entertainment industry and it/ (she, because if gender is applicable, this is the only acceptable application), will reward you with an endless source of lifestyle diversity. Not to mention employment, self worth and colleagues that will endure all the heartache and pleasure beside you, in the attitude of "The Show Must Go On".

By Caroline Grafton

• And a note to Catriona Forcer, whose story appears on the next page, this is NOT an autobiography.

Bloody hell, if it was an AB we'd need at least three hundred pages, just for the erotic scenes!

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# The Ramblings of an Uninspired Scribe

## Sensational, Sizzling, Sexy Summer Reading

by Cat Forcer

When Julius informed me that he wanted an extra 'holiday reading' page, I thought 'bugger'. He further told me that the topic could be about anything and did not have to be related to lighting or sound.

Now call me anal but I need to be disciplined. Just ask my husband ..... but that's another story (see the Forum section of July's Australian Penthouse). Tell me to write about feeding habits of the Striped Bottom Lesser Lemur of Madagascar and I could rattle off a few thousand words. Ask me to chronicle the thoughts of Plato during the year 345 BC and I could cope. If he required an essay on the hopelessness of finding a true Sensitive New Age Guy, it would be no problem.

But to let me do what I want. Arrrrrgh! The mind has gone blank. It must be my restrictive English background but I NEED DIRECTION. Writers Block, I think they call it. Some call it uneducated, ill-informed and consequently: a writer for Connections!

I've had many troubled and sleepless nights over this. Coupled with disturbing dreams (involving Duncan Fry, a fluorescent tube, a Billy Ray Cyrus record and a pot of vaseline) – and I am not a well woman.

I sneaked a look into Julius's computer to see what he had written - the marvels of technology are great for sticky beaks. It seems that Caroline and Julius, partners in crime, have written some sort of warped biographies. What the hell can I say about my life?

I could tell you about the time I travelled through France on the back of a Harley only to fall off as we reached our destination. Or the time I toured Europe with the group Erasure and an all male crew affectionately known as The Gin Monsters. Or the time I 'guested' as a crew member with Depeche Mode for several days in Europe and was told to do the lights for the support band ten minutes before they were due on stage. This was no faith

in my talents but rather a cruel joke played on the support band, still the 12,000 punters didn't seem to notice. What about the time I was flown to the USA to see U2 or to Milan to see Prince. Or the year I was eventually arrested on the serious charge of 'Name Dropping in Public'.

But those were the heady days of my youth when life was one long party and my only worry was clothes/guys/drink/guys/hairstyles/guys. Not that I was shallow. I just liked a good time.

Now I'm a mother, housewife and pseudo journalist with a few arty activities thrown in for extra credibility. So what shall I write about? What about a few vegetarian recipes? How to cure nappy rash, how to wean or how to get baby poo out of your favourite rug. God, I'm so interesting. I could spice things up by including a photo of my stretch marks or even giving a very detailed account of the birth. It wasn't easy delivering an 11 kilo baby (Julius, idiot Editor of Corrections magazine struck again, try *11lbs*. Balding fool).

I somehow don't think people would be interested in my life. It's not exactly *Days of Our Lives* material - oh shit, now you know what I really get up to during the day. I could lie. Just call me Walter 'Cat' Mitty (sounds like some kind of kitty litter that spreads over the whole floor, somehow appropriate).

I could glamorise working for Connections, difficult but with much imagination and maybe some mind-enhancing drugs it could be done. Julius could be the Big Media Boss who hires and fires at random, an Antipodean JR. Caroline could be his Foxy Lady (move over Amanda Woodward) who is an absolute party animal. Elaine has those sort of Miss Ellie qualities but I think I'll give her a dark secret - lots of illegitimate babies all over the country, something believable like that. Natalie could be Epping's answer to Kimberley Davies. Her tits aren't quite as big as Kimberleys but she has a great personality and would be an ideal mother to your children. Fax your details to the office as she's free most nights. Too far stretched, I hear you say and maybe you're right.

I've had a brainwave or rather, a ripple. OK more like a gentle lapping on the shores of my defunct imagination. I'll deploy my underestimated talents as a

graphic designer (No Job too Big or Small, Reasonable Rates, Arty Farty results guaranteed) to get out of this situation.

There are many tricks of the trade I could use. There are a few in graphic design too.

I could increase the size of the type to fill up some more space.

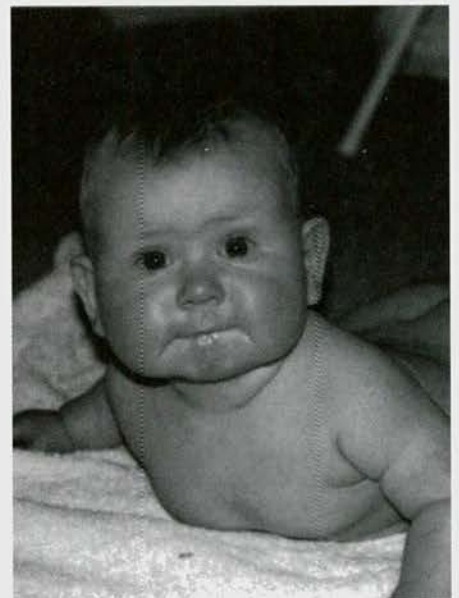
I could increase the leading between the lines like this:

Or I could get really fashionable (see Natalie) and do a bit of trendy lay out.

Posh magazines with little content do that, here at Connections we cram it in. But will Julius see through my dastardly deed. Nah, he can't see beyond his bad haircut.

I know! I'll fill a space with a picture of my gigantic love bundle - Angus. He's more interesting than a lighting console, more appealing than a sub woofer and definitely cuter than any roadie I've ever met.

There he is. What a charmer



*Me actually getting my hands dirty on tour. The truss later sued for substantial damages*

## Sell Everything, Move To The Bush.

*Then live happily ever after? Julius Grafton tried this,  
these words may help your yearnings.....*

**I** blame Harrison Ford of course. The Mosquito Coast inspired me to do as his character did, to pack up the family and debunk to raw and rough country for a new start. It was January 5, 1988 - the next day I loaded the tools and headed 3 hours west to our run-down, decrepit old gold miners cottage at Napoleons Reef.

Not withstanding the dry summer heat, that Sunday of rudimentary repairs, measurements and preparations for renovations left me elated. I drove back to the metropolis that night, exhausted but refreshed after a dunk in the creek, and poured out my frustrations and plans to my very like minded spouse.

We owned certain companies active in the audio trade in Sydney, and had recently sold a lighting company. The stock market crash had occurred just a few months earlier while I was in New York at the AES. It stuck firm in my mind as passengers on the plane home talked of a colleague who threw himself off the Rockefeller Centre that fated afternoon. Those last few months leading up to the bicentenary and Expo '88 in Brisbane were bizarre, business was hard and the banks were turning up the heat. After 16 straight years on the treadmill I didn't want to play anymore.

So through the hot but bearable summer of 1988 we toiled high on the western end of the great divide, rendering our little cottage livable. Friday nights were a rush home across the Harbour Bridge, packing and bustling the girls, aged 12 and 2, away. Away from the pretentious neighbours, the same streetscape, the familiar, and the drudgeon of city life. Late Friday night we would unpack into our quiet remote little shack at the end of the dirt road, filled with the roar of a million trees on the mountain above, pungent with wattle or gum, and lit with kero lamps and candles.

With the April frosts came the plan to sell up and go that Christmas, with Sarah due to

start high school the following year. By the October school holidays we were set, the house would sell at years end, the businesses would either be sold or wound down, and we were deep in planning a new house to be built down nearer the creek.

Nothing matches the feeling of a huge weight lifted, the severing of every link. The sense of escape, a new life. We moved into our cottage while we built our new house, established the few acres, and got into country mode.

1989 saw the recession run hard through our former industry, the bicentenary and expo were over, interest rates climbed through 18% and to be truthful I was so glad we were out of Sydney I didn't go back that year - except for one trip to tie up loose ends.

After the rush subsided reality set in, and one good frozen winter at 3,000' elevation focussed our minds on the next half of our lives.

We'd spent time in Europe and spent money on our property, and bought an investment house in the nearest town, Bathurst. But we needed to eat and run a car. Time to get work.

Ever really found out what you are worth? To do so, leave your chosen industry and plonk yourself out in the scrub without any other useful trade or qualification. I reasoned that I would be happy with a few hours work a day, so driving a school bus seemed ideal. The main bus company owner looked right through me and said no, another guy had two busses and offered to trial me for a week but it didn't work out once he discovered I didn't 'take' my beer at any of the pubs in town. In fact I didn't 'take' my beer anywhere, I usually drank it at dusk on the porch under the solitary sunset on the mountain, with the kangaroos nibbling nonchalantly- they were very considerate of

the garden and only ate the lawn!

Naturally Caroline got a job she wanted after three interviews all went positive at the same time - she tried the public service job at Wallerawang power station but settled for the accountancy practice in Bathurst. It did her a world of good working separate to me that year, we had, and have since, always been business partners. I was happy to stay home with Jess, at that time 3, and make with Playschool, washing and, um, folding. The high school girl would appear down the hill each day at 4.15pm, mysterious with new concepts, embarrassments and interpretations that only early teen years bring.

At dusk the dust trail would announce the imminent arrival of the worker, who would drag her briefcase in to the waiting Gin and diet- tonic on ice, then regale me as to the state of the house and the mental deficiencies of the accountancy practice partners. I already knew they were overfed and overfunded, insulated from real competition by the country crony effect. Boy, a country town can be isolated from reality.

So it was, that turn of the decade. The view of a country life from the outer, as an unemployed 'blow in', surely the lowest form of life in the bush.

I filled time at the bush fire brigade, built things, and sent our previous industry rag Sonics a few articles which they didn't even acknowledge receiving, let alone print. I wrote letters to the local paper about nothing, read a lot of books, and spent a lot of time making cardboard models with Jess.

We played in the creek, she rode on the back of my pushbike down to the crossing to get the paper from the mail lady each day, and we threw rocks into the waterfall. Each afternoon we had a nap.

## Projection for the Performing Arts Effects for the Theatre

Reviewed by D.C. Irving.

Two new and valuable technical books have recently been published, of interest to those concerned with stage productions mainly, though some aspects carry over to other performance venues or media.

The books are: **Projection for the Performing Arts** (Focal Press) and **Effects for the Theatre** (A & C Black).

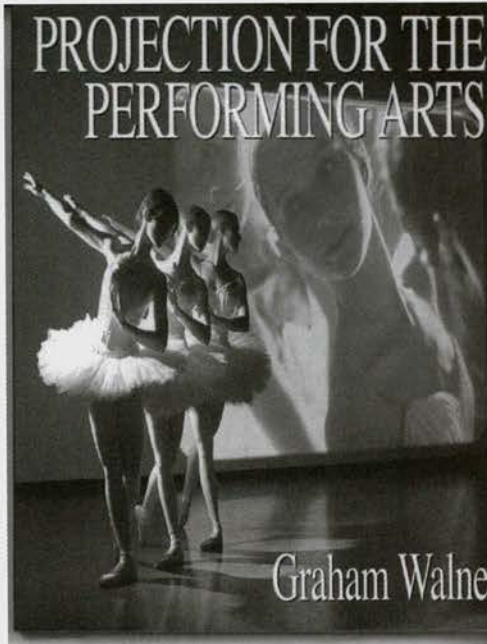
One man, Graham Walne, is author of the first book, and editor of the second. Graham is well known in Britain and America, having worked on both sides of the Atlantic as a lighting designer, followed nowadays by theatre consultancy and a close involvement with professional training of, and setting of standards for, theatre technicians of all disciplines, plus writing various articles in UK journals.

'Projection for the Performing Arts' is a comprehensive volume, with numerous black and white photographs and diagrams, and a full colour centre section of 20 plates. Properly, early methods, e.g. Linnebach lanterns and simple slides are discussed, with tributes to early workers in the field, without whom many currently available devices would not exist. Further chapters discuss light sources, lenses, screen materials, slide production and so on, leading up to excellent descriptions and illustrations of actual productions and the equipment used. The final sections cover film and video projection, although in these days of rapid product development no textbook can hope to be fully up-to-date on video projectors, especially the larger units required for stage work.

Finally, there is an excellent bibliography, glossary and listing of

technical data, making the book a valuable reference for busy lighting personnel, stage directors or their assistants.

This reviewer has one cavil however, in that there are, in Chapter 3, some references to projector output which tend to con-



fuse candela with lumens. Readers are advised to check these carefully with other texts, or their own technical knowledge.

The second book 'Effects for the Theatre' has four authors (buy the book to see who they are), each of whom are well experienced in their respective spheres, which are Scenic Effects; Sound Effects; Lighting Effects and Special Effects - the last being those which defy inclusion in any of the other three groups.

The editor's influence is clear, in that all four authors share an introductory history section before each embarks on a self contained part as listed above, the book concluding with a discussion of cueing methods and theatre safety. This last item is of increas-

ing concern in these litigious days - giving me a cue for re-iterating the need for a theatre (or performing arts industry) code of practice, which can be used as an acceptable yardstick for the construction, equipment and operation of any performing arts space.

But, back to the Effects book - the scenic section has a few surprises, and, no it does not give away any of the time honoured tricks used in 'Phantom' or 'Beauty and the Beast'.

Sound Effects are obviously a much larger topic, this section being a very comprehensive survey in relatively few pages, ranging from a broad outline of what and why, up to an overview of equipment up to MiniDisc, Midi and software such as MCP. Valuable inclusions are advice on script marking and plotting, hints on field recording and snapshots of screen displays for various cueing systems. For those who need an appreciation

of what is sensibly possible, rather than in-depth technical detail, this alone would justify the book.

As might be suspected, Lighting Effects includes some duplication of information from the Projection Book, but not much. Use of gauzes, the inevitable smoke, UV, and, quote intelligent ('wiggle') lights unquote, are all dealt with simply and effectively, with good illustrations.

The not elsewhere included section is mainly about fire or weather, and more on the still inevitable smoke or fog.

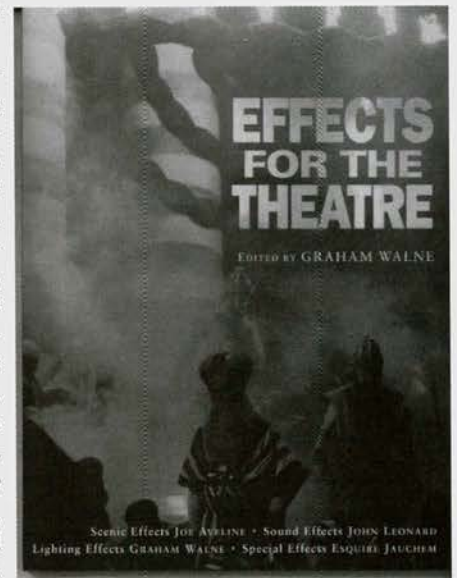
Useful, down to earth (no pun intended) advice is given here, from someone clearly well experienced in design and hands on operation of the methods described.

Both books are recommended to competent theatre technicians - but if they go to schools it is to be hoped that the staff read them first and supervise the results.

**Projection for the Performing Arts** (Focal Press) ISBN 0240 513908. 140 pages. Price: \$69.00. Available from your bookseller (order) or from Connections Bookshop, (in January) call 1-800-635-514.

**Effects for the Theatre** (A & C Black). ISBN: 0 7136 39857. Price \$32.00. 150 pages. Available from your bookseller (order) or from Connections Bookshop, (in January) call 1-800-635-514.

*DC Irving is an esteemed theatre consultant who lives outside Melbourne and just occasionally sends Connections some valuable things. He rejects the title: 'grandfather of the lighting industry' bestowed upon his self by others.*



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# THE PA PAGE

## The Importance of being NEAT

*The Terminator: 2.*

*Part Five in a series, by Michael Orland.*

*(Continued from Page 138)*

with my old faithful Peavey 16/6. The extra FOH channels that weren't required in the foldback were made available simply by mating the extra lines in the two cores. The down side with this system was all the extra plugging in and the lack of versatility. If the desk had ever played up, I could only have replaced it with a desk with similar dual inputs.

The second way to add a foldback multicore is by hardwiring the two multicores to the one stagebox. There is certainly no reason for not doing this with installed systems, but for portable use the system becomes too clumsy to handle and subsequently prone to twisting, fatiguing and breaking. Not recommended.

The third and probably most common way is by having parallel male and female connectors on your stagebox. This is probably the most versatile alternative but gives you a stagebox twice as big for musos to trip over on pokey little stages and still involves extra plugging time.

These days I opt for option 4. Multipin connectors help make things quick and easy and can usually be fitted to existing systems without too much fuss. There are lots of different types available but my favourite for a 24 channel system is the Burndy 48 type.

These are the connectors you used to see on Jands lighting desks back in the analogue era. You may even choose to recycle the connector off your ESP if you're dead sure you'll never use it again.

Burndy connectors can alternatively be gotten direct from the Burndy people or through RS Components.

Be warned though, that if you ask the RS people for a Burndy type connector, they'll probably look at you like you came from Mars. Their catalogue references are 474-524, 474-906, 466-810 (2),

and 466-848 (2). You will also need a pin extractor if you make a mistake during assembly. Cat. no. 466-876.

The chassis mount connector fits neatly on the side of any of the Jands type stageboxes with a little drilling and filing. For a 24 channel mic stagebox, wire the 48 socket inserts to some lengths of ribbon cable (Dick's, Jaycar, etc). Shielded cable within the stagebox isn't really necessary as long as the overall metal work is earthed. The inserts can simply be crimped onto the cable but I prefer to solder them on. Looking carefully at the shell under a good light, you'll see the holes are identified with letters. Insert the pins into the shell in some sort of sensible order, say A - 1+, B - 1-, C - 2+, D - 2-, etc.

Actually, you'll probably find it easier to start at the centre of the shell with 24- and work your way backwards through the channel order to the outer holes. If this is a little confusing to follow, I'm sure all will become clear once you're actually handling the things. What we're doing here is using a 48 pin connector to wire 24 channels worth of pin twos and 24 channels worth of pin threes. I have never wired any pin ones to my foldback cores and never missed them. The foldback core is earthed via the foldback desk.

*<Editors note: this will doubtless cause a flurry of letters pro and against monitor technical earths. In my case I had each earth wired through my foldback split and carefully physically isolated, so a problem channel could have an earth lifted in isolation. Other approaches entail (no pun intended) ONE technical earth which may be lifted via a switch on the stagebox. Maybe Michael has the best approach after all?>*

Additional earthing at the

stagebox is usually redundant and can cause loops and hums in many situations. Once your socket inserts are wired and inserted, mount the connector. Don't rivet the thing on. If you need to remove it for any reason, then drilling the rivets will make a mess of the plastic shell. Use little nuts and bolts. Next trim the ribbon in pairs to appropriate lengths and connect to the XLRs as per fig 1.

Earth the box by simply making a connection between pin 1 on channel 1's XLR and its earth lug if it's got one. Or better still, run it to a separate bolted earthing washer.

Attaching the mating connector to your foldback core is next. Snip back the outer insulation about four inches or so. Strip and remove all braid, foil and drain wires leaving 24 positive wires and 24 negative wires, twisting these pairs together as you go as per fig

2. Strip and tin the tips and attach the 48 insert pins. Insert these into the cable type shell matching the order established on the stagebox connector (remembering to first slip the hood and ring fastener onto the cable). When that's done, force the outer insulation back down onto all but about an inch of exposed wires. Push the ring into place and screw the hood on. NEVER do this by trying to grab the inner shell with pliers, vicegrips or even the new **Binford hydraulic turbo vice** with over 20 kilotonnes of bonecrushing power (Orgh, orgh). I've seen lots of these connectors ruined by such antics.

The only correct way to tighten the hood on ANY multipin connector is by first mating it with the chassis mounted connector.

If you have any problems, give me a call. In the meantime, have a great Christmas and here's to a prosperous 1996 !!!

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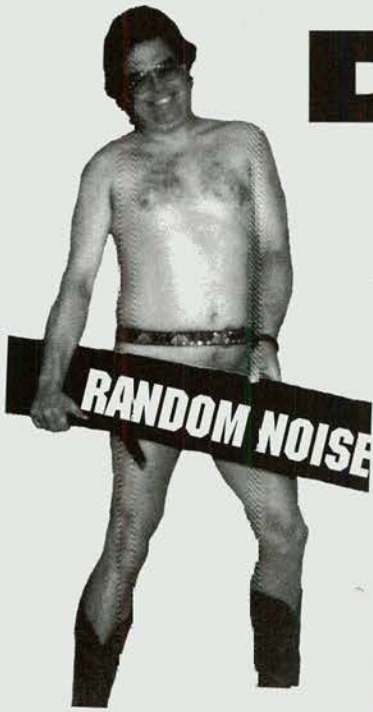
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# Duncan Fry

## CHRISTMAS PARTY TIME AT THE PIER

*More tales of beer and bladder control*



One of the promoters at the Pier Hotel, let's call him Mr X, (although his real name was Bill!) thought it would be a good, profitable idea in the month leading up to Christmas to run some 'Party Nights at the Pier.' And they certainly turned out to be popular, with something for everybody.

His recipe for a successful party night went like this:

All the beer you could drink (from a one armed barman!); a band (usually one that he managed, so he didn't have to pay too much and even took a commission on it!); a male and a female stripper; and a gay DJ! Covered all the bases, really.

And all this for a very reasonable all inclusive price per head. Certainly good value, even by Frankston standards.

The male strippers were very popular, and really got into it, shaking their pouches around with all the nicely pickled girls (and I dare say even a couple of guys) lunging and groping at them.

However the first female strip-

per was a bit of a disappointment. A little overawed by the sight of a couple of hundred Frankston boys yelling "Show us your tits!" (obviously the Mensa club on a night out!), she dashed onto the stage, tore her clothes off in about 10 seconds flat, and ran offstage.

Word of the crowd's roar of disapproval must have got back to Bill, because the stripper he hired the following week was stunningly good looking, and took about half an hour to ease herself out of her clothes. She didn't mind the rowdy crowd at all. In fact, she rather seemed to enjoy it, since she jumped off the stage *totally naked* and squeezed and slithered her way through them for five or ten minutes, much to the crowd's enjoyment!

Unfortunately my trusty assistant Jim missed all this, having chose that particular time to go out and get us some hamburgers. When he came back and found out what he had missed, he was in a foul mood all night! And when I told him I'd organised him a date with the gay DJ as a consolation

prize he got even shittier!

I'm not sure which band we worked with on these party nights, but either way it didn't matter; the free beer was the thing the crowd really came along for. Despite there being only one barman on duty, the crowd managed

As I stood at the urinal relieving myself I glanced at the guy next to me. He was nicely plastered, and was busy pissing in a beer jug!

"Shit, that's a bit rough, mate," I said.

"Yeah, it's great fun, eh," he replied. "I've already done it once before! Filled up all me mates' glasses - Ha, ha, they never even noticed!"

And he lurched off back into the gig, waving his brimming jug.

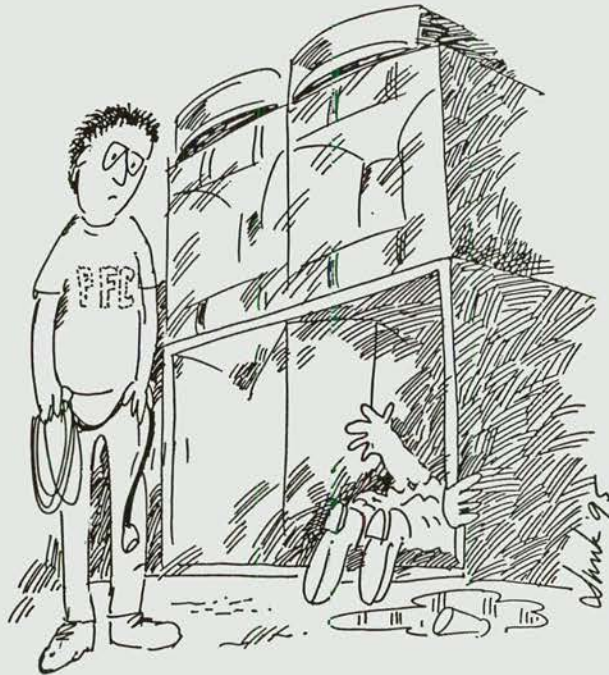
At the end of the night, when the final drunk had been herded out of the place, the floor was awash with beer and spew. As I sloshed my way across the room to shut off the amps, I noticed that someone had left some clothes and a pair of shoes in front of the PA. I waded closer.

Sure enough, it was my mate from the dunny. Sound asleep with his head and

shoulders jammed into the W bin.

I was never able to find out whether he had done it himself, or whether his mates had discovered that the Christmas cheer he was so generously dispensing had been filtered through his kidneys first!

Somehow I suspect it was the latter.



to arm itself with enough jugs to sink the Titanic, and what they couldn't swill they all enjoyed pouring over each others heads.

At least I think it was beer. During a band break I nicked off to the dunnies for a quick leak. I couldn't afford to be away too long in case I came back and the mixing desk was floating in beer!

## 'The Best Of Duncan Fry' - out NOW!

Perfect for XMas! This is what the critics say about "The Best Of Duncan Fry":

'Does ne really think that people are going to pay good money to read this garbage? Damn right they will'

'Revolting, but strangely hypnotic'

'Totally tasteless - I loved every wrd of it'

\$15 & post from Connections Shop,

To Order: use mail order form in middle of magazine, or call 1-800-635-514.

Hotels, clubs and pubs all have a curious aura when visited in the middle of the day, it's the calm before the storm; before serious clubbers eject daytime pokie pushing scaks (and slow moving band types).

The Newmarket Hotel is different; very slick, neat and the home of well known Adelaide club, Heaven. It's just had a refurbishment so Connections payed a visit to check it out;

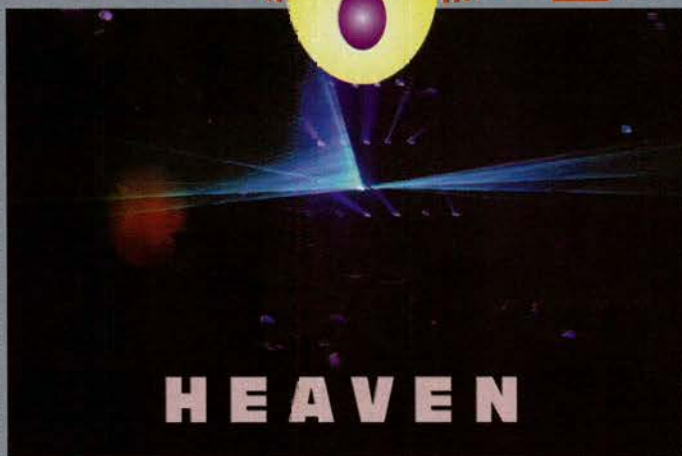
"I convinced the owners that it was time to reinvest in the technical operation of the club," said Operations and Development Manager John Pike, "the thing is, we have to now look not just a few years ahead but at least five and invest in equipment appropriate to that goal."

Upwards of 500,000 dollars later, and the new club is into its third week. It seems money well spent, as punter I was not disappointed at the quality of audio and was impressed by some of the lighting states, obviously some thought has been put into the feel of the place. It was a Wednesday night yet there was a healthy queue to get in and upwards of 800 happily anaesthetised Adelaidians inside.

"We operate primarily as a club, but also feature popular bands. A large band needs to supply their own extra subs, foldback and desk; Swoop and Skunkhour used the in-house system with subs added and blew them away."

"Heaven has won the 'Best Entertainment Venue' award for the last three years in succession, (nominated by the Hotel Industry). We are purpose built and we have set a high standard in promotions which has lifted our profile.

"Everyone [in the audience] gets a view be-



cause of split levels. In three years Heaven has rarely had less than 1000 people for its event nights, and we have a membership of 2000."

John Pike explains some technical changes; "We now have an F2 Martin System (from London) which replaces the EV Deltamax System. I looked at the array, Waveframe systems and decided on Martin — it produces the cleanest sound at high levels I've yet heard; there is no distortion. The system usually operates at around 55 % capacity, even with the loudest EJs (who have a tendency to push systems to limits). The system has preset audio settings for different applications. For instance, our Thursday night is Chemistry, so the DJs' come in and choose their settings and go.

AR Audio [Sydney] sent down people to tune the system for this reason. We are very happy with the quality of sound produced by the system."

The system comprises of four cabinets suspended on either side of the stage with two subs per side, bricked in under the stage. All

powered by QSC amplifiers. There are two DJ decks, one on stage, both with Pioneer CDJ 500s and Denon Twin CD Players onstage,

"Our DJs like to be down near to people, and we have DMC Championship winners working here. For variation, there are dancers on stage too."

Lighting wise, the system consists mainly of; 12 Golden Scans (2s and 3s); 7 watt Laser; 6 ft, 5 ft, 2 ft mirrorballs (on chain motors); 32 Roboscans Pro II 18s; 24 Robo Colours; 6 Solo Projectors; Robo Colour Controllers; 36 lengths Jet Strobe; 48 Rays; Scan Commander

Controller.

"I did the initial installation three years ago, in July this year I came back with the aim of reshaping the place for the future and decided new lights and sound was the way to go. Osmonds Electronics did the initial lighting, DMC and AR Audio from Sydney did the in-



stallation this time around. I did feel odd sub-contracting outside of Adelaide but when it came down to it, they were best for the venue. They were very helpful"

♦ Daniel Cole



John Pike, Operations & Development Manager

## NUMARK

November saw a national Numark demonstration tour presented by Universal Lighting & Audio, with guest speaker Nick McGeachin, Director of Export Sales for Numark USA.

I happened to be in the Gold Coast location, so I dropped in for a look see. During the presentation Nick asked the audience, "Do you want to be a DJ or a producer?", and that of course sparked my interest. Nick went on to say, "sampling, used correctly, is the way to creativity in your mixing, the tool of a talented producer".

I had a quick chat to Nick, to get the low-down on Numark.

### Dateline:

Mid/Late 1970s. The company originally got involved in the DJ equipment market during the Saturday Night Fever boom. Numark quickly established itself in the USA as a major name for club mixers. The market expanded with exports in the Contracting, Installation and DJ areas.

*continued on next page*



# Obsession Nightclub



*Curved truss system hangs above the dancefloor*

launched on the 27th of October.

The heavy accent on the visual hits you before entering the club. A barrage of images of opulence and modern 'Obsessions' are flashed on the stairwell walls approaching the club foyer that are filtered through a Kodak Carousel Projector along with 4 x Martin Robocolour 20400s.

Ornate etchings grace the clubs front doors which set the tone for the clubs elegant decor. The theming and architectural decor for 'Obsessions' was designed by Paul Fegal, who has been dealing with the venue since 1990. The appealing setup is aptly complemented by innovative mood lighting using Martin Robocolours.

Kevin Campbell and John McCauley of Sydney's No Box Entertainment Systems were recruited to design the clubs centre piece lighting rig. The bi-level rig was designed by John with an array of Roboscens and Robocolours used to light the floor. The rig features the Astroraggi and their Jem Club 20 system provides smoke atmospheric. John McCauley's lighting, video and audio design was created with the intent to provide an innovative aspect to installation and operation of entertainment systems.

Door charges-\$6.



*Video at top of entrance stairway*



*Bar area where Martin Robocolours are used to change colour and the mood of the area.*

Photos: Sophie Nicholls

**NSW:** Clubbers at Obsessions have been tripping the strobe light fantastic, courtesy of Auburn RSL's commitment to visual entertainment enhancement

Venue manager Margaret Ward is suitably pleased with the results of her clubs complete refurbishment, which began as a response to council stipulations. The rooms previous incarnation as 'Stags' ceased operating on the 31 December last year. Various factors kept renovations at bay until May when work was started on the final 'Obsessions' product

## NUMARK continued

### Dateline:

1980's. As the DJ market developed so did the Numark line of equipment. In the late 1980s and early 1990s Numark launched two new revolutionary products. The first of these was the digital sampler mixer. The models DM 1775 and DM 1775A became a standard for a new breed of DJ, the creative remixers. Then came the introduction of the worlds first dual transport CD player, incorporating features such as pitch control and automated mixing. The DJ community had to accept that Vinyl was no longer the only format they had to use.

### Dateline:

1992. The company experienced fiscal problems and production ceased for a few months. Numark was quickly purchased by an investment group headed by current President Jack O'Donnell, who had spent 12 years with Stanton Magnetics. The innovative spirit at Numark was something that O'Donnell was keen to preserve.



*Nick McGeachin, Director of Export Sales for Numark USA*

### Dateline:

1995: By way of proof, Numark has recently launched a digital sampler mixer that has a memory of up to 180 seconds of full bandwidth audio and is now available with three minutes of digital sampling memory, the DM 2175XLS. Also just off the production line is the DM 2075XS. Incorporating many of the features of the 2175, the 2075 offers 7 line, 3

phono & 3 mic inputs; individual gain, bass & treble controls on each input ch.; replaceable crossfader; fully assignable crossfader and balanced XLR outputs; 15-bit sampler at a rate 44.1kHz; Recording memory of 12 seconds which can be divided and stored between 4 selectable memory banks. Each individual sample can be edited - intro/outro and stored for later use. \$2,475 RRP

The company headquarters and US manufacturing plant are located in Providence, Rhode Island USA south of the city of Boston. All Numark PPD products are manufactured in the US. The company manufactures its Studio line of equipment in selected facilities in the Far East. Numark also has a service and test facility in the LA area and an export office near San Francisco.

*Australian Distribution: Universal Lighting & Audio P/L (ULA)*

*Ph: (07) 5532 9922 Fax: (07) 5532 4155*

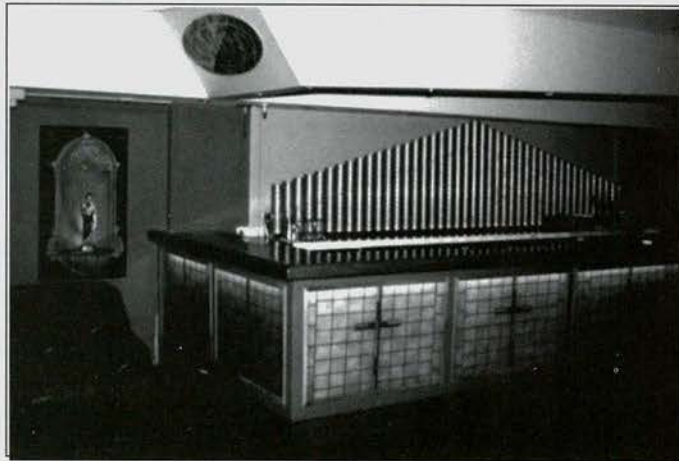
**+ Caroline Grafton**

# DIVINE REINCARNATION

## JD's Ministry of Dance-54 Darlinghurst Road Kings Cross

The metamorphosis that has occurred at 54 Darlinghurst Rd is an inspired effort, that serves as a stellar example of what some strategic planning and ingenious ideas can achieve. Every venue requires an infusion of fresh ideas periodically, but for a staple fixture in the Darlo scene like the 24 hour Colosseum

worked at the hotel for three years, has extensively travelled and has worked in management capacities at The Oz Rock Cafe and the Hotel Capital. Andy and Michelle worked vigorously aligning the pool of concepts for The Ministry and turning them into reality, with Andy crafting and building the actual designs.



The team are enjoying creative freedom with the venue, brainstorming to produce the uniquely themed 'Ministry' concept. The theme is carried out to minute detail. From the ornate organ bar upstairs, baptismal fonts, various religious effigies, stained glass windows and etched crucifixes in the pool table. A Sistine chapel inspired mural is set

any change must be implemented thoroughly. The results have been executed in such a fashion that it is hard to reconcile the before with the after product.

The Colosseum was bought by the Sydney based Japanese company Rising Sun Holdings early this year. The venue was then named JD's which rapidly evolved into the Ministry of Dance. Masterminding the evolution is venue manager Matthew Paxton and Manny Karson., who excelled when challenged with the dilemma of changing an infamous venue's entire ethos. The Colosseum has occupied the role of Sydney's nightlife magnet, due to its positioning at the focal centre of Kings Cross, capacity of 290 and its 24 hour license. Factors that have ensured steady trading and a solid reputation as a tumultuous night of entertainment.

Matthew and Manny are both from extensive venue management backgrounds, with stints at Juliana's in their recent past. Matthew's resume hails from more exotic climes, with an intensive career spent in his native England's clubbing mine field. The Paxton clubbing pedigree covers a massive spectrum of experience. Including an impressive swag of industry tokens-1991 Disco Mirror-Promotion of the Year, 1991-European Discotheque & Trade Industry-Night Club Manger of the Year for Tokyo Joe's. 1992-British Entertainment & Discotheque Association-Marketing Manager of the Year. 1992-Red Stripe Award-Nightclub of the Year (Colosseum-Halifax).

Lennox Miller, Michelle Walker and her husband Andy Dillon are an integral part of The Ministry's management team. Michelle has

to go on the ceiling as the transformation continues. The overall look is decadently stylish creating an atmospheric and novel approach to night clubbing. The design and creation of the club was all self styled, producing a lush effect at the fraction of the cost.

Matthew seized the void which was produced with the closure of Springfield's, attempting to create an accessible clubbing environment with a tight door policy and a casual attitude. The music policy includes top notch DJ's like Sam Allen, Sean Brooks, Pee Wee and Dave Kirkpatrick. Live bands will feature on Friday nights and an evening begging to happen, backpackers night-The Church on Sundays. The Ministry team are brimming with ideas waiting to be executed, which should be unleashed through Summer.

*#Lighting rearrangement and servicing, courtesy of Total Concept Productions.*

### Lighting

2 x Clay Paky Astro Discos; 4 x Clay Paky Golden Scan 2; 36 x Par 36 Pincspots; 1 x Moonflower; 10 x Scanners; 1 x Clay Paky Astro Raggi; 1 x 1500w Monster strobe; 1 x Jem ZR20 Fogger; 1 x Stormtrooper; 5 x Par 56 cans; 1 x Orion controller; 1 x PC 386 Controller; 2 x Lynx elevators; 1 x 24" mirrorball; 20 x Sanyo 48cm monitors.

### Audio

4 x JBL 1400 speakers; 2 x JBL 1000 subwoofers; 2 x Technic SL1200; 1 x Denon ON2000F Dual CD; 1 x Cloud Discomaster 1200 Mixer; 1 x Hybrid 9 video switcher; 2 x Panasonic Stereo VCR; 4 x C-Audio RA3000 Power amps; 1 x C-Audio 152 Equaliser

### Obsession Nightclub (continued)

Live Entertainment including bands, dancers and guest DJ's.

### Obsession Equipment List

#### Audio

LEM DJ Pro Mixer  
Dennon DN2000  
Turntables  
EV MS2000 Radio Mic  
Altec Lansing Programmable EQ  
EV Deltamax DML 1152 Controllers  
Altec Lansing Comp/Limiter  
EV DSP224 Digital Processor  
10 x Altec Lansing 944B Amp  
2 x EV P7600 Amp  
4 x DML1152 Deltamax Speakers  
2 x EV Manifold Subs ML4

#### Lighting

Aluminium Lighting Structure supplied by Stagecraft WA  
24 x Martin Robocolour I  
24 x Robocolour II  
8 x Martin Roboscan 812  
8 x Martin Roboscan PRO518  
4 x Martin Robocolour PRO400  
1 x Martin 2308 Controller  
Other analogue effects

#### Video

8 x NEC Monitors  
1 x Panasonic PT1024  
3 x NEC VCR  
1 x Burle High Resolution Camera  
Technologies Matrix Switcher

## The Kurtzweil K2500

The Kurtzweil K2500 is the upgraded model of the popular K2000 work station.

Three types of K2500 are available. The full weight 88 note version, 76 semi-weight keyboard version and a three r/u version.

Features include 32 channel sequencer, 48 note polyphony, VAST synthesis-which offers 60 DSP functions arrangeable in 31 algorithms allowing the processing of its



48 voices separately. Extensive sample processing with upgrades of up to 128 Meg of ram and 760 seconds of sampling in stereo in CD quality(44.1khz). Using the Flash ROM technology, upgrades on the K2500R's program and sample memories

*continued next page*

# Q Master

An enclave of enterprising minds at Showbiz video have developed a product that is set to radically enhance the concept of audio visual

## The Kurtzweil K2500 (continued)

can be achieved through battery-backed program RAM that can be expanded from 240K to 1,256K..

Included is a visual sample editor allowing for high speed cut and paste and a hierarchical file directory system.

The unit offers a new soundsset of 200 programs and 100 set-ups with all-new drum samples and effects, as well as a program disk with 1,000 additional programs.

The K2500 is compatible with an immense range of existing sound libraries including the Roland 700 series, Akai S900, S950, S1000, S1100 and S3000, plus Ensoniq EPS and ASR file formats.

rrp for The Kurtzweil K2500R is \$7495. The K2500RS/2 meg- \$8495. Additional Rom kit with 20 Megs of sound are \$1195.

The K2500 is available through Music Technology on (02)369 4990

control for venues: The Q Master computer system.

It is an automated music video and billboard system incorporates programming, playing, relaying and telecasting from one control system. Using touch screen control(15" Microtouch), the unit is simplistic in execution. Two industrial National Panasonic AG5700 VCR's are connected to the system. Cueing and playback all function through the touch screen control. On screen video overlay allows clear viewing of clips in play or as they are being cued. The expansive directory houses clips which can be found using artist, title, BPM or program number.

The computer's capability allows for a variance of flexibility in programming. The Q Master allows for the creation of personalised billboards with the option of overlaying them on your program. The system uses a Pentium 75 with 8 Megs RAM and 540 Meg hard drive. This allows for unlimited programming schedules. DJ's are given the freedom to store playlists for future use or in absence, which are readily stored in the hard drive and fully automated.

A built in modem of 14400 BPS allows for easily accessed updates of database and software. The system is fitted with 2 "fast" video cards, one working the moni-

tor, the other for billboard overlay, which allow for high speed storage and high quality pause effect of editing suite standards.

Director of Showbiz video, Tony Varano, saw the need for a video system that utilises advanced technology which complements the rapidly evolving nightclub market. Tony's extensive background in venue management allows him to know what his target market wants.

Max Valenti and Danny Mangion from Slipstream, were the software designers.

Clubs that are already using the Q Master are Rumours in Perth and the Leisure Inn in Rockingham WA.

The Q Master's rrp is \$23 000.

For further information contact Showbiz Video on 1800 025 687



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# THE BOARDWALK

Vault 14 Banana Alley-Flinders st, Melbourne.

Down by the Yarra a fevered enclave of club generators have created The Boardwalk club. Venue manager Paul Hankin and promotions manager Karen Ockwell are striving to provide a casual clubbing atmosphere that utilises the venues unique dynamics and locale. Their emphasis is on fun rather than elitist clubbing conformity. A factor that sets them apart from Melbourne's highly competitive club scene.

The venue itself works because of its idiosyncratic charm. It is in fact a vault that was originally used to store produce. A strip of vaults are perched along the river, housing restaurants, bars and The Boardwalk. The venue owners have made the most of the cavernous space which occupies two vaults. The entrance leads through to the main bar that opens into a pool area. The adjoining vault holds the dance floor which is presided over by inhouse DJHAMO. The impressive lighting design uses the curved walls to full effect producing some dazzling displays. Both lighting and sound was designed by multi-tasking DJHAMO and LAVA, who were responsible for the installation.

The open air courtyard which overlooks the river, is covered by a shroud of fairy lights and is already the gravitational pit for clubbers on those balmy nights. The clubs capacity can be extended to 1200 when the additional courtyard is put in use. Throughout Summer live bands will perform al fresco. The clubs open-

ing hours are from 5-3am Fridays, 10-5am Saturdays with a door price of \$5 after 10.

The Boardwalk has a staple following and becomes a gravitational point for Melburnian club hoppers at some point in the evening.

## Boardwalk Equipment List

### **Pa Gear & Associated Items**

- 1 x Rane MP24 Mixer
- 2 x Dennon 2000F Mark II CD players
- 3 x EV SX200 Speakers for Mid/Highs
- 2 x Double 18" EV DLX Front Loaded Sub Woofers
- 4 x EV SX200 Speakers for Mid/Highs
- 2 x Double 15" L554 RCF Frnt Loaded Drivers with 2 x "N481 RCF Compression Drivers-via Y Split 1" Throat
- 1 x Peavey CEX-4L Phase Coherent Digital Processor



Photos: Marty Williams



# Parramatta's Slice of Heaven



The site of Hotel Parramatta's Heaven Nightclub, works as a reference point to Parramatta city. Previously known as the Paradise Hotel and home to the Cobra Club (a notorious heavy on the rock bang), the venue has changed management and attitude.

Licensee and manager Stephen Quinlan has led the way for the venues total re-creation. Venue owner Solotel has invested \$450,000 into the refurbishment of the two-level complex, emphasising a penchant for modernity and high technology. Stephen boasts that their lightshow is "the biggest and most spectacular in Sydney".

Housing a total of 22 moving lights, 44 lighting effects and a mammoth interactive video system that includes 3 live cameras, 35 TVs and claiming to have the largest video screen in the Western suburbs.

Black Express Light and Sound are behind the installation, providing a hexagon truss cov-

ered with cyc screen on which images and lighting effects are projected onto the dancefloor backdrop. Elevated podiums peep



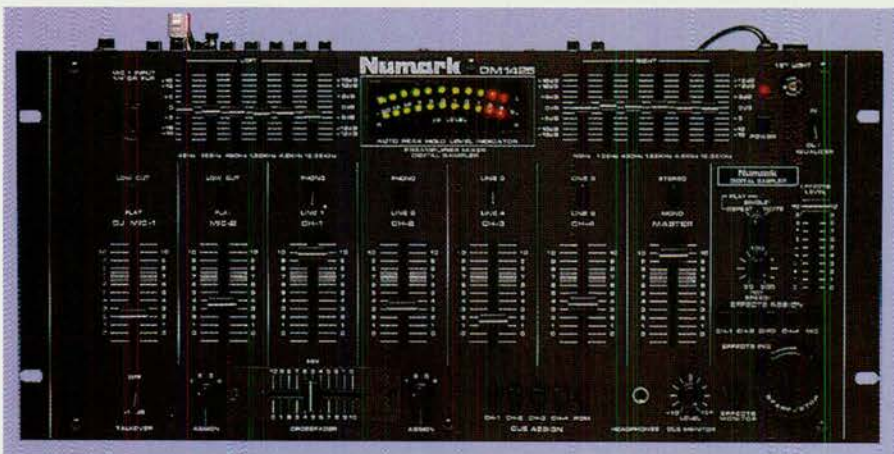
Photos: Sophie Nicholls

the dance floor and "Fantasyland" an inhouse video game arcade is a central attraction. Decor and video design was provided by Adfab Promotions.

Heaven was launched on November 10 by 2 Day FM's Keith Williams and the venue will continue to feature celebrity guest DJ's such

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- Pitch Bend
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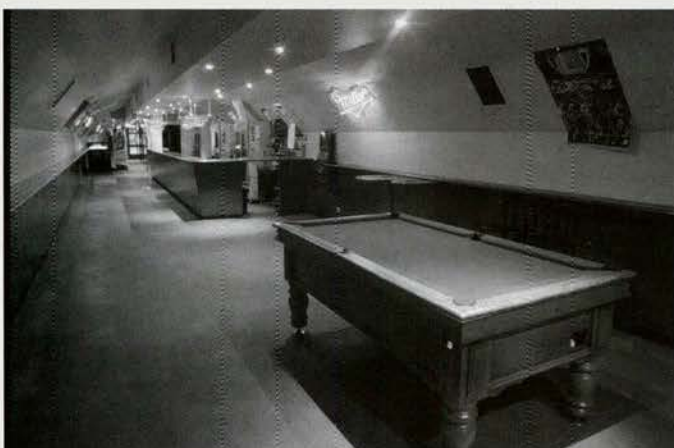
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## THE BOADWALK (continued)

1 x Peavey Twin 15  
Band Graphic Equaliser  
1 x Optimus Double  
Tape Deck  
1 x Beta 58 Microphone  
1 x Beta 58 Wireless  
Microphone with Shure  
L4 Receiver  
1 x Gemini PL-9E  
Power & Light Module  
1 x HD-535 Sennheiser  
Head Phones  
1 x Motorised CD  
Hydrobath  
1 x 32 Amp 3 Phase  
Power Distribution  
Rack

### Lighting and Associated Items

4 x Martin 805 Roboscans & Martin 2308 Con-  
troller  
2 x 6 Head Helicopters  
2 x Abstract Wild Stars  
2 x Geni Sparklers  
1 x Martin Star Flash  
1 x Dimable Lightning Strobe  
16 x Coloured Pinstots, Power Feed and Chaser  
2 x 500Watt Spot Lights  
4 x 4 Foot Ultra Violet Lights  
1 x Jem Mark III Smoke Machine with Remote  
3 x 30Watt Dimable Downlights for DJ Booth  
Custom Made Lightspan Tri-Truss  
#Shit load of Cable & a severe soldering iron



neck burn for Peter.

### Courtyard System

1 x EV 7200 Power Amp  
1 x Phonic Compressor Limite-  
1 x Phonic PEQ 3400 Twin 15 Graphic Equal-  
iser  
2 x Double 15" L554 RCF Front Loaded Driv-  
ers with 2 x 1"N481 RCF Compression Drives-  
via Y split 1 " Throat

### Video System

4 x 64cm TV Monitors  
2 x Video Recorders  
All PA Gear & Lighting Equipment owned,  
maintained and operated by Resident DJHAMO.  
Complete installation carried out by Lights  
Audio Visual Australia Pty Ltd-LAVA.

## Parramatta's Slice of Heaven (continued)

as Wendy Harmar and Red  
Symonds. Live bands will be play-  
ing through Summer and with a  
capacity of 1500 the club will offer  
maximum entertainment value.

LD-James Evans

DJ's-Andre M, Partyman Harris,  
Shane Taylor

Video Jock-Glen English

Laser Operator-George Zivi

### Equipment List

#### Audio

2 x Technics SL1200 Turntables  
1 x Denon DN2000F CD Player  
1 x Citronic SM550 Remix Mixer  
4 x JBL AD44 Satellites  
2 x JBL System 1200 Subs  
6 x Jands 516 Amps  
4 x JBL Control 5  
1 x Jands 510 Amp  
8 x XP200 Speakers-Room Fill  
1 x Jands SR300 amp  
2 x Rane Graphic Equaliser ME60  
2 x Rane Dynamic Controllers DC24  
1 x Rane FPL44 Limiter

#### Lighting

16 x Martin Robocolor II  
8 x Martin Roboscan 812  
8 x Martin Roboscan PRO518  
8 x Martin Roboscan PRO1220 XR  
1 x Martin 3032 PC Based Controller  
1 x Martin 2532 Direct Access Module



1 x Clay Paky Astroraggi  
4 x ADJ Sunflower  
1 x Mercury Controller  
4 x White Lightning Strobes  
2 x Abstract Monster Moons  
2 x Programmi Sistemi Talisman  
2 x Audience Blinders  
1 x Four Flower  
3 x Solar 250 Projectors  
8 x Programmi Sistemi Baby Stars  
1 x JEM ZR20 Smoke Machine  
1 x JEM ZR31 D Smoke Machine

#### Video

1 x Panasonic PT102Y Video Projector  
24 x Video Monitors  
3 x Panasoni HiFi VCR  
1 x Video Title Maker  
1 x Video Effect Unit

## CLUB NEWS

Congratulations to Les Jones Designs who have been awarded the audio visual install contract for **Planet Hollywood** in Sydney, amidst fierce competition The celebrity owned venue is scheduled to open February/March.

**The Loft** in Perth has been transformed into a two levelled club. Featuring a total dancefloor overhaul with new lighting, smoke machine, and full DJ box. To be named Tardis and opening in December.

Singapore's most infamous club **Zouk** has re-opened after an untimely closure due to a drug altercation. The club is back with a vengeance catering to Singapore's creme de la creme.

The future of Sydney venue the **Phoenician club** is uncertain, yet again. Following the death of a 15 year old girl attending a dance party at the venue held over the October 21 weekend. The girl died the morning after the party due to an allergic reaction to the drug Ecstasy. Two dealers have been charged and the venue's future is currently under scrutiny.

DJ Sugar Ray, the driving force behind Oxford St's **Reach'n Records** has released the essential summertime disc. DJ's Downunder Volume 2 offers a masterly mix of house and trance.

Reach 'n Records now has a web site <http://www.mello.com.au/reach>. And a new part of the team ex-Zoomite Stig Richards.

**Colossal** records have got a new email address: -COLOSSAL@ENTERNET.COM.AU.

**The Cauldron** in Sydney's Darlinghurst, has initiated a couple of new nights geared towards promoting and discovering new talent. Tuesday night will be Audition night and Thursday nights will be Performance Showcases which are targeted at getting promotion and marketing people.

**Blazon Electronics** in Sydney's Leura, are running their DJ training course currently. Training covers technical and audio basic principles, mixing, formatting and selection, guest psychology and lighting design and operation including hands on training on the Martin 3032 controller. Contact Ron on-Mobile: 015 272572/047 592924/Fax: 047 591623.

Melbourne's popular DJ training course, **Crucial Cuts-DMC** are also taking enrolments for their introductory course. This is its fifth year of operation and their head instructor is remixer/producer DJ Ivan Gough. Call for a brochure on (03)9521 1211/(03)9696 0069.

Brisbane's outstanding jazzy funky crew **Sunnyside Up** (DJ's Ravi & Will) are returning to the Empire Hotel for monthly appearances.

# TUNNEL TRANSFORMED

## DS.1 Bar and Nightclub

Forum Building, Orchid Ave, Surfers Paradise

The Gold Coast's Tunnel nightclub has been a clubbing landmark for locals and travellers for many years. The venue has maintained a steady stream of popularity despite rigorous competition and a changing market.

The closure of The Tunnel has allowed for an new era in conceptual clubbing for the venue. After 4 weeks of intense recreation the venue has been renamed DS.1 and officially opened on November 10, claiming huge crowds.

The Tunnel was completely gutted with the fit out and design overseen by Design International. Michael Brown and Glenn Allen from Queensland's Design International had a

clean slate to create the innovative club environment. Venue managers Monica Vabausek and Steve Grocott conceived DS.1 out of the desire to provide patrons with an international style venue with an accent on quality clubbing.

Creating much of the hyped atmosphere is a light show which management contends is the most advanced club lighting in South East Queensland. Skypak lighting designed the light

configurations throughout the venue. The Skypak team installed a neon effect to highlight the main bar area which they believe to be the first of its kind to be featured in a Queensland club.

The clubs musical policy reflects a dedica-



tion to house and techno, with regular reggae nights, hip hop and commercial dance to appease the punters through the seven night a week chaos.

### Equipment List Audio

Amps Jands 920 x 3; Jands 4 way crossover; 2 Rane graphic eq; 1 Numark 1475; 1 Dennon 2000F; JBL System 44 top end; Jands 216 x 2;

1 Yamaha compressor; 1 Lem 82 mixer; 2 x 1200 Technics turntables; 4 x JBL Base bins loaded with 2226 speakers.

### Lighting

4 x Martin 812; 2 x Martin Rainbow 2; 2 x Martin Star Flash; 3032 Computer Controller; 2 x Aries; 2 x Saturno; Mini Strobes; 1 x Jive Light; 1 x G300 Fogger; 4 x Martin 218; 2 x Martin Magic Moon; 1 x Martin Center piece; 2 x Astro Raggi; Pin Spots(loads); 2 x Any Tronics large strobe; 1 x Rumba.

### Video Equipment

Nightlife video system; NEC Video recorder 11 x Visual monitors; Custom Video switcher; Technics Effects Unit.

## Correction to Frequency

Nightclub-Gilberts Hotel article: October Issue.

In the October issue of Connections a huge error was made in the article concerning 'Gilberts' nightspot. Contrary to statements made in the piece Total Concept Productions had no involvement whatsoever in the project. The company Les Jones Designs installed and designed the entire Audio Visual system. The owners and operators of the venue, John and Rick Gilbert are extremely happy with the results. Apologies are extended to all parties involved.

## Kam KCD-850

The Kam KCD-850 is a double cd player comprising of two separate 19" rack mountable units. The remote control offers the following features; pitch bend, pitch varispeed 4%-8%-16%, pitch range selectors, track search, frame search, cue, play/pause, time mode select, reverse and CD tray open close and stop.

The control panel is laid out very neatly with most controls including play and pause illuminated.

The pitch control can be selected to offer a smooth response of 4, 8, 16% so you have enough speed adjustment for almost every situation.

The Track/Frame controls are used in conjunction with the cue facility to find a desired point of the CD. Setting the cue point is achieved by using a combination of frames, each second is divided up into 75 micro frames for 100% accuracy.

Some of the specifications are:

Play/Start time delay: less than 0.03

seconds.

Frequency Response 20hz-20Khz,  
D/A Converter-1 bit linear,



Quantization bit-16 bit linear/channel,  
Signal to noise-Better than 105 dB@1Khz,  
Harmonic distortion-0.045%@1 Khz,  
Dynamic Range-Better than 95 dB @ 1 Khz,  
Laser Type-GaAlAs type semiconductor  
laser Sony Corporation.

RRP \$1495 Including Sales Tax.

For further information or your nearest dealer contact Disco World-Factory, 20 Cave Hill Rd, Lillydale, Melbourne. VIC (03)9735 0588.

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# LIGHTING MONTHLY

December/January 1995

Edited by Catriona Forcer

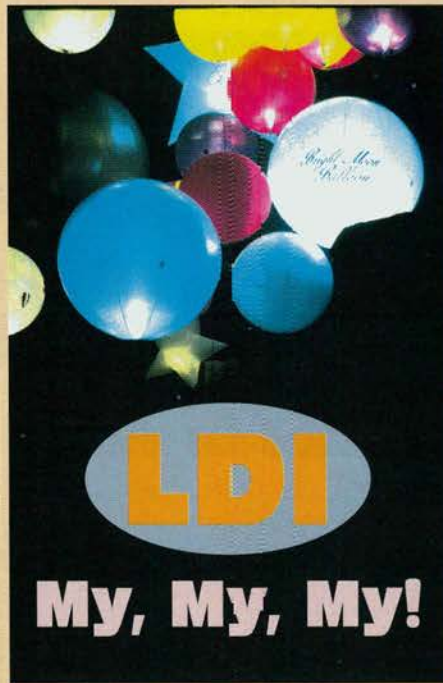
The 1995 Lighting Dimensions International Convention took place from November 17th. to 20th. at Miami Beach, Florida.

Never having been to Miami, I was a little nervous when our leader the Editor asked/told me I was to attend the exhibition just two days before my departure. I mean, this is the town that invented the saying "Keep honking your horn a\_\_\_hole I'm just re-loading". My caution was justified when some creep tried a hotel room invasion and series of nasty phone calls, but hotel security sorted out the situ for me. Actually the hotel people were great, my thanks to the Hilton Fontainebleau.

Miami is a unusual city catering for a very diverse population. You have everything from the classic tourist trade including brightly clad Americans, subdued Japanese to an amazing transient population of Latin Americans whom provide and are provided for, an exotic night-life of open air bars under balmy night skies. Not to mention an amazing number of dance clubs and restaurants.

Once again I wished I had had more time to explore the location and visit such sites as Key Largo and pretend I was Lauren Bacall in the arms of Mr. Bogart fighting against the torrents of a cyclone and gangsters in an archetypical of the time, window shuttered, dilapidated hotel.

Dream on Caroline. Thirty hours in transit to the exhibition, arriving at the hotel 11.30pm



Bright Moon Balloons

Miami time; Saturday and Sunday at the show from 10.30am to 6.30pm; Monday at the show from 10.30am to 12.30pm; Back to the hotel to pack, check out and commence a thirty hour transit return trip. Aren't you all just so jealous of my exotic life style. I am so looking forward to the Christmas break when **I will**

**not go anywhere.**

Anyway enough of this frivolity and back to the exhibition.

LDI is the abbreviation for Lighting Dimensions International an exhibition promoted by the US magazine Lighting Dimensions. Although predominantly a lighting show, LDI like many other exhibitions including PLASA (UK) and our very own Entech, incorporates a number of audio exhibitors as well, proving the point that exhibitions cannot afford to be too niche.

Nevertheless, LDI is the premier US lighting exhibition. Many lines are launched in the US at this event. It seems that even if a product has been launched earlier in the year at leading UK and European exhibitions the American and South American market waits for this event before final acceptance of a product.

8700 (the largest number of visitors ever to an LDI trade show) potential traders converged on the Miami Exhibition Centre to peruse, caress and decide on the validity of product specifications and applications. The number of exhibitors has also grown substantially to over 300 companies and professional organisations.

Workshops are another key attraction to the event and run in three distinct tracks.

Track 1 Lighting Design & Production Techniques include: Technology-At-Sea which outlined the system design, installation and maintenance of systems used on ocean-going vessels; Sets, Lights & RockNRoll; Special FX; Lighting for Television News & Talk Shows, Theme Environments and Parks.

Track 2 Sound in Entertainment included:

*continued over*

## the WASH LIGHT is here



Photo: Serge Thomann

The recent Bon Jovi tour saw the debut of the LSD WashLight in Australia as well as 56 Icons. The 24 WashLights are staying in the country and are available from Bytecraft. The Icons are now out on the Eagles tour.

The system at Bon Jovi was rigged on T.F.C. trussing which enabled the rig to go up in one hour.

Bytecraft also have just acquired the LSD

Mini Console for the Icon (see October Connections).

Nick Jackson, President of Lighting and Sound Design (UK,US) who is touring with Bon Jovi, unfortunately missed the Melbourne Cup but was able to catch the Grand Prix in Adelaide with Durham Fitchie and Ted Fregon of Bytecraft.

See page 107 for full report on WashLights.

## CRONO



Now in production is the new Crono from TAS. The fixture uses a 200 MSR lamp, and comes with an internal ballast. It features include 11 dichroic colours plus white, multicolor and bi-colour effect, 10 gobos of which 5 are rotatable, strobing effect, mechanical dimmer and motorised dimmer.

Price is \$5,750.00 list ex tax.

For further info call: CDA (03) 9467 8666.

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Powerful Lighting Effects for Clubs/Discos/Dancing Bars

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6 Dichroic Coloured Rotating Moonflowers: Angled mirror for maximum coverage; Fan cooling; 250w/24v M33 lamp

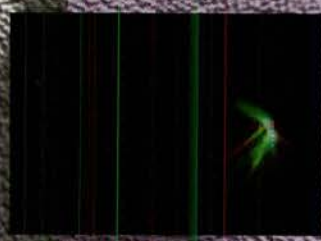


**\$899** inc. tax & lamp



## Twin Orbiter

Twin Orbiter  
2 x 6 Dichroic Coloured Rotating Moonflowers: 2 x angled mirrors provide amazing coverage; Fan cooling; 2 x 100w/12v M28 lamps



**\$1,149** inc. tax & lamp



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2 x Dichroic Reflectors: Fan cooling; 1 x 250w/24v lamp: A calm background effect for chill-out areas

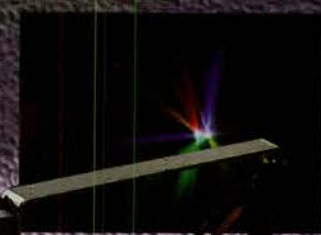


**\$899** inc. tax & lamp



## Power Twin

2 x 6 Dichroic Coloured Rotating Moonflowers: Awesome output from 2 x 250w/24v M33 lamps; Dual fan cooling



**\$1,059** inc. tax & lamp



## Moondancer

Scanning Moonflower Effect: 100w lamp; 250w fan cooled version available;

**\$529** inc. tax & lamp



## Motivator

Multiple, Multi-coloured, Moonflowers: 100w lamp; 250w fan cooled version available;

**\$589** inc. tax & lamp



## Chameleon

Spectacular Colour Changing Moonflower: High output 100w dichroic lamp; Full & split auto changing dichroic colours & white; 250w fan cooled version with GOBOS available soon;

**\$589** inc. tax & lamp



**LDI REPRORT** *continued*

Technology-At-Sea; Theme Parks; Club Design & Maintenance.

Track 3 Light in Architecture included: Lighting for the Art Deco; Airports; Cruise Ships and City Lights.

Hands-On tutorials were also available on CAD, Moving Light & Wysiwyg Programming; New Audio Technology & Laser Design & Safety.

Product releases will be expanded on throughout the pertinent sections of Connections but for a brief overview here we go.

**New Lighting Product in Brief:**

The Real 3-D Display Laser System from ACR in collaboration with Vantage Lighting; Aquafoq 3300 and Beam Bender from City Theatrical Inc.; DMX Without Wires a wireless DMX512 transcoder from Goddard Design Co.; From JEM we have Fog and a Fan in a par can known as the Par fan and Par Fog 250, and a ZR31 smoke machine; Irideon (a Vari\*Lite Company) have released a new architectural interior was luminaire known as the Irideon AR5; Strand released enhanced Lightpalette software and Ethernet device for the 430/530 & the new 550 series consoles, Supernova 200i HMI Fresnel and a Zoom Leko; Available from EPJ Technology is the new lightweight Par-Plus to retrofit your Par System; LSD released the new Icon WashLight; The final version of the Studio Color from High End was in full

flight as well as the full range of Lightwave Research LithoPatterns high resolution glass gobos; Electronic Theatre Controls Inc. (ETC) displayed the Source Four Par, ETC Express and Obsession ML Consoles and the ETC Unison Architectural Lighting Control and Dimming System and finally LeMaitre have come up with a Low Smoke Generator (LSG) to use with a G-300 fog machine.

**For The Audiophiles New Product in Brief:**

Crest Audio have released the new CKS & CKV contracting series amplifiers; Apex introduced the Model 661 Tube Comp/Limiter and the new Two Channel Easyrider Auto Variable Speed Compressor; From Clear-Com we have a few Party-Line Intercom products including PL Pro MS-440 4-Channel Rack mount main station and SB-440 Switchboard main station; Meyer launched a new range of Self Powered Reinforcement Loudspeakers, a Line Driver Array Integration System and a Remote Loudspeaker Monitoring and Control System; Numark launched the DM 2075XS digital sampling mixer and the Beatkeeper.

+ **Caroline Grafton**

**LDI 1995 Award Winners**

- Entertainment Lighting Fixture**  
Martin PAL Profile Automated Luminaire
- Entertainment Lighting Control**  
DMX Without Wires from Goddard Design Co.
- Architectural Lighting Fixture**

The Irideon AR5 from Vari\*Lite/Irideon  
**Atmospheric FX Machine**

Aquafoq 3300 by City Theatrical Inc.;

**Widget of the Year**

The Beam Bender by City Theatrical Inc.;

**Product of the Year Audio**

Meyer Self-Powered Reinforcement Loudspeaker Line

**Light Show Display of the Year (Large Stand)**

Martin designed by Peter Morse

**Light Show Display of the Year (Small Stand)**

Omnisistem/Programmi & Sistemi Luce

**NEW TOYS FOR HIRE**

Lightmoves Technologies (NSW) have added the following new products to their rental inventory:

**Le Maitre G300 Hazing/Smoke Machine (3)**

**JBL EON Self Powered Sound System**

**Theatrelight Cue master 120 Plus**

These items will supplement Lightmoves's range of luminaires, effects, control and dimming including the following:

Heavy Fogger 6500

Optikinetics Solar 575

Optikinetics Solar System

Le Maitre 6/24 Pyro Firing Systems and Pods

Celco Navigator Console

Theatrelight Showmaster II 48/96 Console

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PAR 64



PAR 56



PAR 36



PAR 36 LENSES



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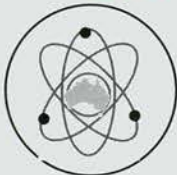
MIRROR BALLS



SMOKE  
MACHINES



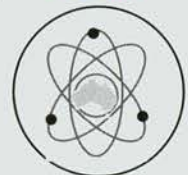
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# The WashLight

The new Icon WashLight weighs less than 25 lbs and can be hung on 16" centres. Using LSD's proprietary graduated colour media, the WashLight is capable of crossfading colour throughout the full spectrum, from the subtlest hues to the richest primaries. The optical system was developed in conjunction with Entertec, developer of the Source 4 profile spotlight. Using only a 575 watt incandescent bulb the WashLight outperforms standard 1000 watt Par 64 lamps, claim LSD.

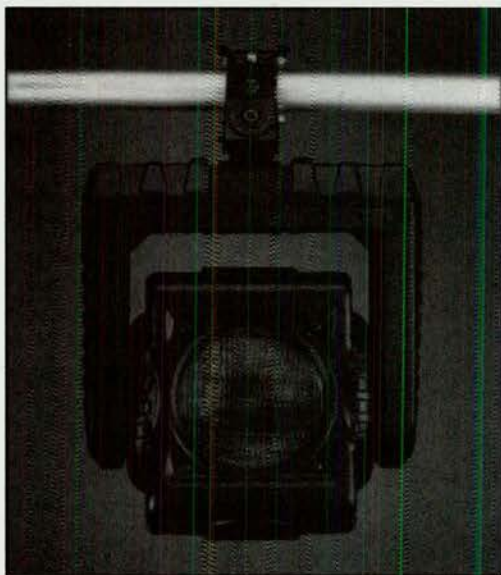
The WashLight provides unrestricted 360° pan and 270° tilt motion that is quick and quiet. LSD further claim that full travel of pan motion may be accomplished in as little as 1.5 seconds, while slow, timed moves are smooth and controlled.

An automated lens rotating facility is provided to allow remote control over the WashLight's two lensing option. Option 1 comprises interchangeable standard PAR type lenses with the ability to position or continually rotate the oval beam shape characteristic of the wider lenses. Option 2 utilises a unique variable beam spread system giving the user remote control over the beam size, from

very narrow to wide flood. Any number of variations can be stored and recalled from the ICON desk.

The WashLight is fully compatible with the ICON control system, and can also be controlled via a conventional lighting board if desired.

For further info call: *Bytecraft (03) 587 2555.*



## Bits

♦ LSC Electronics have supplied Lotts of Watts and Entertainment Light & Sound with **Avolite's Rolacue Pearl** lighting control consoles complete with the revolutionary graphics tablet.

*Call LSC (03) 9561 5255.*

♦ **Entertainment Installations** of NSW have been busy with the following events: lighting and sound production for the under 18's CRISP event dance party; 18 x Par 56, 5 x Fresnels and a Geni Light Modulator for Long Jetty Senior Citizens Centre; Geni Ignitor tube (8) + controller for Joes Garage Gosford as well as heaps of neon highlights, Cliplight and coloured fluoro tubes; neon signs for Noni-B, Lolly Barn, Haven Beach Cafe.

*Call Entertainment Installations (043) 243873.*

♦ **Concert Lighting Systems** of Melbourne have supplied production work for the following: Stone Roses Tour; The Highway Men Tour; Nissan Launch; Samsung Launch; Melbourne Festival; Coles Myer AGM; Youth Alive Concerts (Melbourne and Adelaide); Teenage Fanclub; Soul Asylum; Direct Marketing Awards; Cats - New Zealand Tour.

*Call CLS (03) 646 8444.*

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# TINA ARENA

## Cat Forcer talks to lighting designer Steve Swift

Lighting designer Steve Swift had used Icons on a couple of projects, including the VP Day celebrations in Melbourne, before incorporating them into the Tina Arena tour.

"It's been neat to have a couple of runs with them," said Steve. "On this show Ian Blackburn from Bytecraft is the programmer and he's running the console. The great thing about the console is that you can use macro's to allocate anything anywhere on the board so I'm using the matrix to run a few manual fades and effects like dry ice. It's good not having to have a sub board to do those few little things. One advantage that this has, is that on a small theatre run like this we're only taking up the minimum of seats."

Steve was recommended for the job of lighting designer and met Ralph Carr (Tina's manager) and John O'Donnell (Tour Manager) who already had a set designer finalising his designs for construction. Also on the team was Pierre Berony as the creative director so Steve's role was purely a lighting designer. Normally Steve does the whole production design so this time was a bit different for him.

The three tier set has the monitors buried within it to give a neat and clean look to the stage.

"I was given a very low budget to try bring the vision to a reality, from my side," said Steve. "Eventually we ended up with eight active Icons and forty-eight par cans. I also have some DHA Light Curtains, I started out with half a dozen but I cut it down to three units through trial and error. I used them on Beauty & The Beast and thought they were really interesting. They're fitted with eight low voltage Par 56 lamps and they have a motorised mechanism to make them pan as well as a twenty cell colour scroller attached to the front. We use them quite a bit, there's a line of three units that sit between Tina and the backing vocalists so we can back light Tina or front light the singers. We use them in a couple of songs to sweep the audience. It's a nice look, a kind of 'beamy sheet of light' and even at twenty feet you get a spread of light on the floor that's



Steve Swift (Lighting Designer), Ian Blackburn (Icon Operator) and Chris Lawrence (Lighting Technician)

little more than 300mm in width and the length of the baton, is like an ACL curtain in effect. They were developed by David Hersey and his company for back lighting cloths."

Bytecraft supplied all the lighting equipment. Steve said that for the money he had Jands offered him the Series 200 range, model 5's and 6's, but Bytecraft offered him the Icons although they didn't have any WashLights available at the time. Instead they supplied Steve with the par cans for the wash while the Icons do the general moving light looks.

"It's ended up looking pretty neat," Steve said. "This was conceived to be a theatrical show and they asked me not to use any cliches which is a bit funny for rock'n'roll as I see it as a collection of cliches! So we had three days of rehearsals at the National Theatre in Melbourne which only really gave us enough time to lay base looks for all of the

songs. We got a couple of the songs finished, programming wise, at that point. Since then we've been in evolution which is all part of the rock medium. We do have some cliches in our show now - there are a couple of points where we do a sweep through the audience with Icons or Light Curtains - which goes a bit against the brief. Originally they wanted the band lit shadowy and obscure but we very quickly realised in rehearsals that it was a huge visual asset that should be used. So it has become more generally like a rock show but we're not bumping for every accent and we're not necessarily lighting every little guitar solo. We are dealing with a star solo performer and everything about this show is built around voices, basically Tinns and the three very strong backing vocalists. The band sit on the back two levels of the set, kind of back lit."

As most of Tina's songs revolve around love and references to heaven - all the feel good stuff - so Steve has opted to use many warm tones in his colouring of the show. Lavenders, pinks, ambers and reds are dominant as there are not any songs that are suitable to get a colder contrast with blues and green tones.

Video is used at the beginning of the show to introduce Tina and during the songs *Sorrento Moon* and *Wasn't It Good*.

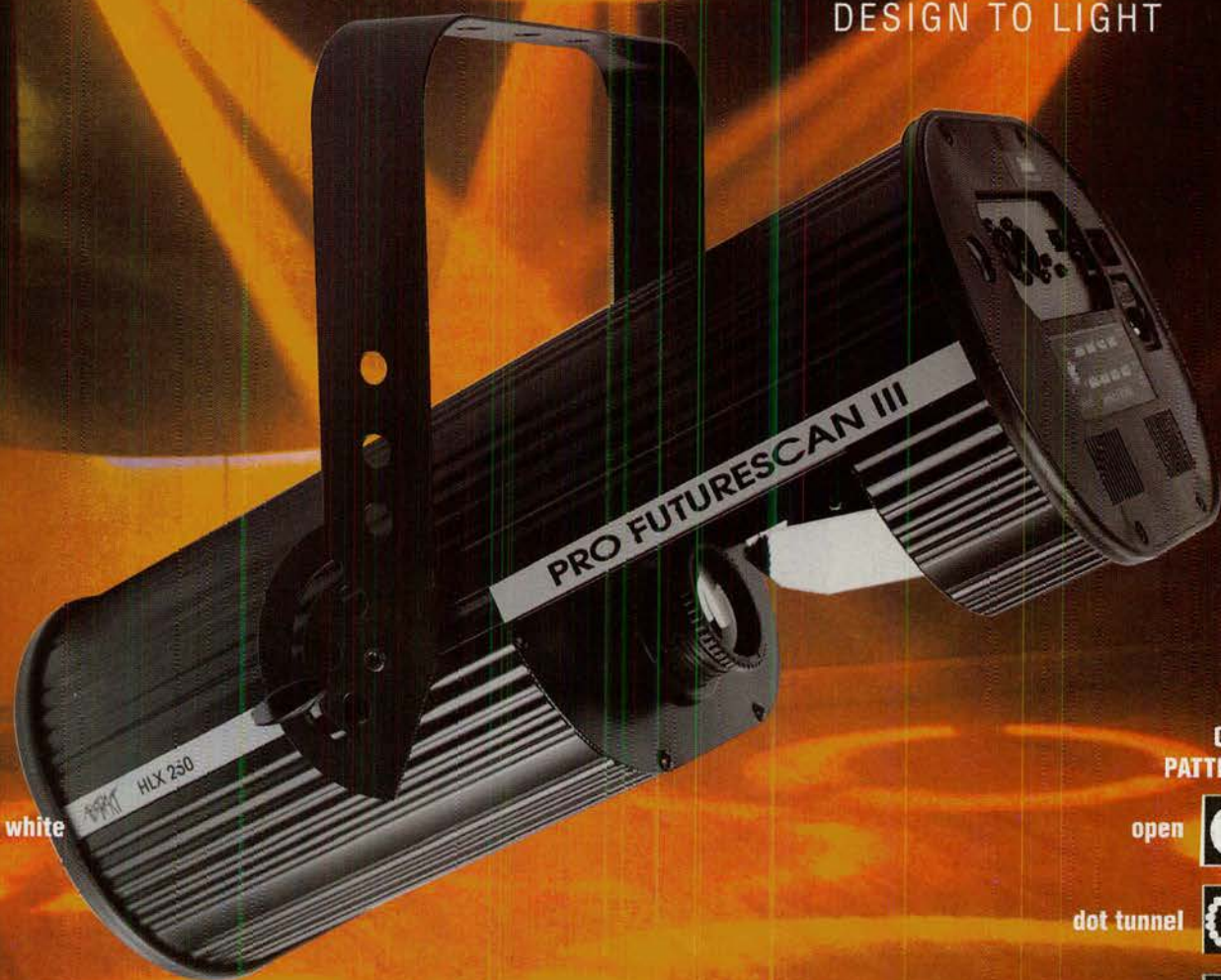


Ian Blackburn at the Icon Console



# ABSTRACT

DESIGN TO LIGHT



**POWERFUL  
COLOUR  
PALLETTE**

-  open white
-  red
-  blue
-  yellow
-  green
-  orange
-  magenta
-  cyan

**FEATURES:**

- HIGH OUTPUT LONG LIFE 250 WATT LAMP
- \*DMX CONTROLLED OR MUSIC TRIGGERED
- LOW MAINTENANCE RUNNING COST
- MOTORISED COLOUR PALETTE
- SEPARATE GOBO SELECT
- WEIGHT - 10 KILOS

**GOBO  
PATTERNS**

- open 
- dot tunnel 
- slash 
- segment 
- triangle 
- tunnel 
- bubbles 
- stars 

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**LDI**

# CITY THEATRICAL'S AWARD WINNERS

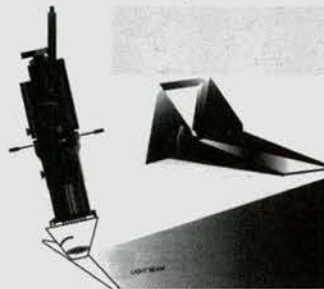


*The Aquafog 3300*

City Theatrical Inc. won two awards at LDI this year.

Widget of the Year was awarded to their Beam Bender, a gadget specifically designed for dance designers. According to City Theatrical's brochure 'our Beam Bender allows your 'shinbusters' to skim the floor and get the maximum light on the dancers feet. Also useful for shooting around scenery or obstructions, you'll find many uses for the Beam Bender'.

The Atmospheric FX Machine Award went to City Theatrical's Aquafog 3300, a water-based system that is lightweight and portable. It features a durable moulded thermoplastic tank for corrosion resistance and a large lid lifts for easy loading of the stainless steel ice shelf. A stainless steel pump brings heated water from the tank up to the dry ice and a 6" fan pressurises the tank and sends the fog out to the stage. Aquafog 3300 conveniently plugs into wall outlets and is easy to move even when filled with water and ice due to large 8" rear wheels and 3.5" front swivel castors.



*For further info call: City Theatricals (800) 230 9497.*

*The Beam Bender*

## Pyro Courses

November 1995 marks three years of distribution of Le Maitre products in Australia by Lightmoves Technologies. During that time they have regularly run Pyrotechnics Training Courses.

"Courses are attended by an average 25 people and special courses have been conducted for the major Arts Industry Training Institutions," said Jonathan Ciddor, Managing Director of Lightmoves. "Over the time the courses have been running we have trained over 600 people. Awareness of the courses has seen students from all over the Eastern States and interest from SE Asia. The Commonwealth Employment Service are sending clients to increase their skill levels and employment prospects.

"Our stockist in Perth, Kevin Harris of Pro Design Lighting, has achieved WA Department of Mines accreditation for his course which has trained 150 people. Melbourne stockist Lightmoves PES, runs regular Special Effects nights as well.

"Our courses originally ran over three and a half hours but quickly stretched to four and a half hours. Recently with the introduction of the Theatre Effects range of Aerotechnics streamer and confetti launchers and Hand Held Pyrotechnics it has further expanded." *Enquiries and course bookings: Rosalyn Maxwell (02) 560 0000.*

# G300



# Le Maitre

## G300



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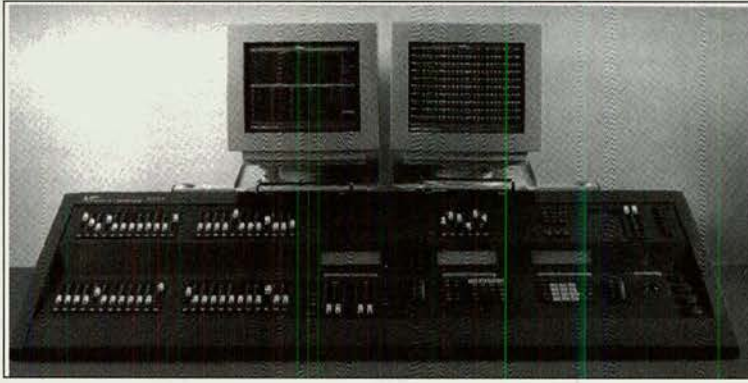
# Strand releases from LDI

Strand released several new products at LDI including the new Strand 550 high performance memory lighting console with 54 submasters, for use with GeniusPlus or Lightpalette operating software and additional optional Strand application software packages. The operating software chosen sets the capacity of the system in increments from 100 intensity channels plus 100 or colour motion attributes to a maximum of

1500 channels plus 500 attributes. Attribute capacity can be increased by reallocating unused intensity channels. Future expansion of capacity or functions (through application software) is designed into the system through the purchase of upgrade packs or additional extension software.

The enhanced Lightpalette software was introduced for the 430/530 and new 550 series consoles. Features include:

- ◆ enhanced 32 bit Pre-emptive multi-tasking Operating System
- ◆ 12 Part fades
- ◆ 2000 cues
- ◆ 400 Mb hard drive show data storage
- ◆ New effects with Midi timing control, new

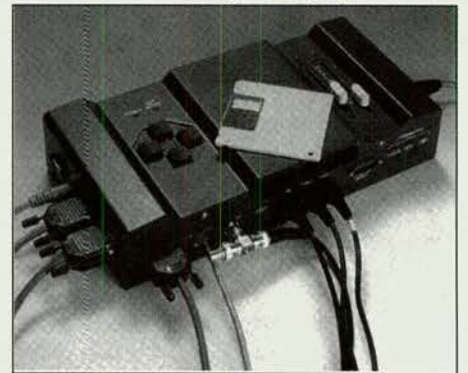


- attributes, improved rate control
- ◆ Full screen Spreadsheet style cue editing in preview
- ◆ integrated control of scrollers standard
- ◆ Ethernet - network distribution of Midi, Remote Video, DMX and peripheral devices
- ◆ up to 4 monitors per console
- ◆ fully integrated moving light control with Tracker software
- ◆ improved text labelling.

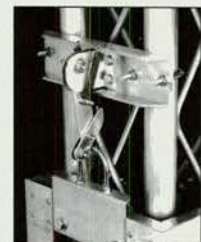
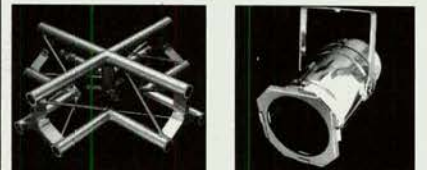
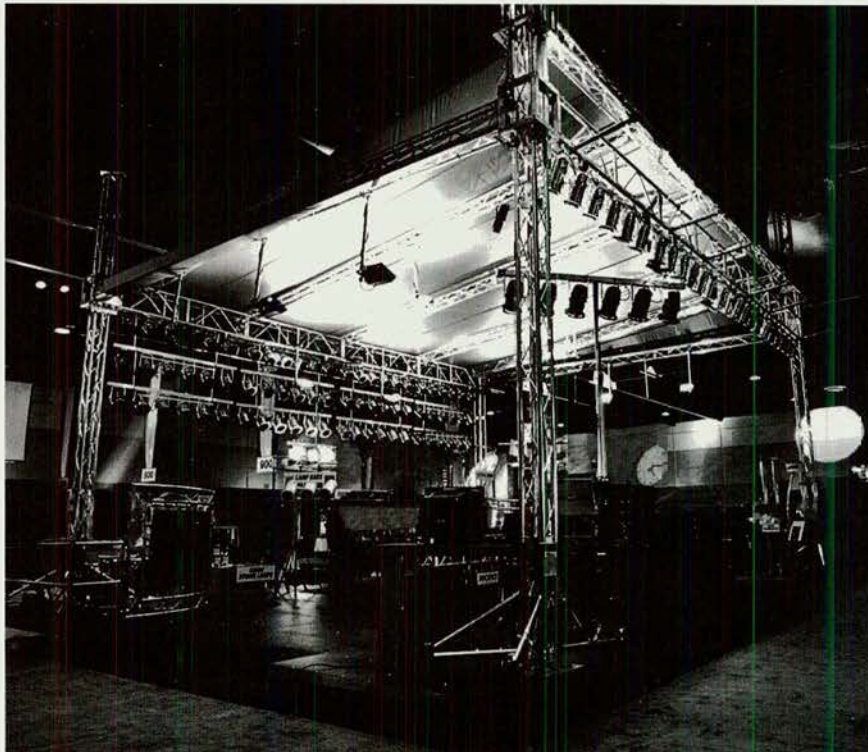
The SN100 is a microprocessor-based Ethernet node offering a wide range of console connection facilities at a remote location. It is for use with the Strand Lighting ShowNet™ data distribution system and designed for use with Strand 430, 530 and 550

ranges of consoles with Networker™ software installed. The SN100 has local connections and control of two CRT screens, two selectable DMX In/Out lines and can be used as a portable unit or wall mounted. Two SN100 units connected together may be used to distribute DMX over long distances using Ethernet independently of a console. Future expansion is incorporated - 3.5" disk drive, keyboard port, Midi connection, RS485 and RS232 ports, two slider faders and four selection keys.

For further info call: *Bytecraft (03) 587 2555.*



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# SYDNEY'S NEON MAGIC

Photo: Babette Griep

The original owners of the building No.1 O'Connell Street in Sydney, commissioned Barry Webb & Associates to supply the electrical design of the total building as well as the diesel generation back up.

"It was classified to be a higher reliability building so it was based as such in the upper end of the market place both for what the building was technically able to offer and consequently the higher return it could get," said Paul Whitehouse, Senior Electrical Engineer at Barry Webb. "It uses a lot of technology that is state of the art in regards to energy management and light fitting designs. It was designed for today's and future capabilities in regards to cable reticulation or putting UPS into the building and basic general items like that, which a modern building these days requires.

"After the commissioning of the building as such, we were also involved in the majority of the tenant fit outs. Some were high profile solicitors and merchant bankers who put dealing rooms and other items in with separate UPS's which we integrated into the building's system. That way they had a reliable system and didn't interfere with other tenants."

Recently the neon lighting on top of the building has been reinstalled. The main problems with the original design was that it was not designed for expansion and it was difficult to replace the neon tubes when they failed.

"We weren't involved with the original instal-



lation," Paul said. "We've evolved some installation techniques and also arranged with the building access people to build a special gantry to allow easy replacement of the neon tubing. This also meant for the first time that the building owners could actually clean the glass on the roof. Everyone is pleased with the result and it makes the building a landmark in Sydney."

Neon was supplied by First Neon who were responsible for the design, manufacture and installation of the cold cathode neon tubing and have been involved for many years in negotiations with the old owners and the new owners.

"Recently the cold cathode neon lighting on the top of the building has been reinstalled after being decommissioned some two and a half years ago by the old building owners due to excessive service and access problems," said Peter White, the Director of First Neon and the Chairman of the Neon & Illuminated Sign Association of Australia. "First Neon were engaged by the building owners back in 1993 to service and report on the failing neon. The original installation, carried out by another neon company, had serious design faults. The main problems were associated with the type and direction of the high voltage electrodes and their connections at the end of each neon unit back to the transformers. Water generation, the building of dust, insects and the associated corona effects led to high voltage arcing back to the building and consequent tube and transformer failure

"In addition the winds experienced at roof level are at times up to 150 kms per hour and the existing fixing methods were inadequate to cope with these extreme conditions. The new project incorporates the latest component technology available and overcomes the original design faults." **● Cat Forcer**

## Maverick on the Gold Coast

Warner Brother's Movieworld on the Gold Coast have a new attraction entitled *Maverick* which is an 'illusion spectacular' based around *Maverick* the movie. The illusions occur in a mock Western town and everything is controlled by a PLC.

Safety is the main priority and areas where explosions occur are ringed by infra red beams which close down the effect if they are broken by any member of the cast.

Bytecraft in Queensland supplied the lighting equipment having previously supplied some theatrical cyclorama lights and five dimmer racks for the *Riddler's Lair* at Movieworld (the *Riddler's Lair* consists of part of the actual movie set from *Batman* which is constructed in one of their sound stages and lit mainly by wiggly mirror lights).

Lighting consists of six trusses of 394 par cans ranging from very narrow spots to medium floods as well as 1K lekos. A couple of Wildfire ultra violet floods are also deployed. Control is by an ETC Expression lighting con-



sole which is 'talked' to via Midi from the main PLC computer. Twenty 10 amp 12 channel rack mounted Bytecraft dimmer racks were installed.

"It was actually a very simple and straightforward job," said Geoff Biggs of Bytecraft. "We used the people from the Gold Coast Arts Centre, their mechanical people and some of their electrical people. We dealt with Ray Calcutt from the Arts Centre and he got the team together including some riggers. They provided the team, we provided the gear and all we had to do was lay the trusses down, hook up some chain hoists, put on the lights and run all the cables, haul it into position, hook it on to some hooks and run the cable to the dimmer racks. It just seemed to happen. The majority of everything was up in a couple of days and then our engineers came up and commissioned the dimming system.

"From a lighting point of view it's nothing

special but it's just big. What is nice about the project is the interaction, the fact that they're using the Midi Show Control to control things - motion control to move scenery and make



things magically happen on stage. It's an all encompassing show and is good from a complete show angle. It's a simple show but very smart technically."

Audio includes a main cluster of JBL speakers as well as a distributed sound system around the top of the seating. The amplifiers are all

QSC and the front of house desk is a Langley 501, an automated desk manufactured by Amec.

Lighting designer was Tom Lazeka, an American consultant who also did the *Riddler's Lair*. Visual Audio Supervisor of the park is Rob Manago who also worked as the installation co-ordinator for the event. **● CF**

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## Inaugural Martin Dealer Conference

The inaugural Martin Dealer Conference took place in October with over 30 representatives from all over Australia attending the two day conference in Sydney. Special guest, Peter Skytte-Christoffersen direct from Martin in Denmark, was on-hand throughout the event to help.

The aims of the conference were to ensure that all Dealers provide a high-level of service, pass on the philosophy of the Martin Dealer Network, provide Dealers with a thorough knowledge of products and give them the opportunity to initiate informed discussions and have their questions answered.

Martin Dealer of the Year was announced - Paul Nicolau from AVL Electronics (Victoria).



Working hard are Peter McKenzie (Laser QLD), Shane Bowman and Emmanuel Ziino (Show Technology), Brian Story (Skypak QLD), Martin White and Evan Gosper (EMJAY NSW).

## WF 250 Series of Long-Throw UV luminaires

The new WF 250 series of 'Long-Throw' UV lighting fixtures from Wildfire are High-Intensity Black Lights designed to powerfully illuminate fluorescent materials at distance from 10-125 ft. These new fixtures are available in three separate models - 20° spot, 50° medium spot and in 90° flood for use depending on the specific film, stage, display or themed entertainment application. All 'Long-Throw' Wildfire fixtures are supplied with heat resistant deep-violet coloured filter glass which will not fade or scratch, claim Wildfire. The unit comes supplied with an integrated ballast, automatic safety cut off switch, mounting bail, pipe clamp, safety cable and one year warranty.

Also available from Wildfire are larger 400 watt 'Long-Throw' UV units which throw up to 125 ft for murals, starscapes, signage etc.



and invisible fluorescent paints and materials. For further info call: GUVT (07)358 5022.

## Theatre Effects

### Aerotechnics and Hand Held Pyrotechnics

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♦ *Sky Cannon* has a 50 mm diameter hand held launching barrel.

♦ *Pocket Cannon* has a 25 mm diameter hand held launching barrel.

♦ *Electric Air Cannon* has a single or double 50 mm diameter launching barrel supplied on an electrically triggered bulk storage tank.

The Hand Held pyrotechnics comprise of instantaneous flame effects produced with Flash Paper and Flash Cotton.

♦ *Electronic Flasher* is a single or double barrelled, battery powered flash effect that is concealed in the palm of the hand.

♦ *Flint Flasher* is a flint fired flame effect concealed between thumb and fore finger.

♦ *Flash Wands* are single and double ended battery powered flash wands.

♦ *Flash Paper & Flash Cotton* are small packets of flash paper and flash cotton used to achieve a wide range of instantaneous flash effects. It burns with a bright yellow flame and leaves no residue (State regulations vary, some States may require permits to purchase).

Theatre Effects of Merrylands USA are now available throughout Australia through Lightmoves Technologies and their pyrotechnics stockists: VIC and TAS - Lightmoves PES (03) 813 2955, WA - Pro Design Lighting (09) 409 8964, QLD - Skypak Lighting (07) 3852 2757. For further enquires call: Lightmoves (02) 560 0000.

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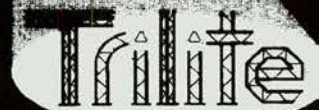
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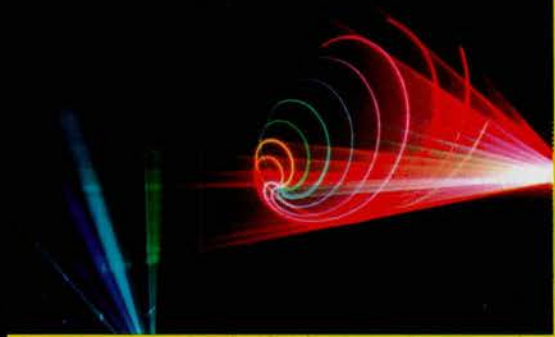
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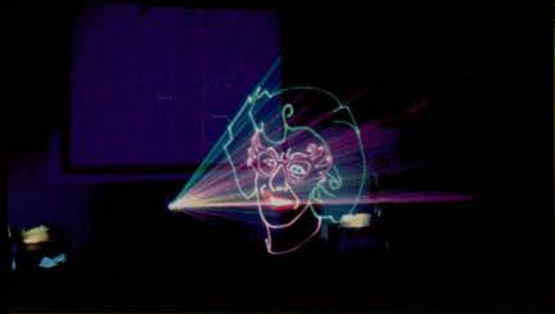
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# SPACE PROBE 7

Cat Forcer talks to Rod Nielsen and Roger Cameron about the new ride from hell at Australia's Wonderland.

Photos: Babette Griep

As you drive closer to Australia's Wonderland Theme Park, it's impossible not to notice their new addition thrusting into the heavens. *Space Probe 7* is an awesome structure and a ride that you wouldn't catch me on for a million dollars! It's certainly not for the faint hearted and signs before you enter run through a list of medical conditions that prospective riders must not suffer from.

*Space Probe 7* cost about \$5 million and was designed by Australia's Wonderland own theme park designer David Ward-Fear. It was decided to add another dimension to the ride by creating an audio/visual experience to keep the punters amused as they await their turn on the ride.

Basically the story is that the place is being invaded by aliens and it's time to evacuate. As you enter Tunnel 1, videos relay newsreaders (actually from Channel 7 as they sponsor the ride) warning of the impending danger. Lights begin to falter, sirens wail and the seeds of panic are sown. The sense of urgency is heightened in Tunnel 2 and by the time you're in Tunnel 3, with the smoke billowing around you and lights flashing madly, your heart is racing. With orders to evacuate booming out, the doors to the base of the ride open and the guards (dressed in futuristic clothing) shout 'there's no time' and they literally throw you into your seats. Rod Nielsen, Audio/Visual Supervisor at the park, admits that the plan is to



The guys said they get a lot of reactions, mostly screaming of course, and that most of the riders are female. Apparently there are a lot of shouted obscenities when the ride hits the bottom.

"There is a countdown from eight to nought and, if the people notice the monitors at all, you'd expect to be dropped at zero," said Roger Cameron, Lighting and Effects Consultant from Pollard Productions. "But they can actually drop anytime between six and minus two seconds! The anticipation of when it's going to happen is very scary."

Sky doors close on the return of the riders so that the launch area becomes a controlled atmosphere, mainly because the Trackspots and Emulators located there don't work so well in the daylight.

The first Rod heard of the ride was the end of last July - not much time to put it together considering the opening was November!

"In essence it's a get on and get off ride whereas we've tried to make this an event," said Rod. "As the sections arrived, they were put up using Wilsons big crane's whilst the canopy was built on the ground next to it. We tried to outfit the canopy as much as we could before it went up in the air. Once it was in place,

there was still a lot of scampering up and down the inside of the turret. We had to take most of the sound gear up in buckets on our backs."

"It would take us a good 10-15 minutes with a lot of puffing and panting," said Roger. "But it's very good for the peccs although not the knee caps."

Six Venturis PCs supply the A/V component to the various queue-line structures. The software, written by Bold, links events on the video to contactors that control the lighting and Midi notes for the sound FX. The queue line computers are running in a simple loop while the Pre-Launch room sequence is triggered by switch contacts on the door. Similarly the Launch area and Tower effects are started in real time by switch contacts on the door and operators panel and by proximity switches on the ride structure which detect the position of the carriages.

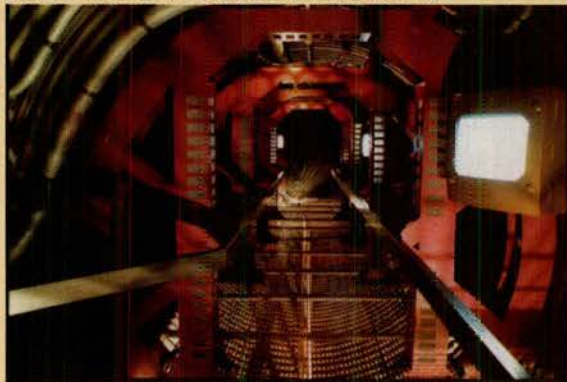
Audio is distributed via Soundcraft mixers to the Evac., Denon or QSC amps as required. The queue line, tunnels and Toa horns are all driven by the Evac. amps designed by Kent Learned from Blue Mountain Audio. The Denon 'Surround' amp is used in the Pre-launch room while QSC USA amps drive the Launch pad and Tower systems.

Outside of the entrance to the tunnels, modified Bose 101 speakers are mounted along the entry path queue-line as well as 48cm monitors replaying a welcoming video. Each 101 has a single 24V amp mounted inside with a big hole cut out for the heatsink - Rod apologises to Bose for this

Each of the three tunnels has three 48cm monitors replaying the newscast and audio is via custom cabinets fitted above head height in a cavity in the bulkheads that line the walkway. Each bulkhead has a single Magnavox 6.5" speaker.

The neon, supplied by Barton Neon, is housed in perspex casing which had to be hand sanded to achieve the correct level of opaqueness. The midnight blue neon had to be imported from Italy and Roger chose it because it was close to UV.

"There is more neon to be placed in Tunnel 3 yet and that will be a 'crackle neon' - a glass tube filled with broken glass

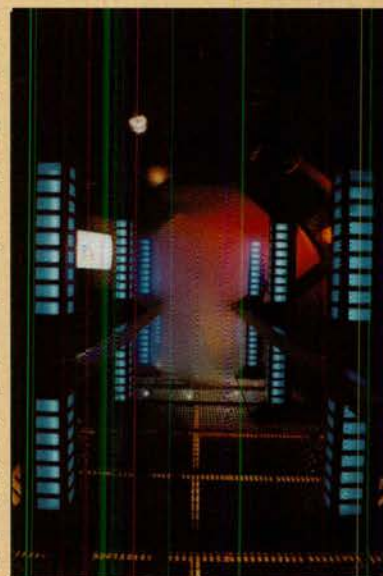


Tunnel 2

'scare the crap out of everybody before they even get on the ride'.

"Once everybody is locked in their seats the guards push a button on the launch control panel which gives a signal to the computers to say go into the launch mode," said Rod. "Beacons start spinning, control lights flash, Trackspots and Emulators flash, strobes, a bang of air cannons and a bang through the PA, sky doors open - and off they go."

You are taken 200 ft into the sky and then the monitors in the canopy tell you the power is about to be cut off, and you are dropped to the ground in about 3 seconds. The guys at Wonderland said it's quicker if you're seated with a group of fatties.



Tunnel 3



SPACE PROBE 7 (continued)

so that the arc from neon, when it's trying to ignite, gives a lightening bolt effect," said Roger. "Basically it's jumping through the broken glass because it can't find an easy path. Also in Tunnel 1 are dichroic uplights at the end, bulkhead lights and emergency lights - all appropriate to the environment. We also have the beacons and getting this shape was really difficult. I think I got the last 12 in Australia with a lot of help from the Auburn branch of Rep Co."

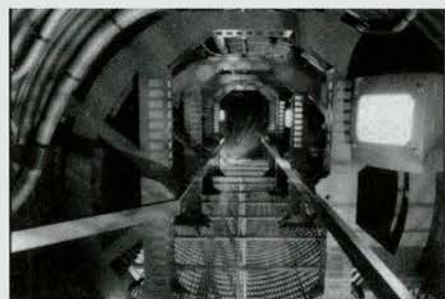
Designer David Ward-Fear has made the cables part of the futuristic design running them through flexiduct material.

"We've tried to keep everything as invisible as possible in the tunnels," said Rod. "We didn't want customers poking their fingers in things they shouldn't because they might break something."

Tunnel 2 has similar lighting with more mayhem - the house lights go off more often, the neon flickers and the emergency lights flash more. Scanners under the mesh floor come on a couple of times every three minutes and the beacons slow down as 'power fails'.

At Tunnel 3 a Jem ZR41E-7986 smoke machine is running so that as the 12 people enter into the Pre-launch area they carry the smoke with them. Note there is a 'chicken door' out of the building for those who do not wish to go any further. The ride carries 12 people at a time so it's important to have a fast turn around, the mock urgency factor helps to achieve this. It is hoped to turn around 700 people per hour.

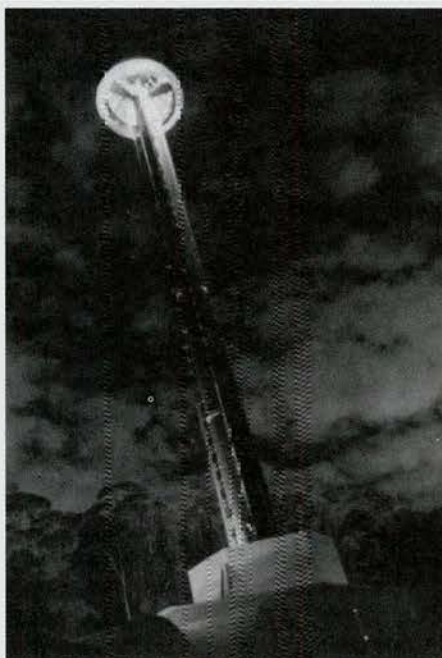
In the Pre-launch room there are four EM15's mounted to the ceiling in each corner and each of these is matched to a Canon V-SB100 sub at floor level on the feature wall



Control area

which includes three more 63cm TV monitors. This area is driven by the Denon AVC3530 in front/rear configuration with a few milliseconds of delay thrown in for effect. There are three Magnavox 8" speakers mounted in the ceiling on the Evac. 24v system.

"Part of the brief was to make sure we conformed to safety standards and were able to turn on/off anything in an emergency ie. fire," said Rod. "The Evac. system is based on a battery back up 24 volt single rail which was designed in-house by one of our technicians. It does some of the FX stuff but it's basic func-



The Jem Heavy Foggers do their best to obscure Rod Nielsen and Roger Cameron

tion is to look after getting people out should we really lose power."

The sound FX for the Launch pad are triggered from a Roland S760 sampler for which Colin Timms provided the samples. A ring of 12 Martin EM15's circle the base of the ride. Each is wired in opposite pairs and driven by the USA 370's. The EM15 subs are mounted in each of three corners in cabinets which also house two Jem Heavy Foggers air cannons and Emulators. Six Toa TC1EZ horns provide Evac. coverage around the ride base.

"With the lighting, I basically had the ideas and Sander Van Brandwyk made them happen," said Roger. "In the launch area there are numerous fans and Spitfire fittings which are hanging on wires so that when the fans go on they sway around. The Spitfires are behind the cable tray producing a kind of gobo and an impression that the walls are moving. So when you come down from the ride your disorientation is increased. Four Trakspots and two Emulators are also in the launch pad area. I was surprised to discover that the Pinstots on the floor actually sit oct 200 ft in the air, under lighting the underside of the canopy! There are three Magastroses supplied by Show Technology."

In the Tower are three pairs of EM15s and V-SB100s left and right of the carriage all driven by the remaining USA 1300. These and the twelve 63cm monitors provide the news of the final demise of the riders informing them of the impending 'power cut-off and lift failure'. Six more Toa horns were installed for Evac. purposes. Beacons and strobes are also installed in the canopy.

The management at Wonderland were keen to have a laser show from the top of the tower every weekend night but there was not enough space on the top to put a laser.

"I said we'd have to somehow go with a fibre optic system and I approached four laser com-

panies in Sydney to work out how to do it," said Roger. "Three of them said it couldn't be done and wanted to do it with mirrors which wouldn't work because the Tower sways in the wind. But Oracle said they would give it a try, bought out 80ft of fibre optic and did a demo off the top of the Demon rollercoaster. The output was acceptable although we would have liked it brighter. So we decided to put a 25 watt laser in the shed outside the launch pad and run fibre optics across the floor and up the tower. Originally the fibre optic cable ran through a piece of conduit that wasn't marked and, two days before we were due to open, we were trying to get the floor spots working when things started to glow green! Unfortunately we'd cut through both pieces of fibre optics which was embarrassing and expensive. However, to their credit and once we had all stopped crying, Oracle got someone to re-terminate the fibre optic and bring the laser into the room so there was enough fibre optic to reach the two laser heads at the top."

The lasers co-ordinate with a pyro show designed by Christian Howard of the original Howard & Sons to produce a 'War of the Worlds' type show. The canopy is full of aliens who 'shoot' down with lasers onto different parts of the park where co-ordinated pyros explode to enhance the effect. There's a musical track made up of samples from different science fiction shows like Star Trek.

The Tower has four lightening rods on top of it and huge copper flat bars from the base of the ride to earth stakes outside the building.

Project Design & Installation

Rod Nielsen, Roger Cameron, David Ward-Fear

Installation Crew

Daniel Galea, Mitch Hart, Paul Morris, Mark Ryan (from Wonderland)

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Dynalite

Oracle Lasers

Capricorn Alarms & Communications

Evac. System Design and Supply

Blue Mountain Audio

A/V System Control

Bold Pty. Ltd

Sound FX/Sampling

Colin Timms

Special Thanks to: John McCauley, Steve Bray, Alsitair Dewar, Harvey Kauffman, Paul Williams, Thad Roberston, Kieran Sharp, John Nielsen, Ross Wood.



# 20 Years Ago

Your diarist ran out of steam in October, so Phil Cullen has offered some reflections on this twisted time. Phil was, as you may recall, operator of Mac Enterprises Lightshow, a serious competitor for your previous columnist, whose lighting company struggled to catch The Phil.

Some interesting moments ... like the time I called to pick up my guy after the show and found the whole place in darkness .. as I approached the venue (Haberfield Rowers Club) my guy ran up to us and said "quick, the lights are under the floor around the back .. let's get out of here quickly .. I'll explain later .. they might come back .. they're looking for me .. let's go.. hurry" .... It happened that during the night my guy had a Diversey BVI fogger (the type you used to spray orchards for fruit fly) and we put paraffin oil in them (Ondina and Shellsol T).

This caused the units to become flame-throwers at times, and apparently my guy burnt some punter's hair and his mates were looking for us.

These foggers were noted for being very messy. When we used them we had huge oil slicks on the floor. This used to cause enormous problems with venues that had nice floor surfaces. The floors were stained and very slippery, so the punters fell over and the venue managers were always looking for you with daggers. The mixture of flyspray and paraffin oil used to cause enormous problems for people with medical problems. It was common for people to be carried from the gig with breathing problems and you had to begin using the machines after the band began playing for two reasons. One, because the machine made a noise like a lawn mower on full throttle, and two, because after one application the band would be trying to find you through the smoke to get you to stop the machine because every-

thing was covered in oil and very slippery, not to mention that the band couldn't breathe.

And another time at Loretto Normanhurst Girls School, when we fogged the place out and the nuns ran up and said "stop it immediately" and I told them that the band's amplifier had broken down and that the smoke was coming from that ... and they believed me.

Security at gigs did not seem to be as big a thing 20 years ago, as it is now. Most gigs organised their own security. Only one firm that I know of operated. It was Tony Lloyds "Bleeding Sounds Security Service". Tony worked in the morgue and used to specialise in answering the phone by saying "its pretty dead around here" when asked how it was going. Tony used to think that he was not earning his money if there was no trouble at the gig, so if it was a quiet night, he would grab someone and say, "I know you. You caused big problems last week.... we will be watching you, you little s...!" So the guy has four huge mates who proceed to start taking people apart.

Tony locks himself in the toilet while his associates put on white judo coats and run screaming at the crowd (none of them even knew how to spell judo, but felt this was a good trick to scare off the trouble makers). After the police had arrived and the broken windows and chairs had been counted, Tony re-appears and says to me "I don't know Phil, all these people want to do, is fight!". The promoter, Brian Todd, said he had to sack Tony because he caused more problems than he stopped.

This was at Lane Cove Town Hall, a gig that Brian Todd ran every week on a Friday. Tony Lloyd was quite a colourful person. He shared a farm at Kellyville with Neville Diamond (a union person). Late one night when Neville was out, a group of young guys drove into the farm and proceeded to chuck wheelies on the front paddock. Tony yelled at them to stop and when they didn't, got a .22 rifle and shot out their windscreen. Neville had to bail him out later.

Later, Tony moved to Waitara and started a collection of medieval armour, complete with spiked ball and chains and racks and swords.

Probably the worst gig was the Blaxall Street Ballroom at Granville which was an old picture theatre owned by the Catholic Church and was used for bingo during the week, and bands on the weekends.

The Sharps and the Rockers used to turn up and of the 300 people there, 299 wanted to fight and one came for the band.

You had to literally use mike stands to get the punters off the stage. The band and crew and sound guy and light guy literally stuck together like glue and all loaded and left at EXACTLY the same time (you would not get attacked in a group; only if by yourself.)

A great gig was the Ingleburn Community hall. Ingleburn being then a sleepy outpost of Sydney. The army boys from Holsworthy used to come and fight and let off their rifles sometimes. It was a colourful affair, with bands like Tantalla playing Slade songs while the punters broke up what remained of the hall.



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# The Projection Art of Ian de Gruchy

Artist Ian de Gruchy turns buildings into monumental works of art using 18cm x 18cm slides and 4000 watt projectors. Under the cover of darkness, de Gruchy changes the form and dimension of buildings with a veil of projections.

During the recent Brisbane Biennial, he transformed the Performing Arts Complex and the Parliamentary Annexe into musical instruments or musical scores.

In the past, de Gruchy has turned a library building into a bookshelf, the High Court building into the Parthenon and another building into a giant microchip.

Ian de Gruchy started to become interested in projection as an art form in the late seventies with his first big break through coming in 1980 when he was commissioned to create a projection idea for a theatre performance called 'Suburban Mystery'.

"The response was amazing in terms of the production itself so from that point on I decided to concentrate fully on that medium," said Ian. "I got a chance to go to New York in 1983, with a grant from the Australia Council, thinking there would be lots of people working with projection. It was really exciting but I discovered there were only a handful of people



*Musical instruments, musical notations and contemporary music scores provided the source material for a series of slowly transforming projections, which occurred each night of the Brisbane Biennial from sunset till late. QPAC. 4 x 4K Pani Projectors.*

projections entail much more consideration than night club projections - where to get power, organising the site, deciding on lenses etc. I didn't start doing projections in Melbourne until about 1990 as most of the work I had been doing up until then was either ambient projections for nightclubs or for theatre/performance. So essentially it was interior projection work."

In 1992 Ian converted the side of the State Library of Victoria into a bookshelf by scaling-up a photograph taken in the reading room.

"I was delighted at that point to find out that Bytecraft had some of the Pani 4000 watt HMI projectors," said Ian. "That meant I could start working in the city on appropriate scale. Even though one is effective, I was lucky enough to have eight of them for the recent Brisbane Festival."

Four of the projectors were trained on the side of the QPAC building whilst the other four were deployed on the Parliamentary annexe building. The images are rather large, depending on the lens and the distance, with one of them reaching nearly 80 metres in length.

"It means I can start developing works which operate within the fabric of the city," said Ian. "I come from a sculpture background and I've always been interested in appropriating various sites around the urban environment to make works of art. I haven't deliberately gone away from a gallery structure, it's just that the work I've always done can't operate only in a gallery structure. I've always been interested in my work being out there in the public sphere."

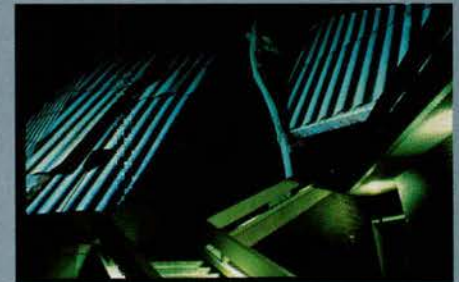
Stands had to be built for the projectors trained on the parliamentary annex - two pro-

jectors were each on two buildings - and they also had to be weather proofed. Ian designed and built his own structures to house the equipment. For the main site at the QPAC building, Ian used a two tonne which he drove in every evening to set up the projectors.

"That proved very successful because people who saw it happening would come up and have a chat," said Ian. "It demystified the process of what we were doing. I had to do it for economic reasons as I couldn't afford the price of a secure building platform. Power was installed for me in fact power is always an interesting consideration with the projectors being 3 phase. For one project I had a generator which gives you the freedom to go anywhere. It's the same scale as the film industry where you have to supply your own power on site."

● **Cat Forcer**

Ian can be contacted on (03) 9419 8822.



*The 'harpy' projection transforms the Adelaide Festival Centre facing Elder Park and the banks of the Torrens River, a site of original aboriginal settlement. The 'rock face' projection was created using images photographed in the Flinders Ranges. 6 x 400w Simda projectors.*



*City Wall projection appropriated a wall specifically chosen for its visibility and character in the heart of Melbourne CBD. The project further developed the idea of the 'subversive billboard'. A 1 x 4K Pani was programmed so that images automatically changed over the duration of the evening at intervals set between one and two minutes.*



*Dazzle of Shadow - ceilings and columns become the screens for oblique projected images. The piece was devised by ACTA, directed by Peter King and produced by RMI. 14th floor (gutted) Tivoli Building, Melbourne. 8 x SAV 2050 projectors controlled by Dataton.*

jectors were each on two buildings - and they also had to be weather proofed. Ian designed and built his own structures to house the equipment. For the main site at the QPAC building, Ian used a two tonne which he drove in every evening to set up the projectors.

working in this area. I did a lot of work for different clubs, like The Pyramid Club and Studio 54, culminating in a large project for the Limelight Organisation. That set me on my way really."

Whilst in the US, Ian was able to work with the Polish projection artist Krzysztof Wodiczko who gave Ian the opportunity to produce his projections for the Venice Biennale in 1986.

"That gave me valuable experience working with high powered equipment and organising more difficult installations," Ian said. "City

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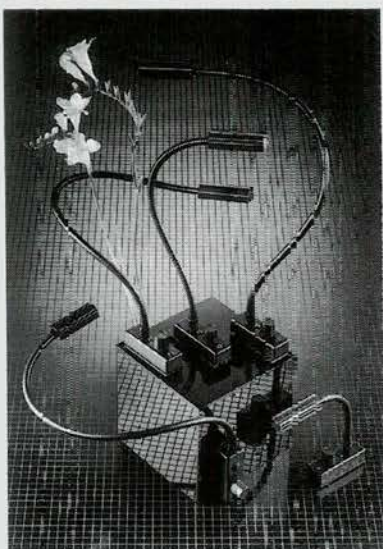
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Fire Balls - burns instantly and completely

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# 3 new products from ROSCO

## Supergel Professional Reference Edition

This special limited edition 'swatchbook' contains large 8" x 10" (20cm x 25cm) sheets of the entire Supergel collection, as well as transmission and special energy distribution information for each colour. Perfect for testing colours in a studio, light lab, and for teaching lighting with colour in schools. The Professional Edition is an important tool for anyone who uses colour and diffusion in stage lighting and it is presented in a 3 ring binder.

## Rosco Hazemaker

The Rosco Hazemaker creates an effect similar to that of 'cracked oil' but the Rosco fluid developed for this machine contains no animal, vegetable or mineral oil. By eliminating the oil, Rosco eliminates the concern about residue on sensitive electronic equipment.

The Hazemaker produces a texture in the air without heat and warm up time. The output has been calibrated to produce just the right level for focussed light beams to be seen. Under normal lighting conditions the effect will not interfere with the audiences ability to see.

The Rosco Hazemaker is a self contained 240 volt machine, in a custom designed road case with two carry handles and four casters to

facilitate handling. The Hazemaker fluid is water soluble and Rosco claim that it does not leave oily residues on delicate equipment, or patrons when the fluid has evaporated into the atmosphere.

Dimensions are 51.5 cm x 42 cm x 42 cm, weight is 9.9kg, price is \$3400.00 plus sales tax.

## The Rosco BR-25

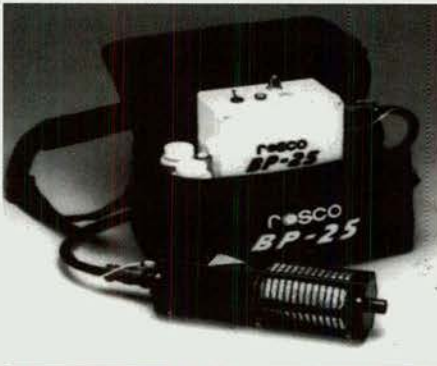
Rosco's Battery Powered Fogger for portable applications consists of a separate Heat Exchanger Head, a Control Centre and related wiring and tubing to connect the two units. An over-the-shoulder carry case holds the four 6 volt batteries providing 24 volt power, and the Control Centre.



Great for film and television sets when small amounts of smoke or fog are required in strategic locations. Other applications include moving pieces of scenery, costumes and theme park rides or floats.

Power requirements are 24 volt, 8 amps. Maximum fluid consumption 7ml per minute. Warm up time 1.5 minutes approx. Price without batteries or charger \$2100.00 plus tax. Batteries and charger \$675.00 plus tax.

All three products available through Rosco dealers. Further details from Rosco (02)9306 6262.



# DOUGHTY RELEASES

Doughty have released a number of new products including the Alpha Winch Stands. They are general purpose workhorse winch stands, available in two models - the 275 which has a max. height of 2.75m/min. height of 1.365 and the 450 which has a max. height of 4.5m/min. height of 1.92m. Both models have a safe working load of 50Kgs and other features include:

- + accepts the standard Doughty accessory tops
- + low loading height for easy rigging
- + studio version available with factory fitted multi head
- + tripod base assembly with 'Lazy Leg' mechanism negates steep slopes
- + spring operated safety system
- + castors fitted as standard
- + finished in heavy duty chrome plate and silk black powder coat
- + adjusters ensure lateral movement on mast inner section is kept to a minimum

Also new from Doughty are the Strata Stands, Zenith Truss Lifter and some additions to the range of Doughty Clamps.

For further info call: CDA (03) 9467 8666.



# ALL ABOARD!

When Disco Mirror in the UK ran a similar article to the one in November's *Connections* entitled 'Smelly JEM', they received this reply from David Neale of David Neale Associates, London.

To the Editor

I was interested to read your news item on JEM in which Nigel Morris said that he is the pioneer of the concept of Aroma Therapy. He also states that with all new concepts come the Pirates and that 'any other companies who wish to copy this (Aroma Therapy) must beware!!'.

I feel I must don my eye patch, grab my cutlass and take up the cudgels. Most R&D projects work in a vacuum, for obvious reasons, but in this particular instance I must put the record straight.

Earlier this year Light and Sound Birmingham were contracted to do the lighting for Wet Wet Wet's world tour (Pirates to a man!). The band had an idea that they wanted to attack as many senses as possible - sound, sight and smell. Terry Lee was discussing the problem with Martin Nicholas, as no show in his previous experience had ever crossed all these barriers. Martin then had a brain wave! LSD had been inspirational in the development of the G300 smoke generator, but Martin had seen beyond the normal capabilities of the product. He wondered if this new innovative machine could deliver, on a concert basis, an aroma therapy oil which until now could only have been rubbed in by hand or burned off in small crucibles for home use.

Martin Nicholas then contacted the Body Shop to see if the concept was viable. A G300 was rushed to the Body Shop's labs and a course of intensive tests were carried out by Body Shop technicians. The results were spectacular.

The findings from the Body Shop told Martin Nicholas that not only were the essential oils not degraded and the aroma's were as expected, but there were also no toxic degradation effects.

Martin Nicholas was now able to offer Wet Wet Wet the exact result they wanted, as the aroma therapy was able to 'touch' their audiences by being absorbed into the skin, and the 'smell' which was created specially for the tour was an integral part of the memories of the event. Body Shop and the Wets management could not reach an agreement in time for the tour. As a result the oils were purchased from a company called Aqua-Olium.

The first time this was 'seen' was at the PALA 95 in Singapore, where Le Maitre were demonstrating the effect, and was reported in the trade press.

So you see, a good idea is not necessarily a new one. I've been working on this with Le Maitre for a good while and at no time have spotted so much as a 'Jolly Roger' on the horizon.



# CLS tackle unusual tasks

## BOTANICA RAINBOW

Concert Lighting Systems were approached to solve a technical problem of an unusual nature for the Melbourne Festival. Anna Bradbury and Brett Foulis, landscape architecture students at R.M.I.T, received a government grant to put their idea of creating a rainbow in the Botanical Gardens at night into reality. Finding a way to do it was not easy.

"They knew very little about lighting but they came up with the knowledge that it could be done," said Trevor Lloyd of CLS. "They first approached another lighting company to hire a follow spot which they tried. They had previously found a diffraction grating from friends at the university and they used the light, bouncing it off the diffraction grating to produce a rainbow - the white light from the follow spot was broken into the visible spectrum. We were then approached to see if we could mount a follow spot in a tree with a diffraction grating and have it switch on and off automatically every night for three weeks.

"Their idea was to project this coloured image into a mist of water and obviously they found a company that could supply a variable mist and they set up a number of jets of fine water mist. It ended up quite large, with about 40 sprinkler heads and it covered one of the main pathways in the garden. That only made it more difficult for us! Not only did we have to cope with rain but the water mist could actually blow in any direction and arc into the light."

Trevor and his team tried a variety of powerful lights for the project including different follow spots and moving lights. Anna and Brett needed an intense source and one that could cover as much of a complete spectrum as pos-



"Anna and Brett tried many different diffraction gratings and diffraction foils until she came up with the final result," said Trevor. "Then we came up with the idea of taking a piece of our large aluminium box truss, and mounting the cyberlight and diffraction gratings in it. We made actual yoke and clamp arrangements for the diffraction gratings. Each truss section was covered by plastic tarpaulin to try make it waterproof before hoisting it into position in the trees."

Control was by a GAM Access Pro console which proved suitable to be left on for three weeks with a PLC switching the power on and off. During the period Melbourne had a very violent storm and water did get into the equipment but fortunately they only had to shut down for one night.

During the festival, Anna and Brett's rainbow proved a very popular, off beat attraction and many people have approached her to reproduce it elsewhere in Australia.

sible. There were also problems with some of the lights reproducing an image of the reflector which disturbed the rainbow by not giving a good cross section of the colours. Eventually a Cyberlight was considered the best option as it could zoom down to a fairly tight and concentrated beam and the MSR lamp was good at covering the whole spectrum"

trolled and safe method," said Trevor. "We built a large trussing grid over Caulfield diving pool and another one in the pool as a safety device. We used Caulfield as it was heated and allowed access for a crane to lower the set although the Director was a bit worried about losing the cabin in 18 ft of water! So we built a steel mesh floor in it, about six feet deep, and set up the cabin on four chain hoists above the pool. It had to be a very stable and strong structure because we were going to have to raise the cabin carrying a lot of water, weighing in all about four tonnes. We had to put in vertical trusses to the bottom of the floor which required one of our chaps to work as a frogman!"

Unfortunately one of the actors was not only claustrophobic but also could not swim!

## GENIUS sign with QUANTUM EFEX



Quantum Eflex have just been signed to represent Genius SRL Australia wide. Genius manufacture a range of competitive effects lights based on the powerful HMI 575 lamp. These effects lights are designed for both image projection as well as the 'beams through smoke' effect. Almost all of the effects are also represented in a 'DJ Series' which feature smaller quartz halogen lamps. All of the effects can be configured for master or slave with a remote blackout switch for those with a discharge source.

Also on the production line are smoke machines, five types of strobe projector, 1 to 6 way cyc lights, UV projectors, fresnels 7 PCs, followspots and par cans, both black and polished. Outdoor equipment includes a scanning flower type effect in a weatherproof case called the 'Hantarex' which is powered by a mammoth 2500HMI lamp source that, according to Quantum Eflex, can be seen from up to 5 km away.

All of the equipment comes with a 12 month warranty and gobos, where applicable, can be selected from an almost infinite range.

A large selection of the range will be gladly made available for demonstration and all retail/dealer enquires will be welcome.

Call Quantum Eflex (08) 295 1455.



## UNDERWATER TRUSSING

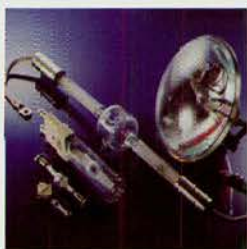
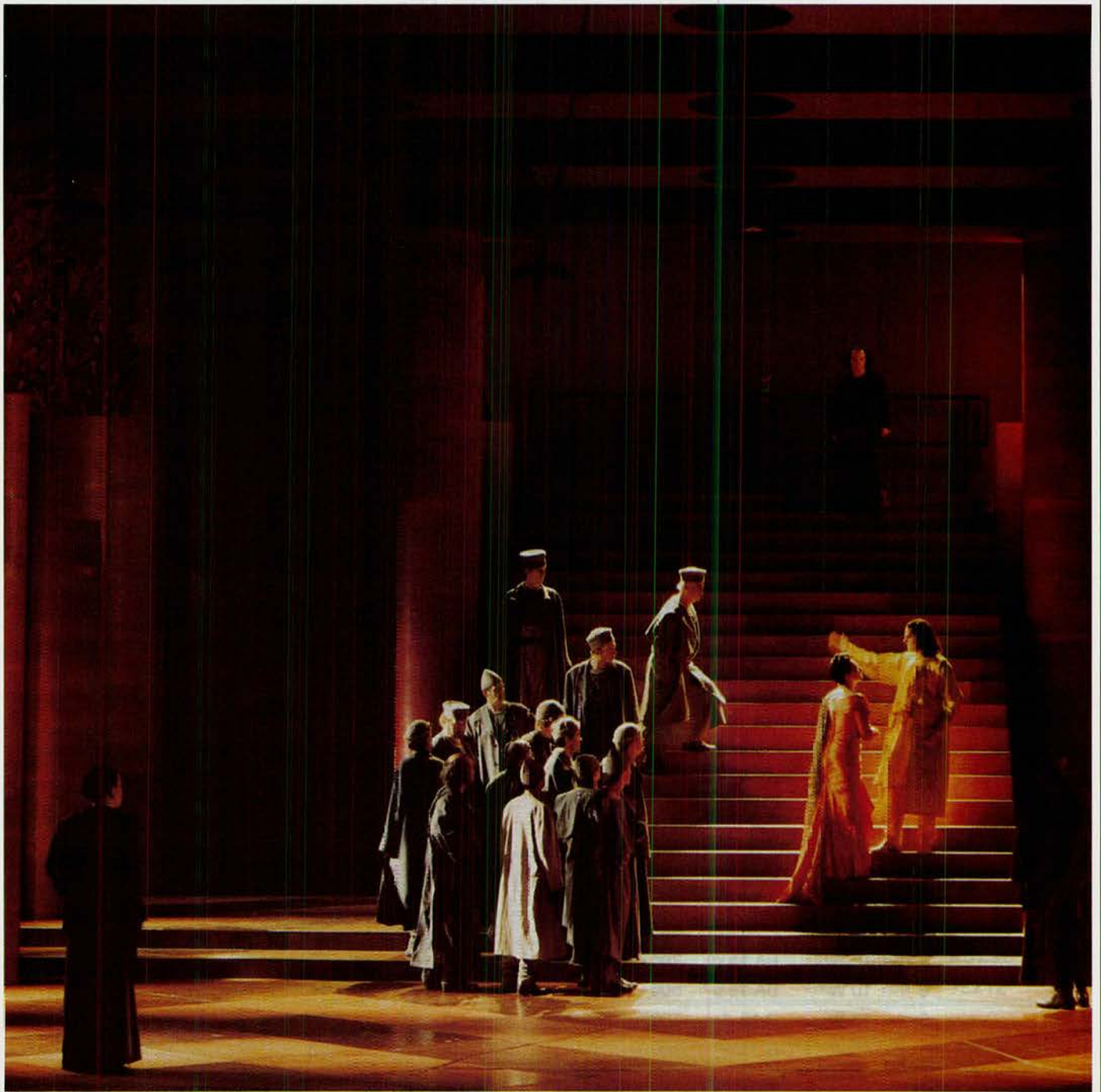
CLS have also been involved in another unusual, watery project which tested their expertise as truss and chain hoist specialists. The ABC asked them if they could lower the set of a ship's cabin, containing three actors, into a deep pool of water to simulate a slowly sinking ship.

"They needed to sink the cabin with a con-

able. There were also problems with some of the lights reproducing an image of the reflector which disturbed the rainbow by not giving a good cross section of the colours. Eventually a Cyberlight was considered the best option as it could zoom down to a fairly tight and concentrated beam and the MSR lamp was good at covering the whole spectrum"

# THE ART OF LIGHT

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# ETC unveil new products

New from ETC (Electronic Theatre Controls) at LDI was the range of Express consoles designed to make the power of the popular ETC Expression line available in a family of five new compact consoles. From 24 to 250 channels, and with ETC's new X/Y Trackpad for level/rate, moving light and scroller control, the Express is aimed for users in smaller venues, tours and rental applications. Express features three two scene/single scene consoles at 24/48, 48/96 and 72/144 channels, as well as a 125 and a 250 channels version. All Express consoles feature 24 submasters, a real disk drive and a standard monitor output.

Also new is the Obsession ML designed to give ETC's top of the range console the best moving light control facilities. It is available in 750, 1536 or 3072 channels/attributes and features ETC's new X/Y Trackpad for fingertip pan and tilt control, as well as six multi-function encoders for other moving light attributes. Built in personalities for many of the leading moving lights and scrollers support 16-bit positioning for total accuracy, and LCD displays and a backlit LCD touchscreen make programming easier and quicker.

An Obsession ML Designer's Remote Console



*The Obsession ML*

is also available, allowing moving light controls to be added to existing Obsession installations via ETCNet. Being a multi-user system, it's possible to light the show with a moving light and a main console, then return the ML console to the rental shop when the show opens.

Obsession moving light software will be available soon for all Obsession consoles, providing the main features of the Obsession ML, for operation using conventional controls.



*Obsession ML Designer's Remote Console*

ETC unveiled Unison at LDI, its long-awaited architectural lighting control system. Unison is an integrated range of control stations, processors and dimmers, providing system solutions for any architectural application, from a boardroom to a theme park. Unison features an industry standard network, permitting easy interface to many building management, audio visual and security systems. The network is topology independent, resulting in installation cost savings.

Unison dimmers are convection cooled, wall mounting enclosures, housing a variety of incandescent and fluorescent dimmer modules as well as, optionally, the Unison system control electronics.

One of the most interesting features of the Unison system is the Windows configuration program, which ETC will be distributing free of charge to anyone interested. Providing a graphical user interface for the development and configuration of larger systems, the program allows designers to import room drawings and create lighting schemes, and even complex room combine systems.

For further info call: ETC (608) 831 4116 or Jands (02) 516 3622.

# STARDRAW 2D

Recently released is the Stardraw 2D, a two dimensional drawing package. A Window '95, true 32 bit, multi threaded application to compliment Stardraw 3D. The program includes an unlimited number of attributes that can be assigned to each object. The package comes complete with a library of lights and trusses that can be customised to your own specification.

A detailed reporting facility allows you to customise the reports to your particular needs giving such things as power consumption, weight of a rig, number of gels used, gel number, lamps, truss, lights, cables, channels etc.

Importing files such as fastCAD, DXF, CorelDRAW plus full OLE 2.0 support is provided. OLE 2.0 gives the ability for Sound and Pictures to be attached to the drawing so a 'set list' or even projected images could be included with your design, alternatively embed a Stardraw 2D drawing into your word processor document.

Future releases will include an interface between Stardraw 2D and Stardraw 3D to allow the moving of designs from one to the other giving the designer the option of designing in 2D and then to visualise the design in three dimensions, thus allowing the client to see a drawing they can understand.

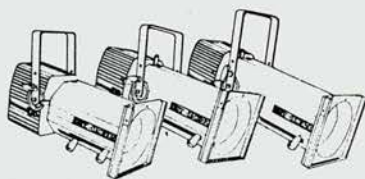
Stardraw 2D costs \$1,150.00 (no tax applicable) or \$475.00 for Stardraw 3D users. For further info call: CDA (03) 9467 8666.

# PHOTON LIGHTING CONSOLE from Compulite

The new Photon from Compulite brings cost-effective but sophisticated control to the smaller end of the lighting control market.

The desk can control up to 120 channels and 48 colour scrollers with fully integrated colour change software. There is one dipless automatic/manual crossfade playback, and 20 automatic/timed multifunction controllers - each capable of playing up to 20 chases simultaneously as well as lighting states.

Price is approx. \$10,000 list ex tax. For further info call: Coemar De Sisti (03) 9467 8666.



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# Le Maitre's new LSG

The LSG is a Low Smoke Generator which is used with a G-300 fog machine. The combination of the two units produces a large amount of simulated dry ice fog. The LSG uses liquid CO<sub>2</sub> to chill the smoke as cold as -20°F in the H series and as cold as -50°F in the L series.

The H refers to high pressure CO<sub>2</sub> units and the L to the low pressure CO<sub>2</sub> units. The LSG-H uses conventional compressed liquid CO<sub>2</sub>, which is commonly used as the pressure gas for soft drink machines in most bars and is available from any local welding supply store or soft drink supplier. The LSG-L uses refrigerated liquid CO<sub>2</sub> which is also available at most welding supply stores. It is very important not to confuse the two gases as each has very different characteristics for storage and supply.

Custom configurations can be accommodated for various applications.

The H series will operate with two 20 pound cylinders in its bottle rack supplied as part of the main chassis, or can be remotely attached to any number of siphon cylinders at a remote location. The distance the remote cylinders can be located is limited to the number of cylinders required to fill the hose. The unit has a 6" diam. outlet and the discharge hosing can be up to 100 ft long. The G300 will operate at about 75% of it's maximum capacity. If the G300 is operated higher than 75% it will not allow for enough cooling and the fog will prematurely begin to rise. The CO<sub>2</sub> consumption is quite small at 5 pounds a minute in the H



The G300 to be used with the new Low Smoke Generator

series, this is 4 minutes per 20 pound cylinder.

The L series will operate with a remote dewer attached next to it. A dewer is quite large, approximately 24" in diameter and stands about 60" high. There are many advantages to using a low pressure vessel. The two most important are, the cost of the CO<sub>2</sub> is less expensive and secondly it will cool the fog much lower in temperature. If the fog is cooler it will remain on the floor longer and lower. Remote dewer locations are possible, this should be discussed in detail before designing or pricing the unit. This unit has a 10" diam. outlet and the 10-12" discharge hosing can be 100 ft long or more. The G300 will operate up to 100%. The CO<sub>2</sub> consumption is quite small at 7.5 pounds a minute, which allows 50 minutes of continuous use on a single dewer.

For further info call: Le Maitre 44 181 646 2222 or Lightmoves (02) 560 0000.

## Bits

♦ Performance Lighting have used a new **Compulite D54** to DMX converter for an installation.

♦ CDA have shipped **DF-50's** to Skypak Lighting (QLD), Stagecraft (WA) and Theatrecrafts (WA).

♦ Key Lighting (VIC) have ordered some additional **De Sisti Caravaggio 1200's** with flicker free ballasts to further complement their stock refit.

♦ KW McCulloch (TAS) have sold a consignment of the **De Sisti Wyeth Tungsten Softlights**.

Call CDA (03) 9467 8666.

♦ AVLA (Audio Visual Lighting Australia) have been busy installing **Martin 1220 Roboscans** at the popular DC's Nightclub in Northbridge along with a range of **Martin DJ Series FX lights**; the Go Club in Fremantle have added 4 x **Roboscan 805's** to their lighting rig along with a **2308 controller** and DJ Big W is a happy man; 4 x **Martin 218 Roboscans** and a **2308 controller** has just been added to an already impressive lighting rig at Mandurah's Marinas Nightclub; Jack Daniels Promotions had a successful promotion night at the Civic Hotel with a nine screen TV wall, 8 x **Martin 805 Roboscans** and 2 x **218 Roboscans** supplied along with Harley Davidson motor bikes to really set the mood.

Call AVLA (09) 227 1399.

♦ The first **Strand Lighting 430** lighting desk has been installed by Bytecraft in the George Fairfax Studio, Victorian Arts Centre and word back, according to Bytecraft, is that they are happily playing with all its features.

Call Bytecraft (03) 5872555.



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# Myer Melbourne Christmas Windows



For almost forty years, Myer Melbourne's Christmas window displays have spellbound audiences with their vivid colours, dazzling special effects and intricate characters. Since their inception in 1956, they have been praised as the finest Christmas window displays in the world, and have won over 20 international awards.

This year, a team of 25 sculptors, designers, electricians and animatronics experts have worked since April to make *The Gumnut Babies* the biggest and best window display yet.

9200 hours of labour was spent on the sets, props and staging, 3 kilometres of framing

pine was used as well as 600 litres of paint and 40 kilograms of hot glue. 3000 hours of labour went in to the animation with over 180 individual animated characters in the window display. Each animated movement will be repeated over 1.7 million times during the display's 51 days of operation. Four purpose built computers co-ordinate the animation.

Lighting and special effects include 592 lights, 4.5 kilometres of electrical cable, 1 kilometre of gaffer tape and 1800 fibre optic cables. 600 hours were spent on safety checks prior to installation with the display consuming 1152 amps.

## LDI

### Cyberlight to begin shipping with All LithoPatterns High Resolution Glass Gobos.



High End Systems are gearing up to produce their Cyberlight and Cyberlight CX automated luminaires with a full compliment of LithoPatterns high resolution glass gobos. The new gobo wheel also features another major improvement; all positions are replaceable with custom glass gobos. This gives users the durability and artistic freedom of glass with the convenience of metal. Every gobo in Cyberlight, both fixed and rotating, is now fully interchangeable and can accept High End System's stunning range of high resolution LithoPatterns. Existing Cyberlight fixtures may be upgraded to the new Cyberlight Litho version at an authorised High End Systems Service Centre.

For further info call: GUVT (07) 358 5022.

# NEW LASER SYSTEMS

## LDI



cision mechanical system allows adjustment of the fibre optic cable. It can be connected to other laser systems existing in the laser market today.

Control is by a DAG 2 digital lasershow playback system which controls 2 independent scanner channels with blanking; 2 high speed colour changers for AJM-Crystal colour changers; 24 switch channels 0-10V for controlling the optical bench.

ACF, in collaboration with Vantage Lighting, presented the new Real 3-D Display Laser System. With the help of special polarisation glasses it is possible to experience the illusion of coloured pictures changing their shape and coming closer.

The 3-D Projection head includes laser optical systems and scanning head that allow the projection of images and animations in 3-D. It is cased in a dust proof aluminium box, with non reflecting mirrors at the front side. RGB-Crystal colour changer system allows the production of coloured images in 16 million different colours and a high pre-

Also new is the DP100 Professional Laser Display System specially designed for display advertising in hotels, nightclubs, theatres, department stores and shopping malls. The complete system is integrated in a road flightcase and no routine maintenance is required. The EP100 laser display system is available in all laser output powers from 300mW air-cooled systems to 30 watt outdoor lasers. A digital playback system controls the complete laser system including music.

For further info call: Vantage Lighting (415) 507 0402.



## Bits

- ♦ Black Express have supplied 4 x Martin Foboscan PRO1220 XRs, 3032 Software-based Controller and a 2532 Direct Access Panel to Petersham RSL Club.
- ♦ CC's Stage & Audio in Melbourne now has a complete Martin intelligent showroom running via a 3032 PC Package. For a comprehensive demo, call Roger Clapton (03) 9690 3999.
- ♦ TCP (Sydney) have taken delivery of 12 new Mini Ultrascan 2's with rotating gobos installed at Patrick's in Sydney. Call CDA (03) 9467 8666.

# NU-Light Systems

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## The VL5B Wash Luminaire

Although the VL5 and the VL5B luminaires have identical exteriors, several improvements have been made to the VL5B. Jim Bornhorst, Vice President of Engineering at Vari\*lite, explains this most recent addition to the Series 300 system.

"By redesigning the blue and magenta filter sets as well as interchanging their positions, we were able to extend the range of all the colours, especially the pastels," he said.

Jim also gives credit to OCLI (Optical Coding Labs Inc), who made process improvements better controlling the accuracy of the filters themselves.

"The reason for this improvement was to focus on a few important colours which are not included in the VL5 luminaire."

Added colour range was not the only refinement made to this luminaire, "at least a year of development time has been devoted to improve the repeatability of the luminaire (when you cue up a certain colour it is the same colour every time) and the colour match between luminaires". Another new feature is an optional 1200 watt bulb "producing more than a 25% increase in lumens from the luminaire".

Vari\*lite Europe training manager Andy Voller explains how the original VL5 luminaire uses the filter sets to perform colour mixing: magenta, amber and cyan.

"The magenta filter set starts from open white and becomes more saturated, and the same is true for amber. But the difference with the cyan filter set is that as you put the filter in, it goes from open white through lavender into some deeper blues and then on to cyan, which means you can't achieve cool blues. This hasn't been an issue for most rock'n'roll applications, but for television and theatre where cool blues are commonly used it can be a problem. The cool daylight blues, LEE 201 and 202-equivalent colours for example, are often used in TV and theatre lighting. The VL5B luminaire with its extended colour range allows you to achieve those colours nicely."

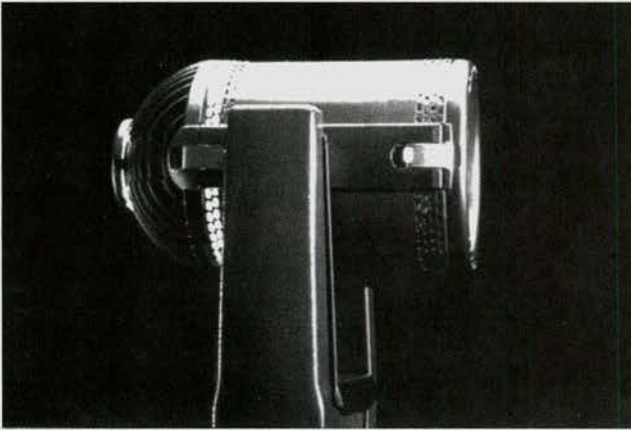
Andy Voller goes on to describe the new blues, "The cyan has been replaced by a completely new filter. The more you put the filter in, the more saturated the cyan becomes. It goes immediately into the new cool blues, and right through to a fairly deep, steely, green-blue. Since the magenta filter also goes

through a couple of colours during its traverse, by mixing combinations of the new blue and magenta, you can get a completely different range of very cool and what I call 'cosmic blues', as well as some very creative lavenders and magentas, before you eventually go through to the saturated blues at the end."

Tim Mitchell, resident lighting designer at Birmingham Repertory Theatre UK, has used the VL5B luminaires in several productions. The most recent production was *Macbeth*, where they used 12 VL5B's.

"They worked really well, they helped us achieve the look I wanted and the contrast we needed between the dark back wall and the actors," said Tim. "I first used them on *The King*

*And I* because we needed cool tones and more subtle colours. Also, the venue we were in is not only sensitive to noise, but you can't reach the rig to focus. I have tried using 'scans' in the past but they are just too noisy. The VL5B's are the best nits on the market to use for a musical or an opera, because you obviously can't have lots of fan noise. For example, on *A Midsummer Night's Dream* the luminaires were only five metres above the singers' heads." For further info call: Vari\*lite Australia (02) 317 5200.



## Atom unleashes Video

LSC were showing their successful Atom console with the new colour VGA video option at LDI and they state that the response has been overwhelming.

The video option, which sells for \$295 ex tax (not including monitor), gives a real time display of channels levels and the status of the console. A further series of screens allow channel levels to be previewed in scenes and chase steps, the patch can also be viewed by desk or dimmer channel sequence. LSC Electronics will be shipping video options towards the end of the January 1996.

For further info call: LSC (03) 9561 5255.

## JEM

Jem launched three new products at LDI - the ZR31, Par Fog 250 and Par Fan.

The ZR31 uses new formula stage haze and high density long lasting fluids specially designed for it and is capable of producing fine haze effects as well as conventional smoke. It has T-BOPS (Twin Bi-Phased Oscillating Pumping System), a 2.5Kw vaporising chamber and a 5mm high velocity cuprous helicoil for greater output (2-3 times output of ZR20).

The Par Fog 250 also has the last three above features as well as on board/removable timer remote with output level, no bottle or air holes and no leaks. It has a hanging angle bracket and high tech insulation system for minimal heat loss.

The Par Fan, a compact high powered fan module, interfaces with the Par Fog ensuring even smoke distribution and may be used for cooling performers on stage.

For further info call: Show Technology (02) 898 1111.

## Bits

♦ Macsound Electronics at Uralla are using the new **Strand Lighting LBX** control desk on a production of *Les Mis* at Tamworth.

♦ The 'old' State Theatre in Flinders Street, which has more recently been a Christian Revival centre, is now being renovated as a theatre by David Mariner and **Bytecraft** is providing the lighting.

Call Bytecraft (03) 587 2555.

♦ 70 of the new **Acclaim 650w Condensor Profiles** have been supplied via Selecons new French dealer. A rather sweet sale for them as France is the home of Robert Juliat, a well known condensor builder and is known for its parochial attitude to imported lighting products, says Simon Garrett.

♦ Rory Miller of Stagecraft reports the sale and supply of a swag of equipment to the Presbyterian Ladies College Performing Arts Centre in Perth. These include **Stagecraft** counterweight systems and drapes, **Jands Event** and **dimmers**, **Selecon Enhanced 1200 zooms**, **Acclaim fresnels** and **3 way cyc 800's**.

♦ John Carter, head of lighting at the beautifully restored His Majesties Theatre has just taken delivery of a pair of **Selecon MSR 1200 long throw followspots**. They were purchased from Rory Miller at Stagecraft Perth to replace the old Pani's in front of house.

♦ Last month I referred to 'Performance Lighting Australia' who point out that their correct title is **'Performance Lighting & Sound Pty Ltd'**.



## BLAKES FIREWORKS

Since the re-launch of the Torch System last year at PLASA 94, CDA report that Blakes Fireworks have had a cracking year.

Negotiations with Le Maitre were opened and satisfactorily concluded. A deal was struck allowing the Torch System to be manufactured under the Le Maitre patent. This now means that the Torch cartridges - similar in many respects to the Le Maitre Cartridges - can now be used in any Le Maitre detonating system with the aid of a simple adaptor - The B2L.

Recent coups have ensured Blakes Torch Cartridges are being used on several of Cameron Macintosh's shows including the British and European CATS tours as well as the Swiss production of The Phantom of the Opera.

For further info call: Coemar De Sisti (03) 9467 8666.

## MARTIN TRADE NIGHTS



Yes, it's another party photo from Show Technology - when do they find time to work!

This time it's people making merry and maybe looking at some gear at the Martin Trade Night in Sydney which Show Technology claim was a great success. On display was the new FAL (Martin's automated profile spot) which had only arrived in the country earlier that day.

An AVLA Martin Trade night was also held in Perth.

## Bits

Lightmoves Technologies activities in the market place have seen a wide variety of projects undertaken recently:

- ✦ Batemans Bay RSL Club where fibre optics, decorative lighting and entertainment lighting systems have recently been installed.
- ✦ The Coogee Bay Palace Hotel now has a fully functioning entertainment lighting, audio and video system.
- ✦ Randwick Labor Club is now completing their renovations that will see extensive Entertainment Lighting, Audio, Video, Paging and Intercom systems installed and operational for the 1995 Festive Season.
- ✦ The Russian Club in Strathfield now have Entertainment Lighting systems scheduled for late November installation.
- ✦ Bankstown Sports Club have an automated Entertainment Lighting system covering the stage areas integrated into the Rain Forest Lounge.
- ✦ Following its release at PLASA in September, demonstration stocks of Optikinetics K2 projection system have arrived in Australia. Product demonstrations will be undertaken throughout Australia in December/January. Brochures are available from Lightmoves Technologies (NSW) Pty Ltd. Call Lightmoves (02) 560 000.

## Optivision from Philips

Philips Lighting have introduced Optivision, a new approach to lighting control, incorporating Echelon's LonWorks technology as a basis for its control systems.

LonWorks technology was specifically designed to realise a standard that can be used

by designers of all building facilities. LonWorks' solution allows linked functions and decreased maintenance costs.

For further info call: Philips Lighting (02) 805 4494.

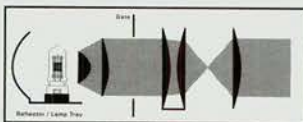
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The Studio Color automated wash luminaire is the lighting product the world has been waiting for. Check out the variables — variable intensity, infinitely variable color mixing, variable positioning, variable beam angle and profiling . . . Studio Color will be unveiled at LDI '95, and unleashed on Planet Earth in 1996.



## CYBERLIGHT® SV: THE STRONG, SILENT

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## STOP PREMATURE AGING WITH EMULATOR®

The Emulator laser simulator is now twice as bright at 1000 hours! With the unveiling of the new HOLL 1000 (High Output Long Life) lamp, the world's finest special effects projector now features a more stable source, significantly increased lamp life, and 100% increased output.



## News Flash! Dataflash® AF1000

In 1988 High End Systems made headlines with the Dataflash xenon strobe. Now we introduce Dataflash AF1000, the next quantum leap in strobe technology. The AF1000 is in a class by itself; not only as the world's most powerful strobe system, but also as a continuous illumination source and pyrotechnic/lightning simulation device. Four times as bright, control options include DMX-512, AF1000 Mini Controller, and the new LCD Controller. Now that's news!





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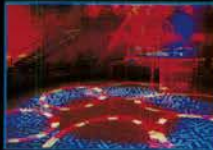
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Output now offers a 75%  
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LithoPatterns high resolution glass gobos produce mind-blowing projection effects so stunning, they must be seen to be believed. The Cyberlight™ SV, Cyberlight™, and Cyberlight™ CX automated luminaires are now fitted with new fixed gobo wheels containing a full complement of replaceable glass LithoPattern gobos. Lightwave Research™ LithoPatterns are offered exclusively through High End Systems.

All specifications subject to change without notice.

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Singapore 1334  
Tel: 65.742.8266  
Fax: 65.743.9322

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LDI

## Strand Lights

New luminaires from Strand were shown at LDI including the Toccata EP effects projector. The Toccata EP is a powerful 2000w high specification projector for slides or moving effects which uses a tungsten halogen lamp. It has a 3 lens condenser optical system with a glass heat absorbing filter. The fan cooling is quiet and it is supplied in black, with braced mounting yoke, C-clamp, and 1.5 metres of detachable cable to open ends.



Toccata EP

The Supernova 200i is based on the new Bambino 650 luminaire but with the 200w single ended HMI lamp (MSR) and takes advantage of the latest developments in igniter and elec-

tronic ballast technology to enable the ballast to be integrated with the head. It is supplied with barndoor and colour frame and 4m supply cord with moulded GR connector.

The Lekolite Zoom 4.5" variable focus ellip-



The Lekolite Zoom

soidal 575w luminaire is a zoom ellipsoidal redesigned to take a high efficiency HX600 lamp. It has new high-performance 250 to 500 zoom optics and reflector design. Suitable for small to mid-size venues, it has insulated handles, four shutters provided and is supplied in black finish with mounting yoke with colour frame, C-clamp, and 0.9 metres of power cable with bare leads.

For further info call: *Bytecraft (03) 587 2555.*

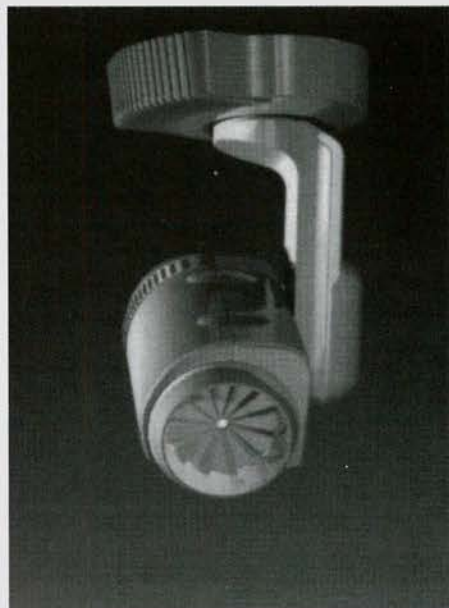
LDI

## IRIDEON AR5

The Irideon AR5 Interior Wash Luminaire represents the state-of-the-art in specialised interior floodlighting. The luminaire features a patented, computer-controlled, dichroic colour changing assembly, optional diffuser or douser mechanism, and robotic pan and tilt.

The radial colour changer has permanent dichroic filters to produce smooth colour crossfades through the entire colour spectrum.

Optional lenses provide a wide range of beam spreads from 7.5° to 60°, and beam control is available via either diffusion or dousing time-variable adjustments. Irideon claim that the diffusion mechanism provides precise and dynamic control of beam distribution. The dousing mechanism provides full-field dimming of beam intensity.



The AR5 luminaire is controlled by the Irideon Composer control system which allows system configuration and programming from an IBM compatible PC.

For further info call: *Irideon (214) 819 3208.*

LDI

## DMX without Wires

Goddard Design of New York, USA, won the Entertainment Lighting Control Award at this year's LDI with their 'DMX Without Wires'.

The DMX512 transcoders are designed for production requirements where a conventional DMX512 distribution cable is not practical. The transcoders take a DMX512 signal and convert it to a data compressed error checking format adapted for transmission by a standard data communication device. A second transcoder reconstructs the DMX512 protocol. It can be used with modems, leased lines, or spread spectrum radio wireless modems. Current units support 128 out of the 512 possible DMX channels.

In the spread spectrum wireless mode the user can send DMX from a single encoder-transmitter to any number of receiver-decoders. Ranges of over 1000 ft are practical. The system combines proprietary DMX data compression and error checking software with the high reliability and noise immunity of spread spectrum wireless techniques. These were developed for defence applications needing wireless systems that were nearly immune to jamming, 'Dead Spots', static interference, and cross channel interference commonly seen in other radio types are seldom a problem for spread spectrum radios. Spread spectrum radio does not transmit on a single frequency but spreads the signal across literally hundreds of frequencies. Interference on a single frequency is rejected. Digital techniques are

also used so that even if two different spread spectrum transmitters operate on the same channel a receiver will see only the messages addressed to it. So if the user needs a reliable DMX link to a barge in the centre of a river - here's the answer.

In modem mode the transcoder will allow you to send DMX512 down a normal telephone line. The system uses sophisticated data compression techniques to get the DMX data across the narrow bandwidth of either spread spectrum radios or computer modems.

For further info call: *Goddard Design Co (718) 599 0170.*

## Bits

♦ Adding to last month's article on the Take That tour is the fact that the show included a sizable production of pyrotechnics including Nuclear Bomb simulations, Air Bursts, Jet Curtains and Flaming Torches.

All the effects and control systems were from **Le Maitre** and were supplied by Lightmoves Technologies.

The co-ordination and liaison with all venues, local licensing authorities as well as touring pyrotechnics operators were provided through local pyrotechnics specialist Kieran Usher.

Call *Lightmoves Technologies (02) 560 0000.*

♦ The manufacturing division of **CLS** has delivered a new folding alloy truss to Sydney Opera House. They have also built custom triangular truss, chain hoists and hoist controller for 3-Faces nightclub and are now building a 1000 amp power distribution system for Les Miserables along with new alloy box truss, remote control dry ice machines, hoist controllers and dimmer racks all due for delivery to Hong Kong in January.

An unusual rigging job they had was rigging truss on Myer Bourke St store for absellers to descend and wrap up the Myer clock.

Call *CLS (03) 646 8444.*

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**Studio Color™ Automated Wash Luminaire**  
 MSR 575 lamp source, 100 million colour permutations, beam angle 8°-22°, variable frost, moving yoke 360°, pan 240° tilt, beam profiling, strobe, shutter, dimming. \$9537 ex tax.

## STRAND LIGHTING

Bytecraft Pty Ltd (02) 9587 2555  
**Colour Call CC1**  
 Suits Par, Cantata, Leko etc. DMX/Analogue control, 2-16 colour frames, max speed 11 frames/second, direct drive scroll position sensor. \$1639 ex tax.  
**Colour Call CC2**  
 Suits 2/5kW. DMX/Analogue control, 2-16 colour frames, max speed 11 frames/second, direct drive scroll position sensor. \$3475 ex tax.

## PAN COMMAND

Concert Lighting Systems (03)9646 8444  
**Colour Ranger**  
 Digital fixture that utilises a custom colour scroll that ranges from 2 to 11 frames. Remote speed and fan on/off is standard. \$1400 ex tax.  
**Colour Fader**  
 Features revolutionary dichroic colour system, can fade to any colour without the need to purchase costly colour scrollers. \$2500 ex tax.

## NEBULA TECHNOLOGY (08) 240 1165

**DMX512 Controlled Stepper Motor Driver**  
 Stepper Motor Driver designed to turn and position iris, colour and gobo wheels. DMX512 input gives 256 position accuracy with (fwd/rev) rotation and speed control. Will drive 2 motors, includes optical positioning. \$425 ex tax.

## V LIGHTING

AE Australia (02) 568 2100  
 Small and compact, stand alone or DMX controllable, 6 colours and white, 7 gobos, strobe effect, rainbow effect, dimmer effect, heavy duty and robust construction. \$815.00 ex tax.

## GENI

Show Technology Pty Ltd 1800 646 666  
**Microcolor**  
 8 dichroic colours + white, 0-100% dimming, strobing, accurate stepper motor control, adjustable focus, built-in mic for audio activation, pre-programmed audio chases, halogen lamp, DMX512 standard. \$660 ex tax.

## MARTIN

Show Technology Pty Ltd 1800 646 666  
**Robocolor PRO400**  
 32 colour combinations, MSD200 lamp, combined dimmer/shutter for 0-100% smooth dimming + fast strobe, 3 motorised gobos, adjustable metal focus, audio activated, DMX512 or Martin protocol. \$1238 ex tax.  
**Robocolor II**  
 11 dichroic colours + white, halogen lamp, variable strobe rate, beam angle 18° - optional 27.5°, precision optics with adjustable focus, DMX512 or Martin protocol. \$495.00 ex tax.

## CLAY PAKY

Show Technology Pty Ltd 1800 646 666  
**Combicolor 300**  
 2 colour wheels producing 49 colours and many combinations. 2 frost filters, HTI300 discharge lamp, adjustable beam diameter, 3 gobos, optical system with interchangeable objective lens, 0-100% dimming, strobe effect, DMX. \$2704 ex.

## GRIVEN

Universal Lighting & Audio Pty Ltd 1800 062 828  
**Spot 8 1000w DMX**  
 Using a 1000w halogen lamp the Spot 8 is a powerful colour changer for any application. Features include 14° beam angle, 8 colours, frost effect, rainbow effect, DMX512 or 0-10v control. \$1279.89 ex tax.  
**Spot 8 200MSD DMX**  
 Features of this unit include: 7 colours and blackout, 14° beam angle, frost and rainbow effect, DMX512 or 0-10v control. Uses a powerful 200MSD lamp. \$1562.34 ex tax.

## ABSTRACT UK

Universal Lighting & Audio Pty Ltd 1800 062 828  
**Scene Setter 100**  
 Featuring 8 dichroic colours, 7 times a second strobing, 0-100% dimming, DMX512 controllable or sound to light. Ideal for any small band or small club application. \$499.00 ex tax.  
**Scene Setter 250**  
 Professional colour changer featuring 8 dichroic colours, 7 times a second strobing, 0-100% dimming, fan cooled, DMX512 controllable or sound to light. Modular construction for easy maintenance. Uses long life M33 lamp. \$659.00 ex tax.

## JB LIGHTING GERMANY

Universal Lighting & Audio Pty Ltd 1800

## 062 828

**Varycolour 2000 - 200 MSD**  
 Colour changing spotlight with 36 colours, 4 gobos which provide 4°, 7°, 14° and 21° beam angles, strobe shutter, full range dimmer, wash/flood effect, blackout, full stepper motors, DMX512 control. \$1468.60 ex tax.

## RAINBOW

Herkes Electrical (02) 319 3133  
**Rainbow 2/16 8 inch Par scroller**  
 From 2-16 colours end to end in 1.4 seconds, DMX or analogue control. 12 bit resolution for smooth crossfades. \$1700.00 ex tax.  
**Rainbow 15"**  
 Universal adaptor for mounting on a wide range of 2K and 5K luminaires. Nine operational modes to suit all requirements. \$2955.00 ex tax.

## Acclaim Stage 1

Kit of four heads, power supply and cables. Universal adaptor fits most 500w/650w luminaires. Supplied complete with 11 colour gel string. \$3700.00.

## Rainbow Alfresco

Outdoor version of Rainbow's famous 2/16 changer. 16 colours in a weather-proof housing for outdoor applications. \$1800.00.

## COLOURSET

Showcraft Australia (02) 698 3009  
**Colourset Series 2 1K**  
 Suits Par 64, 1K profiles, Lekos, Cantatas etc. 2-21 colours, control via DMX512 or dedicated Colourset controller. Max speed 100 milliseconds/frame. Low noise motors, electronically controlled gel tension. \$1,470.00 ex tax.  
**Colourset Series 2 2K**  
 Suits profiles with 10"/12" lens, 2K fresnels with 8"/10" lens. 2-21 colours, control via DMX512 or dedicated Colourset controller. Max speed 200 milliseconds/frame. 12" opening allows full beam spread on fresnels. Low noise motors, electronically controlled gel tension. \$1,620.00 ex tax.

## Colourset 5K

Suits 5K fresnels with 10"/12" lens also 6 way DWE/ACL. Up to 12 colours, control via DMX512 or dedicated Colourset controller. Max speed 400 milliseconds/frame. 360° rotatable fitting. Gel cooling with low noise, high velocity tangential fan. \$2,250.00 ex tax. Barn doors \$215.

## Colourset 8W

Suits 8 way DWE/ACL fittings. Up to 12 colours, control via DMX512 or dedicated Colourset controller. Max speed 400 milliseconds/frame. Gel cooling with low

noise, high velocity tangential fan. \$2,650.00 ex tax.  
**Colourset Controller \$1,625.00/Colourset Series 2 Power Supply \$1,260.**

## COEMAR

Coemar De Sisti Australia Pty Ltd (03) 9467 8666

## NAT PC1000 (14-28)

Motorised projector with built-in CMY colour mixing, iris diaphragm, electronic on-board dimmer, zoom lens (14-28 degrees), remote focus, frost facility, gobo holder, uses 1K or 1.2K tungsten lamp. Control via DMX512. \$5,100.00 ex tax.

## NAT PC1000 (28-45)

Motorised projector with built-in CMY colour mixing, iris diaphragm, electronic on-board dimmer, zoom lens (28-45 degrees), remote focus, frost facility, gobo holder, uses 1K or 1.2K tungsten lamp. Control via DMX512. \$5,100.00 ex tax.

## NAT PC1200 (14-28)

Motorised projector with built-in CMY colour mixing, iris diaphragm, electronic on-board dimmer, zoom lens (14-28 degrees), remote focus, frost facility, gobo holder, uses 1200HMI discharge lamp. Control via DMX512. \$6,900.00 ex tax.

## NAT PC1200 (28-45)

Motorised projector with built-in CMY colour mixing, iris diaphragm, electronic on-board dimmer, zoom lens (28-45 degrees), remote focus, frost facility, gobo holder, uses 1200HMI discharge lamp. Control via DMX512. \$6,900.00 ex tax.

## LEISURE LIGHTING

Coemar De Sisti Australia Pty Ltd (03) 9467 8666

## Supaquest 250

Utilises 7 dichroic colours + white, 4 standard gobos, designed for club use, control via 0-10v analogue signal. Fan cooled, on-board sensing, 250w dichroic lamp. \$680.00 ex tax.

## COMPULITE

Coemar De Sisti Australia Pty Ltd (03) 9467 8666

## Whisper Colour Changer

High speed scroller, quiet operation, twin DC motor drive, adapts to wide variety of fixtures - DMX or analogue control, remote and local fan control. End to end speed on 1K is 1.7 seconds, with 0.72 second frame to frame. \$1,800.00 ex tax.

Note: All vendors have much more than the (maximum) four products illustrated here.

Next Issue's Buyers Guide: Colour Medium/Rigging

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## ADVERTISERS INDEX

AIBA	11
Alcatel Components	37
Amber Technology	9,19
Amps Unlimited	4
AR Audio Engineering	10,40
Aro Technology	75
ARX	47
Ashton Admor	31,48
Audio Oz	14
Audio Sound Centre	51
Audio Telex	49
Audio Visual Designs	28,38
Australian Audio Supplies	16,54
Australian Monitor	50
Australis Music	23
AV Experience	57
AWA	46
Black Express	129
Bose Australia Inc.	29
Burkinshaw Consultants	62
Bytecraft	114
Central Musical Instruments	56
Classifieds, 8 pages start:	79
CMC	3
Coemar De Sisti Aust.	139
Concert Lighting Systems	119
Daylight International	57
Disco World	99,102,106
ESA	34,77,89
F. Payton & Son	66
GUVT (Highend Systems)	132,133
Hannan Insurance	42
Hirepoint Software	62
Jands Electronics	2,15,32,74,137
Lightmoves Technol.	110,115,122
Magna Systems	26
Mark IV Audio Aust.	25
Multicontact	53
MultiMedia 2000	75
Musitronics/RCF Aust.	34
Newport Broadcast	59
Noisebox Entertainment	61
Osram	125
Paul Bryant Mastering	75
Penn Fabrication Aust.	111
Phillips Lighting	113
Premier Lighting	127
Production Audio Services	59,68
Pro Music	63
Quest	60
Ramtek-Big Box Builders	62
Rosco	126
School of Audio Engineering	65
Selecon	131
Showcraft	135,136
Show Structures	105
Show Technology Aust.	107,121,140
Sony Mastering	44
Soundcorp	24
Sound On Stage	67,72,73
Stage & Screen Travel	8
Staging Rentals	62
Studio Connections	69
Sydney Opera House Trust	51,66
Syncrotech Systems Design	20,21,55
System Sales	52
Tascam	35
Technofear/Lasernett	116
The Lighting Co.	62
The Resource Corp.	77
Turramurra Music	39
Universal Lighting & Audio	101,109
Yamaha	58

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# THE PA PAGE

## The Importance of being NEAT

### *The Terminator: 2.*

*Part Five in a series, by Michael Orland.*

Lately I've talked with a few van sized sound system owner/operators on the subject of adding a separate foldback desk to their existing system. There are reasons both for and against such an addition, and I guess the first question to ask is whether it's really needed.

If the system is only used by acts where the two or three auxiliary sends available from the front of house desk are adequate for their needs, then why bother? In such self-contained one or two person crew setups, I would prefer everything running from the one desk.

In the past, I have often been asked to provide a "set and forget" foldback system at the side of stage, only to be asked to constantly alter settings during the performance. Even apart from the cringe factor of hearing singers ask for alterations over the mic between songs, having to abandon your post behind the FOH desk leaving it totally vulnerable to who knows what or who, fight your way through a crowd, and then be unable to get the singer's attention while you wait for a response to the alteration, can be one big buttpain.

My attitude these days is that I'll only supply a separate foldback desk if I know there will be someone to control it.

As live mixing console manufacturers compete for shares in what many consider to be a saturated market, there is a growing trend to squeeze more and more features into smaller consoles. It is quite reasonable to expect up to 6 auxiliary sends on modern consoles around \$5 - 8 Gs, where 10 years ago 4 would have been the norm. This makes it easy for us to supply 4 foldback sends and two effect sends at smaller gigs.

Ideally, the auxiliaries allocated to running foldback sends should be both prefade and preEQ, so that balancing your front of house mix and adjusting tone controls have no adverse effects on the monitors.

Most desks available these days have these options user-available. Although many desks have pre/post switches alongside groups of auxiliary knobs, they generally only

soldering wire links where indicated, the same effect can be achieved.

If the required modifications are not obvious, then it's a job for a technician. Without wishing to get too far into great 'derrs' of history, even with prefade and preEQ auxiliaries, your monitors are still affected by input gains, which need to be preset with plenty of room

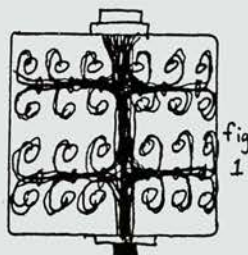


fig 1

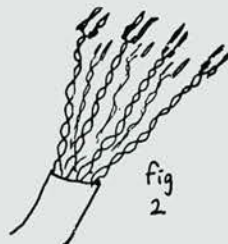


fig 2

refer to prefade and not preEQ. If the desk came with a manual, it will usually explain how to customise the channels for your requirements. If, as is so often the case, you bought the desk second hand and the manual has long since disappeared, you may have to look at its innards.

If the desk is modular, that is, if each channel is mounted on its own bit of metalwork which slots into a mainframe, then carefully remove one channel. If the desk isn't modular, you'll have to separate the console from its backplate and lie it knobs down to look for clues.

Most modern desks (Soundcraft, Soundtracs, etc) are fitted with solderless links which are clearly labelled on the circuit boards as pre/postfade or pre/post EQ. These can be easily relocated to suit using a long nosed pliers.

Other desks, such as the earlier Studiometers, have labelled copper tracks on the circuit boards. By cutting through these tracks with the point of a Stanley blade or edge of a small screwdriver, and

for artistes getting excited during the gig. If this becomes too constrictive, or if the act requires more foldback sends than your desk can supply, or if they bring along or pay for a front of house guy, THEN by all means look at adding a monitor desk.

This need not be such a daunting prospect. As promised last month, we'll first look at adding a foldback split to your multicore. This can be done any one of several ways. If your foldback desk has parallel male and female XLR in/out connectors on each channel (Peavey, Soundtracs, AHB, etc) you can have a foldback length multicore, say 10 to 20 metres, with your stagebox at one end and male tails to the foldback desk at the other end. Then you can reterminate your main core with female tails at the foldback desk and male tails at the FOH desk.

I used such a system for years  
*(continues on page 94)*

*Michael runs The Public Address Co in Sydney, call (02) 799-7219.*

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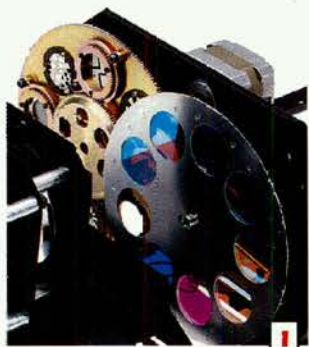
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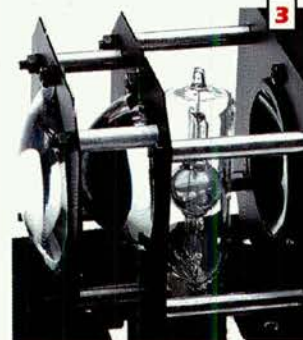
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