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Australia's **Entertainment Technology** Magazine

20! **FEBRUARY 1995**

Connections

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



Joe O'Herlihy, REM engineer



WERE REM BAD?

Mixing Consoles

MEET THE LD'S

**Internet for idiots
(like us!)**

**HARD DISK
recorder review**

**.... and about 70
other items. BIG!**

Cover shot by Sa'ly Tsol'tas, from a dance & lighting concept by Eferpi Soropos. (See page 84)

3 THINGS MAKE OUR NEW POWERED MIXER STAND OUT

SPIRIT



Affordable powered mixers used to mean mediocre performance all round. Spirit's new PowerStation, however, re-defines the standards for power, audiophile quality and versatility on stage, matching Spirit mixing performance with effects and a power amp that can do it – and your music – justice.

With PowerStation Graham Blyth has excelled himself: there's a new pre-amp design that will take any signal you care to throw at it, plus a subsonic filter to tackle rumble without stopping you using bass EQ. The on-board digital effects are by Lexicon - the choice of large studios around the world. Even the power amp is an audiophile's dream, really meeting its specifications to deliver 300 watts (peak) per side of pure Spirit sound*.

So what's missing? Just the hiss, muddiness and distortion that you'd expect to find on a powered mixer at this price. These, on the other hand, are just a few of the features that you will find on PowerStation:

Bullet-Proof Mic Pre-Amps

With gain ranging from 0 to 60dB Graham's new UltraMic™ pre-amps give you even more signal handling capacity to connect signals ranging from low output dynamic mics to active DI boxes without fear of clipping. Just as important, at -129dBu EIN their noise performance exceeds that of many so-called professional mixers.

High Pass and Subsonic Filters

A new no-nonsense 100Hz High Pass Filter with an 18dB/octave cut-off (instead of the usual 12dB/octave filter) means you can tackle low frequency rumble even more effectively. An additional 40Hz subsonic filter across the outputs lets you create bass-heavy mixes without overloading PA cabs with frequencies they just can't handle.

Mono and Stereo Inputs

Of course you won't just be using mics on stage, so we've given you two full-spec stereo line input channels in addition to the 8 mono mic/line channels – ideal for keyboards and samplers. The stereo effects return and 2-track tape return can also be used as stereo inputs.

LEX Appeal

Long revered by Graham Blyth, Lexicon effects have pride of place in the effects racks of studios around the world. Now you can complement Spirit audio fidelity with Lexicon effects, all in the same box. A carefully chosen range of breathtaking effects algorithms adds a final polish to your music.

The British Sound

Everyone knows British EQ is the best. PowerStation's mono inputs use Graham's acclaimed 3-band EQ with swept mid. Impedance-balanced outputs and electronically-balanced inputs – especially important in electronically hostile stage environments – keep the audio clean going in and out of PowerStation.

7-Band Graphic EQ

Don't ever believe manufacturers who tell you that their simple graphics will solve feedback problems: to isolate the 'ring' at exact frequencies really needs at least 27 very steep, close-spaced filters. Instead, PowerStation's graphic EQ has been designed as a creative tool to give you a brilliant sound whatever the room acoustics. With a subtle 6dB of cut or boost there is plenty of fader resolution for precise fine tuning your sound.

The Right Controls, for Real Control

Custom fader laws give PowerStation's new 60mm channel faders smooth, predictable response, and a full 100dB of attenuation – so you get complete silence when you fade out. Custom-designed controls provide an even spread of gain and smooth response, ensuring that you will never get annoying leaps in level with even the smallest adjustment.

* 265 watts RMS x 2, continuous into 4Ω



SPIRIT MIXER



LEXICON DIGITAL EFFECTS



CLEAN 300W x 2 AMP*

Channel and Master Inserts

A good live sound is often helped by external EQ and dynamics processing – channel and master inserts are care of that.

Flexible Auxiliary Routing

Aux 2 can either be routed internally or to an external processor. Aux 1 is switchable pre/post fade, for pre-EQ stage monitoring or more effects.

Patchbay

For even more flexibility the comprehensive patchbay lets you bypass the power amp to drive a bigger PA, feed another mixer into the power amp, or route external signals (or the aux outputs) through the graphic EQ.

Power Amp

Most powered mixers deserve their reputation for using poor quality power amps that don't actually meet their power rating specifications in everyday use. Not so PowerStation, whose 300 watts (peak) per side amp*, designed by UK power amp guru Douglas Self, offers both audiophile performance and enough power to blow your socks off. Roac tested around the world for a year, we can guarantee this amp doesn't just meet spec, it exceeds it.

Rugged Good Looks

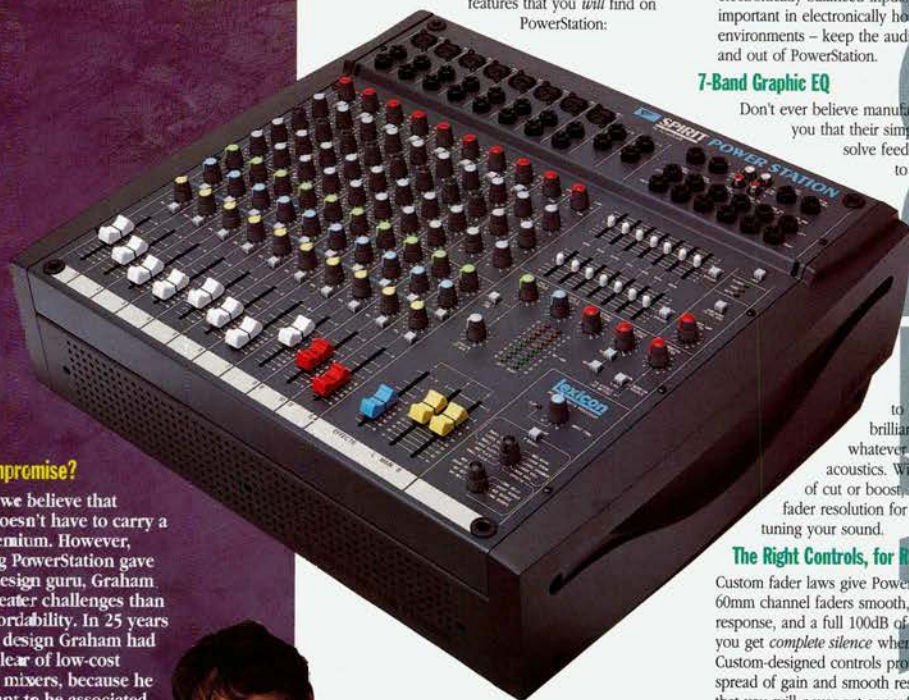
PowerStation is built like a tank. Period. A hinged cover protects the mixer from beer, dust and roving bands that shouldn't be playing with your knobs. Rack ears are available too for rackmount use.

Spirit by Soundcraft

Harmar International Industries Ltd.,
Cranborne House, Cranborne Industrial Estate,
Cranborne Rd Pottery Bar, Herts EN6 3JN, England.
Tel: +44 (0)707 665000 Fax: +44 (0)1707 660482

Why Compromise?

At Spirit we believe that quality doesn't have to carry a price premium. However, designing PowerStation gave Spirit's design guru, Graham Blyth, greater challenges than mere affordability. In 25 years of mixer design Graham had steered clear of low-cost powered mixers, because he didn't want to be associated with the terrible reputation many had for poor audio and build quality. However, when we told him that PowerStation had to be a tool that audiophiles would be proud of he soon changed his mind! Read on to find out how he designed a console that gives you performance, power and change in your pocket.



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578 Princes Highway St Peters NSW 2044
Phone: (02) 516 3622 Fax: (02) 517 1045



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FULL of NEWS

THE NEW ACCLAIM

RANGE



The performance and operational standards for 500/650w luminaires have just been rewritten. Unmatched choice and features exceed the performance and budget requirements for theatres, schools, entertainment venues and display lighting. **Acclaim**

Condensers - precise projector like beam quality ideal for pattern projection. 18° to 32° and 24° to 44°. **Acclaim Zoomspots** - ellipsoidal variable beam profiles with 30 to 100% more light output than comparative luminaires. 18° to 34° and 24° to 44°. **Acclaim fixed beam profiles** - efficient, simple to use, excellent performance 25° and 40°. And a **Fresnel** and **PC**.

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MORE FEATURES



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MORE LIGHT



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TAS KW McCulloch (Hobart) Ph: 002-286373 KW McCulloch (Launceston) Ph: 003-431 034

Selecon New Zealand Ltd, 26 Putiki Street, Grey Lynn, Auckland, Ph: 64-9-360 1718, Fax: 64-9-360 1719.

SELECON

ALL DAT TAPES ARE NOT THE SAME BUT DON'T TAKE OUR WORD FOR IT

Ask Studio Sound, one of the world's most highly respected professional audio publications. They recently subjected eight leading DAT tape brands to an exhaustive series of tests and the results should be of interest to everyone serious about audio.

In the critical area of block errors, the tapes fell into two distinct categories of performance. Three exhibited similarly low error rates with the others presenting error levels considerably higher. HHB DAT Tape was one of the leading three.

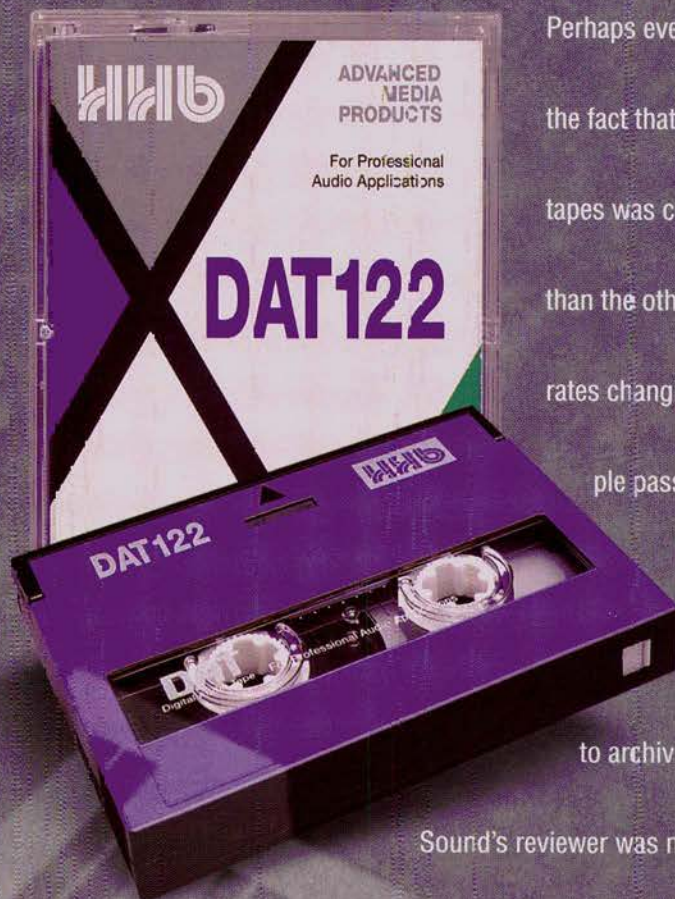
Perhaps even more significant was the fact that one of these leading tapes was clearly more consistent than the others, with its low error rates changing very little over multiple passes. That tape was HHB.

And when it came to archiving stability, Studio

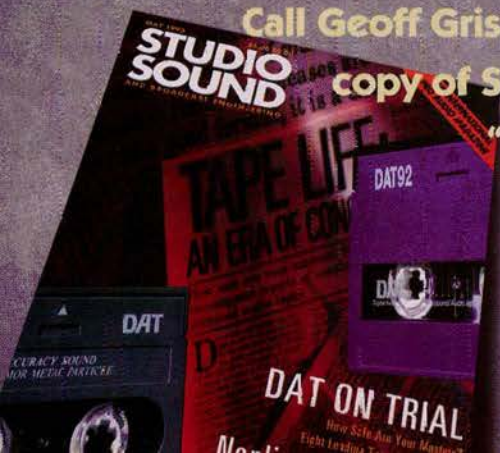
Sound's reviewer was moved to write:

"If it were my recordings at risk, it is clear which choice I would make". His choice? You guessed it - HHB.

HHB DAT Tape. Would you trust your recordings to anything less?



Call Geoff Grist for your free copy of Studio Sound's "DAT On Trial".



Audio Services Corporation Australia
32 Punch Street, Artarmon, NSW 2064
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SHOWBIZ

NEWS & UPDATE

FEBRUARY 1995. Number 20

Rupert Neve for 5th AES

SYDNEY: Audio guru Rupert Neve is confirmed as a star attraction and presenter for the forthcoming 5th Australian AES Convention - to be held in Sydney, April 26-28.

Mr. Neve (pictured below with a friend) revolutionised audio mixing console design more than a quarter of a century ago. In the 1980's he was one of the founders of Focusrite, and in recent times he has been associated with AMEK where he has provided significant input to several consoles and the Medici equaliser.

Rupert Neve now lives in a commune in Arizona, and will make several presentations at the AES as well as being available on the exhibition floor to chat with visitors.

AES Details- Rob Walker, 03 525-6755, fax 03 525-6722.



NOT Enough
• Melbourne
• Brisbane
• Adelaide
• Perth etc
**NEWS? It's
YOUR fault,
contribute NOW!**



Guangdong Acrobats lighting plan looked like it had been done by potato cuts - yet they were a very popular Festival of Sydney attraction. See Performing Arts section, Page 40.

HOME MUSIC & VIDEO FORMATS EVOLVE

*DCC, MD in trouble as CD-R shapes up, while
Digital Video Disk formats do battle*

By Buck Freeman in Detroit

Remember how DCC (Digital Compact Cassette) and Mini Disk were going to replace the analogue cassette and the CD? The industry vibe at the Consumer Electronics Show in Vegas during January has it that DCC is in real trouble while MD is relegated to a niche market position. Philips did not demonstrate DCC on the tradeshow floor at CES.

In Tokyo it is assumed CD-R will eventually prevail, produced it is compatible with existing CD players, which MD is not of course. The prices of machines that burn CD's (CD-R) must fall drastically, however, and the problems afflicting the Japanese domestic consumer markets will delay this eventuality.

Back here Stateside, Radio

Shack are discontinuing the DCC already, and prerecorded material is thin on the ground. MD has fared a little better due Sony's hard pushing, a recent tag-on had an MD on the cover of every Rolling Stone, (circulation 1.15 million) after which Sony say they got 40,000 calls in the first month. (Presumably from people who couldn't get the MD to play on their CD player, perhaps?) Meantime, conventional cassette sales continue to rollick along like nothing has happened. Philips did release several new DCC players at CES, so they are clearly pushing on.

The MD has found favour with some consumers who like to record music for immediate track access, and others who have been given prerecorded MD's. Sony say
(CONTINUED OVER)

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MOVED

PRODUCTION AUDIO SERVICES

Moving to much larger and more convenient premises, the address is now 6 - 8 Elizabeth street, Richmond 3121. Call (03) 415-1585, fax (03) 415-1595.

AUSTRALIS

After 15 years at Brookvale in Sydney's Northern Beaches precinct, this Top 5 music equipment importer (Peavey, Akai, Tama) has moved across the bridge to 88 Bourke Road Alexandria.

New phone: (02) 698-4444 and new fax: (02) 698-4545.

A.V.D.

New address: Level 3, 25 Cooper street Surry Hills NSW 2010. Ph. 02 281-2444, fax 02 281-2400.

CAM-MACK SYD

Cameron Mackintosh have moved to the ground floor, 66 Hunter Street, Sydney 2000. Phone (02) 320-9200, fax (02) 320-9201 or technical dept fax (02) 320-9222.

ROB WALKER

The offices of Rob Walker, who is the main contact for the Australian Music Association and the AES Convention, has moved from St Kilda to Elwood. Now located at: 38 Southey street, Elwood 3184, call 03 525-6755, fax 03 525-6722.

SOS COMMUNICATIONS

Michael White & team have moved from Chalmers Street Sydney into two different locations. **Contracting Sales and Installations** are at: 47 Belmore street, Surry Hills NSW. Call 281-0077, fax 281-0022. **Hire & Production** are at 1/566 Gardeners road, Alexandria. Call 02 667-0062, fax 667-0266.

LIGHTMOVES MELBOURNE

Best known as Lightmoves Professional Entertainment Services, the firm has moved to 7 Mayston Street, East Hawthorn. Phone (03) 813-2955 & fax (03) 813-2466 are unchanged. Braham Ciddor says the new place is larger, air conditioned, and has off-street customer parking.

CADILLAC CASES

After years as a tenant of Eric Robinson at Jands in Mascot, Cadillac Case Co have moved out to Padstow - 1 Jayelem Crescent. Phone 02 773-8244, fax 773-8452.

ANTHONY'S MUSIC

After 15 years in Sydney's West at Moore Street in Liverpool, Anthony's have moved across the road to number 89. The new store has 2,200 square feet. Call Joan and Anthony Vadala - 602-4243.

WARNING

The Nigerian conman is at it again, we have had two faxes and half a dozen calls from a so called 'Prince' in Nigeria who seeks our bank account number in exchange for the immediate transfer of \$30 Million US Dollars. Sure, sure.

It seems some idiots actually give this information to the Nigerian who then somehow seeks to

exploit it in mysterious ways. He is incredibly persistent. Caroline has told him he is the son of a jackyl, but he called back. He has then been told to do something closely related to fornication and travel, but still he calls.

Would the person who gave him our number please kindly get in touch with us?

Corrections

- **Norman Korte** at Topstage Productions tells us he does not spell his name Court. So we shouldn't!
- Back in June we referred to **Matt Crosbie** as Croxbie in an item re-

garding the Cruel Sea. Suzie Higgie told us about this!

- **David McGrath** from Lake DSP was not born into the McGraph family, so we acknowledge this!

UNIONS IN BATTLE

SYDNEY: Just when the industry started to get used to the Media Entertainment & Arts Alliance exerting influence nationally, an upstart state union has appeared in Sydney and wrested control of a major site from the MEAA.

An angry release from the MEAA claims that newly re-opened Luna Park management may have pressured new staff into joining a state registered union, the NSW Theatrical Employees Union (NSWTEU). Further, the MEAA claim the NSWTEU seeks to establish agreements with employers to exclude the MEAA.

NSWTEU - WHO?

Click. Like the 'record' button on the tape player, Michael Taylor launches into tradeunion speak.

NSWTEU boss Taylor is in our office to explain what he represents.

"The advantage of the state union system is that we can establish common rule awards that means that essentially it covers anybody or any organisation within the industry that perform the functions that the award intends to cover."

It's a sales pitch that is long on jargon and capable of rolling over the top of your train of thought.

The substance of the situation appears to be the arcane and byzantine system of industrial relations in this country has spawned both a State system and a federal system.

"We regard our awards as Prod-



ucts", he states, brandishing a slew of photocopied awards which he says have been ratified in NSW. "We offer managements an alternative".

This alternative extends to creating a new 'side' award for larger employers, something the NSWTEU has done for the re-hashed Sydney Luna Park. -JG

CD and Video Formats

From previous page

they have sold 700,000 units up to September last year, and 500+ pre-recorded titles are on the market. Professional applications are expanding with the release of an MD data version, IBM had an MD drive in a ThinkPad at CES. The MD data drive gives 140mB of storage, vs. 1.4mb on a conventional floppy - ergo, one 2.5" \$10 Mini-Disk stores equal to 100 floppies.

•WHAT AFTER VHS?

CES also featured news of the pending battle to replace the VHS format, which has been wildly successful beyond imagination. A battle looms, but Hollywood hopes it isn't a replay of the Beta vs. VHS war in the early 1980's.

Lining up on one side are Phillips and Sony, together this time, with the DVD (Digital Video Disk) format, offering 135 minutes of MPEG-2 quality video plus

audio, for 3.7gb of data on a 5" optical disk. 3M are working on doubling this, to foil the argument that this isn't enough data space.

Pioneer and Toshiba have proposed different DVD standards. Their proposal offers more data storage (4.8Gb for 180 minutes, on a two sided disk) for longer duration, but is thought to carry a higher manufacturing unit cost than the single sided Sony/Philips proposal. According to Billboard the major Hollywood studios are uncommitted as to which format they will back. "If you don't have Disney and Universal, you're dead", said a Hollywood observer.

The currently known video CD format will only store 74 minutes, most first release movies exceed this duration and entertainment companies demand extra time for promos. •

New AUDION New AUDION New AUDION New

AES/EBU Cable

Eurocable's response to the requirements of the digital age is the D2N6S2 AES/EBU Digital Cable (see diagram below).

The cable has a nominal impedance of 110 ohm and low capacitance within standards. They say 'the high velocity of propagation further reduces capacitance and shortens signal delay, providing for error-free transmissions over extended distances'. Sounds good, eh?

It has double copper screening and twin PVC external jackets. List price

\$2.32/metre.

Eurocable also do StarQuad audio cables where you extract better performance by linking the opposite conductors of the same colour to the Hot and Cold signals. This sells at \$2.95/metre, retail.

• Eurocable from *The Resource Corp*, (03) 888-6555.

Cable Lock



Cord Care is a widget that might prove a winner with rental companies and owners of a lot of cables. Securing rolled cables is often done by tying off the end, a practice that ultimately damages the cable. The Cord Care thingo is a plastic pretzel that is fitted to one end of a cable, then the cable is looped ONTO it.

Advantage: you fit the thing onto an existing cable. It comes in a variety of sizes, packed into packages that start at \$2.95 for a bunch of them. A good retail item too, available from Brash, Tandy etc. •Manufacturer (03) 782-5242.

TDK line up new CD ROMS

The write-on-it feature of TDK's new recordable CD ROMS is probably the best part of the whole thing, yes?

The 74 and 63 minute versions are also available with a printable surface.

•Wholesale enquiries to Mark Gribble at TDK- 02 437-5100



JBL ARRAY WEDGES

Series expands with new 'low cost' Analogue Processor

The ASC-24 is a two channel, 2 way processor for JBL's Array Series - their upmarket, custom engineered range of speaker systems. Until now, Array has only been available with a Digital Processor, the ASC-24 has horn EQ and output limiting.

• Two stage monitors join the Array family, the vertically oriented 4891 and the horizontally oriented 4890 both use the unique 14" woofer found in the other Array designs. This Neodymium magnet structure woofer has JBL's Vented gap Cooling trick onboard.

Equally, both designs use the 4" Neodymium compression driver that JBL developed for Array, it has a 1.5" exit throat, and is mated to an 60° x 40° optimised aperture horn. In the 4890 model (below), the horn can be flipped sideways (see provision for this) to change dispersion. A 4 ch. controller is coming too. •Jands (02) 516-3622.



Connections Yearbook

New title to also be distributed in Singapore and London

Connections Publishing has announced plans for a Yearbook, to be published mid-year. The intention is to produce a resource work that 'properly services' readership of the monthly magazine.

To boost acceptance the firm has undertaken to distribute the Yearbook at major trade shows, in addition to Australia. Copies will be given away at the Pro Audio & Light Asia tradeshow in July, and also at PLASA.

Connections have booked exhibition space at Singapore to spearhead a push into Asia. The Yearbook will be a vehicle whereby Australian firms and

technical crew can promote their services direct to Asia as well as at home.

As Connections is now in its third year, the introduction of a Yearbook is a carefully considered addition. Connections assert that their Yearbook will differ from currently existing products, and that it will be researched from scratch.

To this end the firm will outlay a considerable sum on research over the next quarter. Publication of a yearbook is a serious undertaking, with material accuracy paramount.

Listings will include a comprehensive guide to venues, studios and production companies.

PARTS

• **Audio Telex** have opened for business in Auckland. Marcel Reinen is in charge, location: 11 Peirmark Drive, Albany.

• **Electrosonic Systems** has appointed Malcolm Sargent as Queensland sales manager.

• **Corduroy Records** in Melbourne are set to operate our only vinyl pressing plant, starting March.

• **Cliff Blackburn** from Sinclair Communications (Perth) won the coveted Meyer Sound jacket at AES San Francisco. Bastard!

• **Sydney Entertainment Centre** is nominated for best O/S facility of the year, while manager Maddie Jackson has been nominated as Best Facility Manager in the Performance Awards, Miami. Hope they win!

• **Audio Services Corporation** is the name adopted by Geoff Grist for his NSW company when launching in 1992. Geoff says that at the same time, Murray Tregonning (best known as Murray Tregonning and Associates) registered the name in Qld and Vic. He also says Len Wallis sells domestic audio products in NSW and has the name Audio Services registered as a business name. Geoff's number is (02) 901-4455.

• **Elecoustics** won loudspeaker of the year for the Image 3 MKII hifi loudspeaker at the recent Sound & Image Awards. Call (02) 429-2199.

• **Academy of Audio Engineers** have a new face, now known as The JMC Academy, this Sydney based audio school offers office skills and music business management courses too. 02 281-8899.

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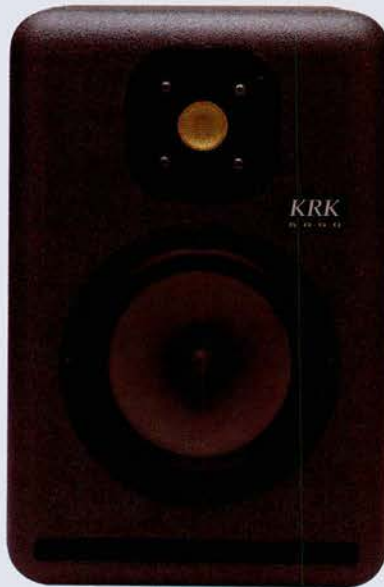
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Perfect



Simply Perfect



KRK 6000

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9c Gibbes St. Chatswood, NSW 2067

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Fax: (02) 417 8360



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Manufacturers Forum

Export Grant Sought for Trade Missions

Export opportunities to Asia are opening up, and a new drive initiated by NETAA - the National Entertainment Technicians Association of Australia seeks to find new Asian markets for new and developing products and services.

Products currently exported by Australian firms to the region include audio, lighting and laser hardware, and a growing number of technicians and designers also export their expertise on short term contracts. With several existing exporters as sponsor members, NETAA has established an Export Committee to seek Austrade support for a proposed joint Australian trade exhibition at a major trade show in Asia in 1996.

Firms and individuals with potentially exportable products should contact NETAA, who are calling for expressions of interest from anyone interested in joining the export trade group. Currently, Austrade export assistance for Australian firms exhibiting at trade shows internationally does not kick in until export marketing expenses exceed \$30,000 - which in many cases it does not. NETAA hope to consolidate a group of potentially viable exporters

who can initially exhibit at a major tradeshow to be determined, in Singapore, Hong Kong or Beijing. As a group exhibiting together, a greater and more cohesive presence is possible than if an individual firm buys the smallest possible exhibition booth at a large trade show.

With export experiences dating back to the creation of Australian Monitor in 1986. Connections publisher and Entech Tradeshow copromoter Julius Grafton has joined the NETAA Export Committee. "I'm enthusiastic about this", he told himself as he wrote this story, "and think that we have a lot to offer Asia. We see Australian consultants, architects and designers all over the region, but also a lot of Europeans and Americans too. Being in the same time zone as Asia, and speaking English is a major plus factor for Australia, and we need to act now to show Australia is a serious player by waving a larger flag."

WHO FOR EXPORT? NETAA believes there are obvious local manufacturers with existing audio, laser and lighting products who have already achieved some export success and are prime candidates to join the export group. They know they have a good chance, and may have

already exhibited at a trade show overseas.

The OTHER players are most welcome as well, say NETAA, and this group could include performing arts centres who have developed products, people with software products, and manufacturers contemplating development of new products specifically for export. It is further possible that several smaller, complimentary products could be exhibited together with one representative of several manufacturers, or even a NETAA export group volunteer present to sell these products. This approach could be adopted to 'test market' products with minimal risk.

"The important thing is that we don't want this to be seen as something for nothing, or an easy way out", said Grafton. "NETAA can't guarantee Austrade participation, and if granted it will likely be in the form of rebate funds. There will be cash required, the whole concept here is to join together to minimise cost and maximise impact."

Expressions of interest are requested now, contact Lee Conlon at Showcraft (02) 698-3288 or Julius Grafton at Connections (02) 876-3530, or E-Mail- julius@next.com.au.



TASCAM 2600 Series.
The new, unnaturally quiet consoles from TASCAM are on demonstration now at TASCAM Mixing Centres throughout Australia

TASCAM

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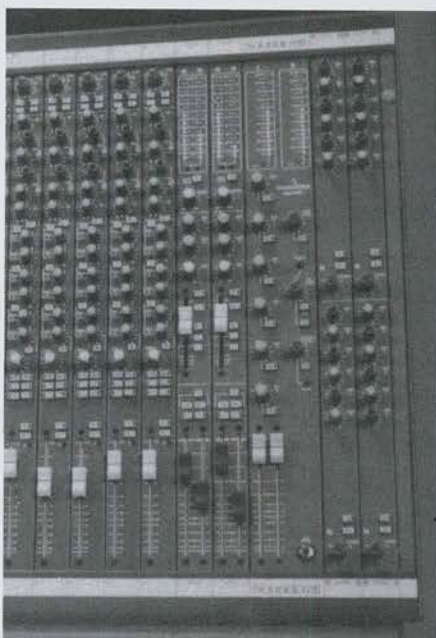
REFLEX reverb

Lexicon's new Reflex is a MIDI controllable stereo digital reverb system with eight reverb algorithms - or modes.

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At \$1099 it is deceptively simple to operate, but has 112 factory loaded effects onboard. Any MIDI controller can fire the effects, and up to four MIDI patches can be created per effect. •Studio Connections, (03) 723-4300.

Theatre MIXER



Soundcraft's Delta Theatre console has particular features for theatre and conference sound, namely a 6 x 4 matrix output section. The matrix occurs on the two modules at the right of the console, more may be added. As standard there are four matrix output sections supplied.

The six auxiliary sends are switchable pre/post fader in pairs, auxiliary six can be switched direct to the control channel direct output. Two fader controlled stereo returns are fitted as standard.

The console is based on the DELTA platform which has been around for a while, it comes in 8, 16, 24 and 32 channel versions.

Optionally stereo input modules can be featured, mixing and matching is a Delta strength. Call Jands (02) 516-3622 for more.

PARTS

► **JVC** professional products are, of course, distributed in Australia by Hagemeyer. We thank a variety of readers for calling to point this out after we noted in the last issue that We Didn't Know!

► **PHASE LINEAR** ceased major activity when the founder went on to establish CARVER. Pioneer apparently own the name now. Again, thanks readers for calling us when we asked: "What Happened To Phase Linear!"

► **STUDER DYAXIS II** modular multitrack digital production system is now available from Studio Connections, who appear to have wrested this agency from Syntec. Syntec did, apparently, have sales pending for Diaxis. Adding to this, Syntec and Studio Connections are headed by the brothers Sloss, who it seems Do Not Talk to each other!

► **ISMT** have been appointed as Australian distributor for AVID Audio Vision, Audio Station DPR Systems. ISMT initially only represented AVID's Media Suite Pro desktop video system. ISMT (03) 967-2922, (02) 416-9688.

► **CAREFUL** when you link an artist to your product. The trend of saying 'Joe Blow uses my Widget' ought to be tempered with caution, after Jimmy Page and Robert Plant took heavy action against Fishman Transducers in the UK. A release landed here, we quote:

"Fishman would like to apologise and make it clear the pair did not use their products for recording or filming Unleaded. The company would also like to apologise to the pair for any distress it may have caused them or their families".

This is legal speak for We Are In Big Trouble, and wish it would go away!

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Mixing Consoles: the NEW mix



For 1995 you have new distributors for Soundtracs, DDA and Studiomaster, a new range of CREST consoles, Alen & Heath building a local market, Mackie challenging Yamaha and Soundcraft, and Spirit looking like becoming a stand-alone brand. Wow!

Your audio mixing console choices for 1995 are completely different to just a year ago, not only have most manufacturers released a considerable swag of new models, but distribution of key brands has also changed.

Users don't care too much about distribution changes until they need warranty service or spare parts, the accepted theory is that warranty obligations transfer to the new distributor, as do parts holding responsibility. Sadly we know of instances where considerable buck-passing and stonewalling has occurred in the recess-

ion riven past, and would like to hear if this should occur again in this more buoyant era.

A normal precedent is that the new distributor buys the old distributor's stock, but there is often some ill-feeling on the part of the former distributor, and as you can imagine, in the highly competitive audio distribution world, chances are the two parties wouldn't have been friendly in the first place.

>More on consoles, see next page.

• *Tune into our Buyers Guide's, the JUNE edition for Live Mixing Consoles, and our AUGUST edition for Studio Mixing Consoles.*

SOUNDTRACS moves to Syncrotech Systems Design

After many years distribution in Australia by Amber Technology, UK manufacturer Soundtracs will shift local distributor next month. Sydney based Syncrotech have taken on the range after passing on distribution of DDA, which goes to Mark IV Audio Australia.

DDA is now a Mark IV Audio company, and that console range gives Mark IV (Australia) a much needed range to fit between lower

pitched EV models and top-line MIDAS consoles.

Syncrotech add Soundtracs to their portfolio, which includes Sonic Solutions hard disk recording/production systems, KRK Monitors, and NEVE consoles. The challenge for the firm is to sell to the live console market and to expand their dealer network.

Contact Paul Heaton at Syncrotech, (02) 417-5088.

CREST GTX, Vx

CREST are the amplifier company that Clair Brothers have just annointed by buying several hundred amplifiers. Yes thank you.

They also make GAMBLE EX-56 mixing consoles, which are the most popular live mixing consoles in the extreme upper end of the USA concert touring industry.

Recently CREST introduced some more downmarket mixing consoles, (pic above) but the duo on show at the AES were something else again. The firm have an intuitive knack for getting it right in terms of features that the live mixing market wants.

GTX

This is a pure front-of-house console, expanding on the features present on the current CREST GX line. GTX has 8 subgroups, 4 mute groups, and true left-centre-right panning. This is more useful than you first think, for the centre cluster can also be an audience front fill position where a stereo mix isn't needed.

8 Auxiliary sends are arranged in pre/post groups, and aux. number 8 is a direct out, used when you need a direct send to an effect from one channel.

The EQ section is the now com-

pulsory sweep 4 way system, with the added benefit of a switch for tight or medium 'Q' on each of the two midrange controls. The high and low frequency controls have a peak/shelve switch.

Vx

Akin to the GTX, this model has eight VCA groups too. The 8 auxiliary sends per channel each have a push on/off feature for each pot/control, and an indicator LED. These are globally switchable for pre or post fade. A front panel 'insert on' switch is supplied on each channel. The auxiliary busses are fully balanced.

Eight matrix groups are standard (as opposed to two on the GTX) and like the GTX the console has numerous VU meters.

WHERE DO THEY FIT?

These consoles have a very high standard of fit and finish, at least the examples we saw at AES did, and it looked to us like the PM-3000 replacement market and the Soundcraft 800 or even Soundtracs M Series replacement market would be a natural for these. CREST are represented here by Production Audio Services, who shouldn't be underestimated. Call (new number) (03) 415-1545.

ABSTRACT

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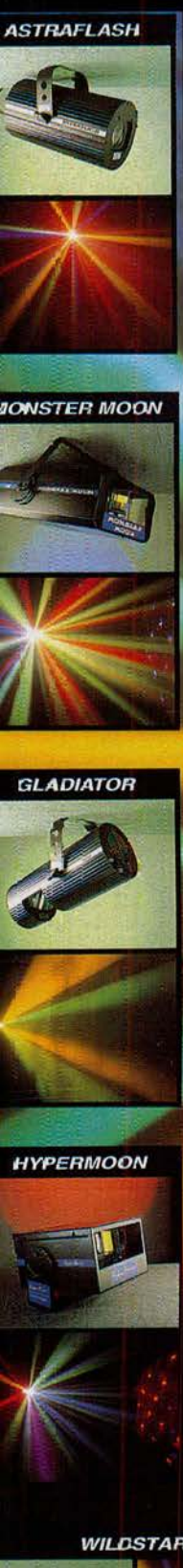
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Mixing Consoles: the NEW mix



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AMEK	ATT Audio Controls	03 379-1511
ART	Dynamic Music	02 939-1299
CREST	Production Audio Services	03 415-1585
DDA	Mark IV Audio Australia	02 648-3455
DOD	Central Musical Instruments	03 315-2244
EUPHONIX	Studio Connections	03 723-4300
EV	Mark IV Audio Australia	02 648-3455
FOSTEX	Syntec International	02 417-4700
FRONTIER	Audio Telex	02 648-3698
INKEL	Magna Systems	02 417-1111
LANGLEY	ATT Audio Controls	03 379-1511
MACKIE	Australian Audio Supplies	02 879-6124
MIDAS	Mark IV Audio Australia	02 648-3455
NEVE	Syncrotech Systems Design	02 417-5088
PEAVEY	Australis	02 698-4444
PHONIC	Capricorn Marketing Concepts	02 905-2511
RAMSA	Ramsaudio Australia	02 477-7377
ROSS	Central Musical Instruments	03 315-2244
SAMSON	Electric Factory	03 480-5988
SOUND TECH	Bridge System	03 380-9133
SOUNDCRAFT	Jands Electronics	02 516-3622
SOUNDTRACS	Syncrotech Systems Design	02 417-5088
SPIRIT	Jands Electronics	02 516-3622
SSL	Syntec International	02 417-4700
STUDIOMASTER	Syntec International	02 417-4700
TAC	ATT Audio Controls	03 379-1511
TACTILE TECHNOLOGIES	Syntec International	02 417-4700
TASCAM	Teac/Tascam Australia	03 646-1733
TOA	AWA	02 898-7666
YAMAHA	Yamaha Music Australia	03 699-2388

* If we missed anyone, could they please get in touch and advise us.

STUDIOMASTER FOR SYNTEC

Studiomaster is back in action in the UK, after many years battling Soundcraft and Soundtracs there. The firm was taken over several years ago by Mr. Malik, who was at ENTECH with his henchman Stake, looking to re-establish in Australia. The deal was done, and now Syntec have the line.

Studiomaster have a variety of

consoles for live and studio work, the P-7 (left) is new, and offers in-line returns for your multitrack, and a MIDI mute system.

Studiomaster has often offered expander modules for its consoles, and so the tradition continues with P-7. You may start at 16-8-16 and expand to 40-8-40-2.

•Syntec, (02) 417-4700.

DICKHEADS

By Tim Ireland





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warranty against malfunction with a lifetime warranty on the acoustic system.

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Ripoff? What you pay....

"It sells for \$999 in the USA, but \$2499 here. What a ripoff" - it's the number one grumble we hear at Connections, and needs explaining. This is a common reaction whether buying recording, PA or lighting equipment, and has put many a local purchaser offside with either and/or both retailer and distributors, in many cases unfairly so.

Here's how the importing game works, in a general sense

ITEM COST. The USA retail is \$999, but of course the yank dollar is a lot stronger than ours. At presstime we chose .75 as an average exchange, its been down to .65c in recent years, and a lot higher in the early 1980's. So your US retail in Australian dollars is now \$1333.00.

AUSSIE DISTRIBUTOR BUYS ITEM. The system is different from manufacturer to manufacturer, but generally they give around 45% discount for export. Our local distributor will pay, say: US\$550. An importer could buy currency at a given exchange rate which can be a couple of points (cents) less than the rate of the day because the importer may hedge, or advance buy, a rate for payment to the overseas manufacturer once the goods have actually landed here - which can be two months or

more after order. Suppose though, that the local has paid US\$550 at a .75c exchange rate - that equals \$733 Australian.

IT IS SHIPPED. Costs vary due to weight or cubic measure, sea or air. We've put \$150 flat on the cost, and remember customs agents charge a fee to clear and deliver a shipment.

IT GETS HERE. Upon arrival much later, if the item is subject to import duty, this is paid. Some items are exempt, almost identical items dutied at up to 20%. The importer needs a wholesale tax number, otherwise sales tax is levied at time of arrival too.

WHOLESALE. We typically have two levels of sale. We have distributors and we have retailers. In the USA they often simply ship from plant to retailer, via a commissioned rep. Their system means less profit margins are added on, but then they also have factory warranty and economies of scale. We have distributors here because a retailer in most cases can't buy quantity from a USA manufacturer, or maintain a national warranty system.

RETAIL. The distributor has landed the item, paid freight (\$150), paid duty (\$110). The landed cost is now \$993 before considering the customs agents fee, bank fees and shrink-

age. The shipment could be short, or when opened and tested one in 20 items are damaged in transit. But take the \$993, and add on a profit margin for the distributor. It needs to be about 60% on cost, because from this margin the distributor runs a business with international travel and warranty service overheads. The item now carries a wholesale cost of \$1589.

SALES TAX. Most equipment is taxed at 21%, or 31% if deemed recording equipment. This now goes ON the wholesale cost, and is charged the instant the item is sold to a retailer. The \$1589 is now \$1923 (at 21% tax) or \$2082 (at 31% tax). This is what the retailer has paid wholesale for the item.

WHAT YOU PAY. A retailer must make a living too, and the usual margin is 50% on cost. The item has also been shipped across Australia at the wholesalers cost. It now carries an Australian retail price of \$2884 if it had 21% sales tax paid, or \$3123 if it was taxed at 31%.

The American retail price was \$999. You paid between \$2884 and \$3123. Did someone rip you off? No.

SO..... YOU BUY IT IN AMERICA THEN! Yes, you can. It'll be a 120v mains version, but if you pay \$999 this will equal A\$1333. You

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will then ship it back at an unknown cost, and pay duty AND sales tax upon arrival. You will probably pay around \$2200 by the end of the process. There will be no warranty here, you will take the risk and hope the thing isn't damaged in transit. When you need a software upgrade, the local distributor will not know to contact you, and probably not be able to sell you one in any case. But you saved between \$684 and \$921 but only if you paid straight retail here!

RETAIL? A typical retail price is a suggested maximum, which you only pay if the item is in totally short supply. A more realistic street price will be 10% to 15% less than retail, and this will often be made up of some kind of deal offered by the distributor to the retailer.

SUMMARY. You saw the retailer sweat to sell you the item, and you haggled with them. You probably feel they deserve whatever profit was left in the deal after you were done with them! You probably think the distributor is the one making an obscene profit from your deal, right?

In general terms distribution is a very tough way to make money. Sometimes the distributor pays for the item upon ordering it, and gets delivery three months later. Then, freight

and duty are outlaid, and when the item is sold to a retailer the sales tax component is paid to the tax fiends.

Our distributor isn't paid buy the retailer until the end of the next month, and that's presuming the retailer is a straight trader who doesn't go on stop supply for stretching the payment terms.

Aside from financing the shipment, the distributor must do all these things and more:-

- Honour the manufacturers export warranty terms, then do battle with the manufacturer for some rebate. I know for a fact many distributors never get back what they spend on warranty work, and it is often a part of the distribution deal that is not properly defined in advance.

- To properly support product a service facility is required in house, or a good service agent must be appointed and paid a monthly retainer.

- Carry spare parts for at least five years after the item is discontinued.

- Marketing must be done, otherwise the customer will not know the merits of the product. Good marketing can cost 5% of a distributors turnover.

- Warehousing and shipping needs to be efficient, a pallet of goods sitting unsold after three months can cost hundreds of dollars in warehouse space, let alone finance and holding costs. Many a savvy distributor has seen stock shrinkage from an efficient and honestly run warehouse, sometimes just by shipping errors alone.

- Selling costs good money too, a technical sales rep is a hard position to fill, and when you do you must train these people. A rep on a \$50,000 salary plus a car, which is the average before sales commissions are added, will cost a distributor \$85,000 per year. Then they need to travel interstate to see retailers

- Stay ahead of the game. Visiting international tradeshows is essential because it means seeing first hand new products before they must be ordered, and is insurance against some other local distributor stealing the line.

Who would want to be a distributor? **-JG**

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Natalie Apostolou visits Edels boss and promoter, John Whale

Snuggled behind a cluttered desk, thirty-four year old John Whale seems oddly aligned to his plush surroundings. A panoramic vista of a glimmering Sydney Harbour seascape surrounds the office which is the headquarters of Edels Music and John Whale Productions.

Despite the trappings of wealth that litter this office, Mr Whale strikes you as a direct yet affable, long-haired lad from the east-end that made good. His unpretentiousness belies a reticence to discuss business competitors but is genuinely enthused when elaborating on his forthcoming tours and past triumphs.

Throughout February and March, Whale Productions is resurrecting the taste for the 1960's, with the Best of the British Tour; which includes The Searchers, Gerry and The Pacemakers, The Manfreds and suchlike.

The show runs for two and a half hours and promises to be a huge production, something that Whale and his team are tending to specialise in. "We are into creating an events show, like the 60's show, like Motown (last year), its a night. That way people are getting value for their money."

This event type show is undoubtedly popular with the masses, as pandering to the older

baby-boomer market of nostalgia and middle-aged yearnings for recapturing ones youth is cleverly capitalising on commercial radio stations heavy rotation dinosaurs of rock polities. Indeed these are smart tactics.

Tony Barber, the chief executive officer of John Whale Productions, relates that every promoter is "Independently trying to read the Australian public. They are the people that create the ideas and themes and try to satisfy the public need. It is a high risk business." As John agrees: "The numbers have to stack up, you have to pick what is going to sell and start from that basis." Selling is what Mr. Whale does well, Edels turned over \$20 million last year and the Motown Tour was a sell-out across the country as, they hope, should be the 60's show and the forthcoming ELO tour.

I ask John how one maintains that level of enthusiasm after 20 years of work in an industry notorious for turning precocious muso's into jaded rays of cynicism. "There's

nothing more inspiring than any event that's live. Because you live your life. If you're down there in the front, with the atmosphere of the show, it's life you are living, there's nothing else in the world, there's just that event. That's what makes it unique. That minute when they walk on stage and the crowd rises is an amazing minute."

It's obvious that John's job satisfaction comes from being lucky enough to combine a lucrative business with his personal pleasure. "People spend so much of their time in their lives going about their daily existence that they forget life is a live event and if you don't live that life you miss it. So that's what maintains the passion. Reality should be life. People unfortunately go about their lives existing.

I couldn't go to work every day if I didn't love what I was doing. I'd sooner come to work, work is the best thing I can do, whether they term me as a workaholic or whatever it's because that's what I enjoy the most. Unfortunately a lot of people don't have that and they forget that's what life's all about"



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Write in Reader Service number: 135

An idiots Guide to E-Mail

E-Mail is accessed though the Internet or Compuserve. Without an E-Mail address you look dated these days. We explain...

The Internet is a major threat to productivity within any commercial organisation with multiple computers hooked up to phone lines via modems. I'd go so far as to say it's a dangerous entity. This is because some people fart about exploring millions of bytes of dross and useless information available on-line.

It is also at the same time the equal best and cheapest means of immediate communications available.

E-Mail is the sending of computer files to other computers, and these days its getting extremely common. Anything you do on a computer can be turned into a file, and E-Mail can be something as simple as a short note or as complex as a series of attached (and different) files.

It's cheap if you use it enough, because in most cases to get access to E-Mail you need to join a commercial dial-in service. At present these exist because the international telecommunications conglomerates are slow and stupid, and thus so have allowed the whole thing to blossom. The commercial dial in service is a site where there are enough incoming lines to give you access when you want it, your modem dials the site, it logs you on and starts charging you an hourly rate, which can be as little as \$3.

The hourly rate relates to time 'logged on' via your modem, and thus your phone line. You can prepare an E-Mail message and files off line, then log-on and send them, receive any incoming mail by saving it to read later, and log off. All in a few minutes.

Best of all with E-Mail, the cost is based on time rather than distance. This is due to the nature of the system, which with Internet is a complex web of independant sites all wired together with dedicated data lines, not unlike ISDN lines. So, there are major server sites and there are dial in sites, and sometimes they are both the same thing. To you this matters non.

Imagine you dial in to the Connections-preferred dial in service, a new one called Next Online. This dial in service is owned by Phil Keir, publisher of Rolling Stone Australia. Upon connection to one of 24 lines and 24 modems, your signal is routed through a hub to the Next Online file server. Then, you can access anything they have loaded, and their content is evolving. If you send E-Mail it is first posted to the Next-Online mailbox, which is where

anything incoming for you is stored until you call in.

So how do you access the rest of the world?

Next Online, like everyone else, is hooked up to a major server by a dedicated data line. Next are hardwired to the major Internet site down under, run by a group of universities. This site, is in turn, hardwired to another large site overseas. Such is nature of data transmis-

sion that a large number of users can communicate simultaneously on one data line. Therefore, the raw cost is low compared to using the phone.

MICROSOFT, COMPUSERVE, INTERNET CONFUSION.

Everyone, everywhere has a different view of what will happen next. Microsoft will launch ON Australia, a dial in service for users of Windows 95 once that software is launched sometime around Spring this year. Great if you use a PC.

They are alluding to Internet access from within ON Australia, which they must have if it is to work. Likewise, Compuserve will send and receive Internet E-Mail now, which satisfies some people who have no desire to really explore the Internet.

The important thing is that you must get yourself an E-Mail address, and the major part of the cost is a modem for your computer - Mac or PC. These are getting cheaper every minute and need to be 14.4 baud capacity.

NEXT?

We chose NEXT ON-LINE as our preferred Internet site. And, we are paying for it. We use it ourselves for E-Mail, our address is reasonably simple - Julius@Next.Com.Au. Aside from the two way exchange of memo's and whole text files that contributors can attach and send, NEXT also has info-tainment on it's home screen. This means you can browse things the Rolling Stone people deem interesting, and things that people like us at Connections pay them to include. **Note: we pay them.** We are still getting used to this concept!

We are putting some of each issue online, along with our Buyers Guide (returns next month) and Classifieds. You can visit NEXT for free if already online, c/o Next.com.au.

SIGN UP AT NEXT: Call Brad at (02) 310-1425 and ask for the Connections special deal.



modem



Goodnight CD-ROM?

As a music format the CD is invincible for now. You put it into a CD player and play it. Music occurs in real time. As a data storage format, the CD-ROM is a turkey. You put it in your computer and play it. You wait.

Consider why the CD-ROM was siezed upon by the computer industry and touted as a multimedia standard. The ability to store up to 600MB of data (vs. 1.4MB in a floppy disk) means that yes, you can download a lot of material very efficiently from a CD-ROM.

Problem is, you cannot use the CD-ROM like you use a hard disk. It's way too slow. A program or file stored on a modern hard disk will run at a benchmark speed that you quickly get used to. A CD-ROM, even a double speed unit, will not.

Here at Connex we have a PLI brand magneto-optical drive which accepts 1.3GB magneto optical disks. This unit is almost as fast as a hard disk, indeed we use it like we use a hard disk. The data can be recorded freely onto, and read from, the M/O disk.

We also have a lot of CD-ROM disks. Some contain the latest version of someones software and are intended for use once, to download the software onto a users hard disk. Others are multi-media titles, like encyclopedias, games and soforth. They tend to use every byte of available storage, so cannot be downloaded onto our hard disk. They are designed to be run in 'real time'. And they are painfully slow.

At this time a CD-ROM represents a cost effective transport medium for a software manufacturer who may have needed to ship 10 floppy disks before the CD-ROM came along. Multi-Media is a neat idea too, all that info crammed on a CD couldn't be transported any other way.

The PC of tomorrow will likely have an NEC flashRAM card port in the side. The card will store ever increasing amounts of data, and the record companies will think of ways to have material downloadable onto these cards in a convenient manner.

People looking for encyclopaedia material or indeed most of what is available on CD-ROM today will find it online- on the Internet or on Compuserve. Microsoft will launch ON Australia in August, anyone buying Windows '95 & a modem will use it.

Yes, telephone lines and modems are even slower than the CD-ROM drive, BUT on a phone line connected to an Internet site you can get what you need, when you need it - and very soon now digital compression and modem technology will make real time video and music a reality on-line.

Goodbye CD-ROM.

-JG

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Write in Reader Service number: 137

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From C.M.C. Music - Call (02) 905-2511, Fax (02) 905-0189

Elder representative of Aussie audio manufacturer heard bragging to QSC rep at AES: 'we're giving you a hard time, we made 2,000 amps last year' to which QSC dude replies - 'oh, that's a couple of days production for us'. Exit one elder, chastened.

The irony. Breaking The Dry, the drought relief benefit tour lost the Newcastle date due to the trucks getting bogged in FNQ. Meanwhile, ponder the increasing rash of benefit shows, since Concert For Life, where leaked audit reports showed inconsistency re who was paid and who was not. Perhaps it's time more scrutiny was applied to any show advertising a 'cause' or charitable outcome. It is quite possible to promote a show as aiding a charity, then to pay a small percent of profits to the charity, isn't it?

Perdiiums for international business travel seem to vary a lot, and often don't reflect the obscene cost of just being there. Grumbles from some crew repeat touring Asia are being heard, a standard is needed.

!!! CONGRATULATIONS TO :

Peter Kemp of Coemar de Sisti Australia and his wife **Sue** on the birth of their baby girl, **Leticia** at the Diamond Valley Hospital on December 21, 1994.

Rod Salmon of Show Technology and his wife, **Kylie**, on the birth of their third child, **Nathan James** on 8 December, 1994.

Anthony McKenzie of Audio Visual Design and his wife **Kylie** on the birth of a 7lb 10oz baby girl, **Skye-Maree**, born January 18 '95.

Lighting Fair, Stockholm, Feb. 8-12

Seil, Paris, February 12-15

CEDIA - expo 95, Syd Feb 25-27
Custom Electronic Design and Installation Association.

98th AES, Paris Feb 28 - March 3
Pro audio technology

Musik Messe, Frankfurt Mar 8 - 12
HUGE Euro music show
• *SHOWTRAVEL* have announced deals on airfares to Messe - Economy \$1767, Business \$3499 ex Sydney. Call them in your state for an update.

China Lighting Fair, Guangzhou, Mar 16-19

REPLtech International, Vienna, Mar 28-30

USITT Stage Expo, Las Vegas, Mar 21-23

SIB, Rimini, March 26 - 29
The Worlds Greatest Disco Show

NAB International, Las Vegas April 9-13

AES 5th Australian, Sydney Apr 26 - 28
Local Audio Industry on show

NSCA, Indianapolis USA, April 30 - May 2
Contracting audio and systems

IMM Music Industry Convention
Singapore May 17-20

Software, Multimedia expo, Melb. June 2-4

Audio Technology '95, London June 21-23
APRS recording technology tradeshow

SMPTE 1995, Sydney July 3 - 6
TV and Broadcast technology

Pro Audio & Light Asia, Singapore
July 12-14 Asia's Regional show

NAMM Summer Session, Nashville July 15-16

Pro Audio, Light & Music China 95,
Beijing May 9-12 Fledgling Chinese show

PLASA, London, Sept 10 - 13
UK/Euro Lighting & Pro Audio

AIMS '95, Sydney September 30 - Oct 3
Aussie music industry main show

REPLtech Asia, Singapore, Oct 24-26

LDI Miami USA Nov 18 - 20 1995
World's biggest lighting show

1996
ENTECH 1996: April 24-26, 1996.
Aussie Entertainment Technology show

NSCA Indianapolis,
April 30, - May 2, 1996.

Local Notes

- **AES Sydney Section** 1995 meetings
Tues 14 Feb, Tue. 11 April. Ph 02 948-4577.
- **The Society of TV Lighting Directors** has been reborn in Brisbane, contact David Lee at TV 7 Brisbane - (07) 368-7207.

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20 Years Ago This Month.....

By Julius Grafton

Retro time, I found The Diary from 1975 mouldering away somewhere Caroline couldn't find it to throw out during a purge! Thus this exciting monthly feature for time voyeurs and us older farts. The phone company was the PMG, numbers had 5 digits, you needed an operator to make trunk calls, the kinks were on tour, and the average weekly wage was \$120.

SYDNEY:- February 1975.

Zapco Lightshows is in dire trouble, the Kombi that I bought from Peter Clak, AC-DC's first drummer, is on it's second engine, and that 1600cc lump of flat aircooled machinery is sounding weird whilst eating gallons of oil. Getting the psychedelic lightshow to gigs is everything, and I'm locked into a trade war.

The Lightshow Wars of the mid 1970's is probably akin to what you used to read about in relation to tow truck wars. My foe was Phil Cullen's Mac Enterprises Lightshows, he had three times as much gear as I did, then there was Colin Baldwin's Vibe Lighting - but by 1975 he had gone for a change of direction and was touring with Hush and Marcia Hines most of the time. They were managed by Peter Rix, who had a company called the GAS Company. However, the sound company that Marcia Hines used also had The Great Australian Sound Company registered. Confused?

Back then a gig promoter hired a band, who had a PA, but hired a lightshow seperately. Bands didn't have lights, unless they were Hush or Sherbet. Most bands were just getting into 'real' PA systems, WASP and Jands in Sydney, NOVA in Melbourne, and Kosmic in Perth were selling PA's to bands every other week.

The PA market was wide open too. Jim Pye had a company called Cord, Jands were at Chalder street Marrickville, Sherbet had a rental firm called South Pacific Audio Rentals, and someone else had a horrible PA made up

of ugly orange coloured boxes with sharp aluminium edges. Cash-More Enterprises arose this year too.

Wollongong Town Hall.

An \$80 gig! A lot of rain and fog heading down the old Pacific Highway in the Kombi, the headline band is Ginger, who have a girl in a glittering cat suit fronting, remember this was the glam rock era. Rocky and the Hurricanes were the support.

Aside from the mirrorball, 4 x colour wheels on Patt 23's, 2 x UV's, 2 x twin-strobes and 2 x Aquarius projectors, I hired a Concept fog machine from Strand. It worked with a bottle of carbon dioxide as propellant, pushing foul fog oil through a heat exchange that regularly caught fire. I also hired a Colourgram 4 and 4 x Patt 223 1000w frensels. Wow!

Lane Cove Town Hall.

Sultry City is the promoter of this, a kind of folk-rock gig. For \$40 I give them a standard lightshow. The mirrorball comes with every lightshow. I can't remember how the strobe was used during this gig, it must've been interesting! The promoter is a fat hippy woman who is very slippery about paying.

Cronulla Workers Club.

Another Cordon Bleu gig, Jim Towers ran the largest booking agency in town from the PACT building in Sussex street, while Michael Chugg ran what I think was then called Consolidated Rock over in Paddo. Jim favoured Mac Lights, so when I did get a gig from him

there was usually something a bit suss about it. Dear Dairy is mute about this one, but it probably featured a band called 'Winter'. Another \$45 earned.

OMNIBUS.

Somehow a hippy had recently gotten possession of a large building at the corner of Glebe Point Road and Broadway, which was running as a rock gig every Friday and Saturday night. Zapco was the house lighting company, bands like the 69'ers and the La De Da's headlined. Money was optional, so the diary says \$37.50 earned per gig one week, and \$40/gig the next. Idealism ruled. The LaDeDa's charged them \$200, Chuggie was on hand to collect the bucks.

Omnibus - the venue - died this month, 20 years ago after a large party of very pissed blokes smashed it up. It came back as an occasional town hall gig later in '75.

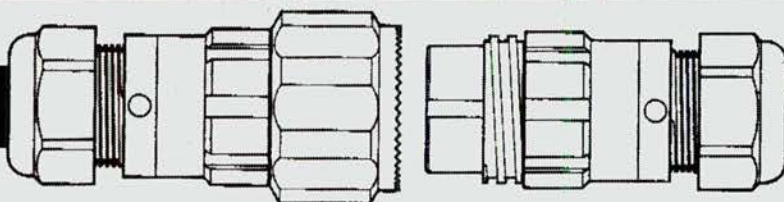
THE REST- I quoted Bill Chambers at 2SM half price for 'Liftoff '75' at Hornsby Police Boys Club on a Sunday night, with 4 hot bands like Chain, Sebastian Hardie and others - but Mr Mac Lights - Phil Cullen got the gig. I've written a rude word in the diary about this! A couple of hires helped the month along, I think I bought a bit of new gear too, or at least made another mirrorball from Opalflex mirror tiles. Remember these? Interior designers loved sticking them on bar walls, there was even an oversized tile with a cocktail glass icon on it!

A good time to be alive! •

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Write in Reader Service number: 127

POWER article was wrong

Re your December/January issue, and the article entitled **POWER**.

There are few inconsistencies in this article that I feel should be pointed out.

Phasing: Yes, 3-Phase power has 3 lines, each at 240v. When any two phases are joined you get 415V. This is the reason 3-phase plugs are rated to 500v not 240v.

Once again Yes, these Phases are 120 degrees out of phase, but it has nothing to do with the cooling effects (if any?). This is how the power is generated, at either the power station or from a generator.

In a situation where the phases are unbalanced you will have voltage and current on the neutral.

It makes little difference to a dimmer if it draws 40 amps on three phases or 120 amps on a single phase, **HOWEVER** - you would need a 120 amp neutral if you used single phase. In fact, electrical engineers have recommended to me that it would be better to have a fully rated neutral for each phase. This brings me to the point of this paragraph. A dimmer rack is classed as an unbalanced load if you bring up channel one (for example) then you are only drawing power from one phase, the other two phases remain unused and thus you have 240v and the appropriate current flowing down the neutral. Also, if you bring up more than one channel (especially when you are in a dimmed situation) you can have more current on the neutral than on any individual phase.

All single phase equipment, e.g. lights, desks, toasters and the like won't work at all if the neutral is not attached or even loose. The problem is compounded in a 3-phase dimmer, and you can actually severely damage the dimmer if the neutral is missing or faulty.

So, far from the statement in the article in question, "That the neutral is simply a second safety after the earth", it is indeed very much needed. To the point that ELCB's (Earth leakage devices) check power on the actives and compare it to the power on the neutral. Any discrepancy is assumed to be going to earth, they don't actually test the earth, so once again the neutral is very much needed.

The statement that the neutral and the earth are tied together is correct, but this only occurs at the main switch board of the building.

In conclusion, I believe some of the statements in the article in question were misleading and could be dangerous for some of your readers who take information contained in your magazine as gospel.

- James Kenny, East Coast Lighting, QLD.

Twice As Powerful As Whose?...Selecon replies.

We would like to thank Prolite for assisting us in some small way in communicating our message to the industry. We are very proud of our innovative product and optical designs. Nor as a responsible manufacturer committed to our industry do we make spurious claims or conduct dubious "comparative" tests.

But first just to clarify the issue, no indeed our comparative claims can't refer to Prolite, simply because we are comparing performance data published by respective manufacturers and Prolite don't publish any performance data for their products!

A few comments on the "test".

- There is general industry dissatisfaction with the present accepted standard of measuring luminaire performance, viz quoting peak candela as this measures only the centre peak output, the extent of the beam being defined as 50% of this output. Niethammer, before their demise proposed an alternative method of measurement looking at the efficiency of the optical system relative to the known light output of the lamp. (Refer Lighting Dimensions March 94). This may prove to be a more useful guide for the future. What is certain is that simply taking a centre reading and an edge reading as done in this "test" is totally meaningless without regard to beam size or other points of measurement across the beam.

- Those Connections readers who receive our regular "Performance Lighting News" will be aware that when writing about our luminaires we are constantly referring to beam quality and "usefulness". Usefulness of the beam must relate to the intended function of the luminaire. The primary function (75-80%) of profiles is for controlled area illumination. To obtain even light coverage beams from several luminaires are overlapped. The drop off criticised by Prolite is of course deliberate as overlapping beams cumulatively balance the higher light level in the centre of the beam.

- Selecon totally rejects Prolite's claim that the gobo projection is unacceptable in our Acclaim Zoomspots. Again Prolite seem confused over the use of gobos in stage lighting, most are break ups of one kind or another used to "texture" the light - dappled forest light etc etc. Acclaim Zoomspots provide a very acceptable gobo projection with high light output. Indeed the image can be improved (the slight halation found at some beam angles is reduced) with the use of a donut. If projector like quality pattern projection is required we have developed a specific luminaire for this task, the Acclaim Condensor which

neither sacrifices light output or usefulness for purpose.

- A couple of technical points : * The size of the gobo is irrelevant to light output. The "M" size is now the de facto standard world wide for 650w luminaires. * When testing luminaires there are a large number of variants which need to be controlled including voltage; lamp (+-10% variation in output claimed by the manufacturers = possible 20% variation between two lamps); ambient light etc. A lot more than can be done with just a light meter (which of course should be calibrated at least annually by a recognised test laboratory).

And as to our claim that Acclaim Zoomspots were purchased instead of 1.0kw's, indeed they were, not once but on two occasions, by Twin Towers Club, Surfers and Electric Sunshine, Sydney.

As to believing what you read? I guess it comes down to who wrote what your reading.

On one matter we do heartily agree, before you buy any luminaire check it out, with comparative products in your theatre. This will give you the opportunity not only to check out light output and the usefulness of the beam for your purpose but operation features (effectiveness of shutter system; ease of access for relamping and maintenance, interchangeability of lens assemblies; adjustable yoke etc) and of course the inherent safety of the product. Any of our 22 distributors around Australia will be pleased to assist with the supply of samples and further information.

Simon Garrett, Australian Market Manager, Selecon NZ Ltd.

How's this for Gibberish?

We note the following packaging description for a Uni-Directional DYNAMIC MICROPHONE. "This unit is widely available for Singing, Recording, School teaching, Church preaching, Stage performance and P.A. system etc. The features : * It possessed a sort of bright sound Microphone. * With cardioid pick up pattern. * It can produce broad response, high fidelity quality, no feedback, and no howling etc. * It can express good sound of your voice and excellent melody orchestra. * To self-contained filter control explosive breath sound "Pop" and wind noise in outdoor locations. - Craig, Central City Music Hire, Wellington NZ.

LETTERS

are always welcome here! Fax to (02) 876-5715, mail to PO Box 439, Epping NSW 2121 Australia, or Email to julius@Next.Com.Au or Compuserve 100242,3662.

Feed Back

We have recently surveyed 250 Entech visitors at random. Aside from tradeshow issues the survey asked them what they liked and disliked about Connections. The info helps us to help you. Here are a few choice comments—

- More product reviews, less politically correct terminology.

-David Lee, Brisbane TV

*Agreed, product reviews need to be unbiased and unbought. This limits the ones we can use. -Ed.

- More educational things and good humour. (Underlined the 'good'). Less: Ribald humour and inuendo. Despite what Julius says in defence of Connections' brand of humour, some just don't like it, and I know of more potential subscribers if it was cleaned up.

-Paul Perry, Vortex Media, Sydney.

- More installation review, less childish sniping between so called 'experts' and the magazine.

-Bert Reedy, Aricom, Melbourne.

- More marketing information, less product selling, more Asian info.

-Pramote Chokesirikulcha, TV3 Bangkok.

- More quotes from women, second hand equipment.

-Victoria Hall, Bathurst NSW.

- More well written, indepth stoies on people and productions. Less spelling mistakes, blurry photos, poor layout.

-Kelvin Gedy, System Sound, Melbourne.

- More on theatre and solving problems on a small budget. Bring back the Buyers Guide. Less Bitchy letters re. Jands vs. everyone else. Include more prices, I hate ringing for these.

-Duncan Sharp, Edith Cown Uni, Perth.

*The Buyers Guide returns in March. Can't recall any letters re. Jands, but remember we always run negative letters, especially if they relate to the magazine and our sins. -Ed.

- More live review. Less recording crap. Give Catriona a pay rise!

-Jeff Pavey, Randwick NSW.

- More multimage audio visual info, less wobbly mirrors.

-Brian Kirby, Kirby Productions, Dundas, NSW

- More Natalie Apostolou, Catriona Forcer and Caroline Grafton. Much less, preferably nil, Julius Grafton.

-Denise Burns, Application AV, Doncaster VIC.

- More lighting and control, less audio - but I'll probably get lynched for it!

-Peter Robins, SAS 7, Adelaide

- More moving lights. Less of the trend to exalt overseas operators and designers as I think the Aussie operator/designers are more innovative with less budget.

-Peter Walker, Seagulls Rugby Leagues Club, Tweed Heads.

- More product reviews, less ad's for disco products and bitchy letters.

-Roger Clapton, CC's, Melbourne.

- As MIDI has become such a major component, more on setup and interfacing systems.

-Roger Doyle, Director of Engineering, NSW Fire Brigades.

*Absolutely. We seek freelance articles on topics like this. Please contact us anyone who has ideas. -Ed.

- More backstage, on-tour stuff. The personal views of some writers needs tweaking.

-Peter Stobbert, AV Services, Wellington NZ.

- More women. Less men.

-Greg Bee, Music Workshop, Geelong Vic.

So it went. Readers also completed a matrix Q & A whereby they rated what they most liked and disliked, turns out our layout and ease of reading rated lowest. Which doesn't surprise us too much. The new complete index on page 3 should help, we will keep trying harder. -Ed.

EDITORIAL

COMPANY COLLAPSES DUE

Hard to believe we started this magazine in the aftermath of a bad recession, but with all target readership markets enjoying growth it's that same 1990 - 1992 recession that is now about to kill a few businesses.

We have just been reluctantly forced to sue an advertiser who are insolvent & owe us money from last June - and surprisingly we haven't had to do this before! That company, like some others we observe, spent the recession downsizing and thinking small, and failed to see their market would grow again. They didn't keep the iron in the fire, and so had nothing new to offer when the competition warmed up.

E-MAIL FOR ALL IN 1995

The Internet hype actively deters a lot of people from its ultimate greatest benefit - the transmission of messages and computer files at

very great speed and little cost. Most people we know on the 'Net or on Compuserve swear E-Mail is gods gift, we agree. Via my modem I can send any computer file to anyone on-line, they needn't be in their office, they don't need to leave their computer and modem turned on, and they don't need to dedicate a 24 hour a day line to their modem.

WHAT WE NEED FROM YOU

'In practice' type stories, which detail a technology or application, with diagrams. MIDI and show control solutions, detailed. Product reviews. Interstate material. How can we better cover the areas you like? Only with your help!

The FAQ (Frequently Asked Questions) section can also deal with common mis-conceptions. Please help us by participating, send material and if used we will pay you (if more than a few sentences or a FAQ.) -Julius Grafton.

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Write in Reader Service number: 145

NO ADVERTISING DEALS WERE DONE IN RELATION TO THESE INDEPENDENT PRODUCT REVIEWS. YOU CAN RELY ON WHAT IS WRITTEN HERE.

SOUNDSCAPE HARD DISK RECORDER

Reviewed by John Zulaikha

One thing that I'm totally used to in a studio, is a multi-track/mixer configuration. It is a most powerful combination and the digital world is only scratching the surface of replacing the workhorse and for good reason. In practise the power to actually replace the standard is proving elusive and inferences that manufacturers claim they can replace the multi-track is somewhat misleading. The confusion is inherent with the blurring of multi-track and mixer merging into one item.

One such unspoken feature



missing on many hard disk stations is *dropping in and dropping out of record on the fly*. After 25 years of multi-track work, it's a little hard to drop that habit. Having had a few conversations to Patrick from Digital Sound Systems, Soundscape distributors, the penny finally dropped. The latest

pricey hard disk recorders all do, or so they say... but many elderly or low cost systems didn't quite altogether necessarily... and that bears a direct relationship to how the user wants to work and the service they supply.

To Soundscapes credit, they have dropped the line, *The system*

can be used as a replacement for multi-track analogue tape (older blue pamphlet) and replaced it with *Studios with multi-track analogue tape machines can now add digital tracks with full chase lock* (newer pink blurb). So let's forget about replacing a multi-track and look at it as a new device that does the job in a new way - and hey presto, magic!

Getting the feel was easy enough taking into account we were just running through the functions - no actual critical listening. 1 hour later... everything appeared to work fine even on the IBM 386 clone supplied running a slow 16 meg - all except for some screen re-draws like EQ which were tediously slow, but Soundscape was running just fine. Satisfied with the price of \$6000 for the basic 2 in 4 out 8 voice machine... I asked how well did it sync? Well, we figured it out and essentially I was satisfied with all the *tech talk*.

OUT OF THE BOX

Out of the box it goes something like this... plugged in 2 in and 2 out rca's unbalanced - had plenty of level and was very clean - plus one midi in. The Soundscape controller card was already in the

(continued over)

(continued over)

KORG 05/RW SOUND MODULE

Reviewed by Mark Williams

This time last year after researching the multi-timbral synth market for a box that would form the heart of a midi setup on a tight budget, I forked out the required amount of money through a local dealer to KORG for an 05/RW. (What I mean is - last year I bought a synth module.)

TARDIS-LIKE ABILITY

This little half rack box has a tardis-like ability to contain more great sounds, FX and programma-

bility than would seem possible in such a small unit.

The 05's 6meg of basic waveform samples are called multisounds which number 340 and include loop or 'sustain portion only' samples.

These multisounds are presented in the form of "programs" and "combinations", a format that's been around since the M1.

Programs consist of up to 2 multisounds and are arranged in 2 banks. Bank A contains 100 RAM

programs including 2 drum kits and Bank G is a General MIDI bank with 136 ROM programs including 8 drum kits.

Combinations are a cocktail of up to 8 programs layered, split, velocity triggered and effected to your liking in 100 RAM locations. FX

There are 2 FX units which can be applied to any sound in any of 3 parallel and 1 serial formations. Parallel 3 is particularly useful as it facilitates an "FX send" to each FX unit and in edit drum mode you can send separate FX levels for each instrument, eg: wetter snare and toms, drier kick and cymbals.

47 FX are available to each FX



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KORG 05 (continued)

unit including reverbs, delays, choruses, overdrive, distortion and rotary speaker with enough parameters to keep most programmers happy.

SALUTE TO GENERAL MIDI?

Multimode can receive up to 16 ch. of MIDI data on 16 independent tracks which default to GM assignments, eg: ch. 10 = drums, FX1 = reverb, FX2 = chorus.

GM has been given more thumbs down than up, at least by reviewers but I have found it to be very helpful in my situation, where I have friends who create a sequence and hand it on to me to sync to tape and add guitar, vocals, etc. This does not mean that all sounds and FX used are "GM clones". What it does mean is that the fundamental structure of the sequence is transferred from module to module very quickly and efficiently and then at mixdown [or before] unsuitable GM sounds and FX are replaced as a mix is built.

The 05 allows this via Bank A which is basically Korgs "original" sound set as opposed to the GM "clone" bank.

Both a Mac and PC MIDI interface are built in which is a significant cost saving if you haven't already got one. MIDI in, out and thru are still there of course and output is via two 6.5mm phone jacks which is a welcome relief from those pesky little RCA's. There is also a 3.5mm stereo head phone jack located on the rear with everything else and 12V power is supplied through an in line floor wart - which is a better compromise than a wall wart!

CONCLUSION

The 05 offers much for your money whether you run a PC or Mac, want creative expression through powerful programmability and FX or just want a simple GM playback module. It is capable of producing sounds to suit most types of music and excels with thick luscious pads and dance music textures. Potential for the creative programmer is abundant and SYSEX data dumps allow plenty of expansion if you have a SYSEX library device.

So if you're after a mini minor with a V8 hidden under the hood, I recommend you test drive the KORG 05. Retail: \$1495.

SOUNDSCAPE (continued)

IBM so all we needed was to screw in the ribbon connector... double checked system, power up, and we're in. You're then presented with a screen layout that you can re-arrange... Tool Bar, Transport, Mixer, Meters, Sound File etc. to your liking and save.

Along the top there are 9 (one at a time) user assignable strips containing about 26 mouse tools. On a 2 button mouse you click with the left one on any icon and the right button on any other. The mouse left/right now becomes the respective icons. 8 colour coded microphones for record, 8 coloured speakers for playback, a clear speaker for de-selecting a track - making it an outlined track and one of the 64 virtual not heard. Simply by clicking with a coloured speaker tool it becomes real. Others icon tools are available to select when the transport is in the stop mode.

Functions are limited in play or record, all except Tape Transport, View and Mixer. It now has 99 on the fly locate markers.

Considering that's what you can do, all the icons and stuff that you can't access should dim to clarify what is not available (minor gribble). The mixer section functions, volume panning mute and I believe follows MIDI Controllers for sequenced automation, but then again it will be also able to send midi from the screen mixer in later software.

Eager to actually record and listen I patched in a CD, selected +4 or -10 switch on the rear of the Soundscape, neither was exactly right... one needs a mixer that pumps out the right level, but a trim would be extremely handy.

Considering one wants to eliminate mixers a lot of the time and just go straight in for the best quality, a pot would be handy, (but I'd like a volume control on digital inputs). I will mention that Soundscape has Normalise, which means one can under record and Normalise back up to zero and the quality was great when I tried it.

Having the patience of a 2 year

old I pressed record. It appeared to work then it stopped and asked me if I wanted to keep the recording, yes please, so I clicked ok, but there was nothing? After a few tries I reverted to the manual which told me not only did I have to select record with a microphone icon (which I did) but I have to also make an imaginary track (or 2 for stereo) by clicking the mouse in between the left and right locators. I found myself forgetting this basic fact until I became accustomed to the concept.

Record drop-in drop-out worked well after you set locate points left and right and followed the appropriate

I wanted to really check out the vari-sync mode. I slowed the video down to a crawl, Cubase locked in and the sequenced music was playing, slowly... a bit faster and yes -- the Soundscape synced up and was... recording.

mouse clicking a n s w e r - prompt-box-sequence but not on the fly... I'd say in most project studio functions, this will cover the job just fine. It would leave that % of the time when you

just want to drop in and out done next.

I wanted to really check out the vari-sync mode. Time was running so I went straight into the hardest check I could think of. Set up record it, was waiting for MTC. I slowed the video down to a crawl and... too slow, a bit faster, Cubase locked in, good, and the sequenced music was playing, slowly... a bit faster and yes the Soundscape synced up and was... recording.

Now remember, I had a CD running at normal speed and pitch of course, and the hard disk actually was recording, chase locked to extremely slow SMPTE. What would it sound like? I started to turn the video wheel slowing it even more, until the Soundscape lost sync and dropped out, and so did the Cubase. I was like an excited schoolboy looking up teachers dress when she hiked it up on a hot day!

It asked Do you really want to keep this? Yes please, I clicked OK and there it was it, 2 beaming red and gold bars. It recorded something but what? I couldn't wait, I de-selected chase mode and

switched to internal. The CD was playing back fast, real fast - and then it got faster and faster until it whipped up in pitch and out.

The Soundscape tracked, recorded and played back way beyond the call of duty and seemed to track because the pitch went up as I slowed the SMPTE down.

Hardly a bench test, but a quick last minute check that stunned me. That was good, real good. If it could handle that it would more than likely follow Timecode anywhere it went!

All my head related problems seem to fall back into one area. You have to define the area that you wish to record before you can.

The Soundscape wants to be told left and right locate position presumably so it can pre-determine the amount of hard disk space it needs to allocate.

Mathew at Harbour Music, local Soundscape boffin, pointed out that it's effectively organising hard disk space which is cost efficient.

One really needs to know the job to be achieved to be able to make the decision which hard disk system is for you, but Soundscape is an excellent product which boils down to a price Vs. features war, and that changes faster than the wind.

PROS : Lots of features, creative usage of available power, sounds great, syncs great, straight forward easy to use, expandable, future audio/sequencer packages is attractive.

CONS : Minor software quibbles, lack of drop-in drop-out on the fly, house keeping unavailable unless in STOP mode.

CONCLUSION:

Considering sales have reached the 50 mark in Australia, they're carving a much sort after niche in the market. Future options include Cubase and Logic Audio front ends, which is a very nice direction and should establish Soundscape as the preferred high quality hardware package for the very cost effective IBM family, and gives the Mac and Digidesigners a run for the money.

• From Digital Sound Systems, Sydney (02) 386-1043, Melb (03) 629-6236, NZ 09 366-0554.

FAQ

Where we (try to) answer
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Kick Mic Choice First DMX Hassle

Q Please advise me which is the best all round microphone for bass drum? -Zargon, Perth.

A Microphone choice is a hot topic anywhere audio types congregate. In a retail shop, a microphone A:B test is almost impossible, and yet this is often the most sophisticated technique applied.

A recent kick drum microphone choice debate on the Compuserve Live Sound Forum got nowhere, because as the participants eventually agreed, every situation is different.

"I normally spend a lot more time tuning a kick with a standard kick mic compared to the Shure SM 91" was one comment. Then on the other hand- "This mic (SM-91) seems to generate extreme love/hate reactions. If you do mostly metal or fusion acts, then this could be your kickdrum mic of choice. If you do a variety of musical styles, then the SM91 could still be a useful tool in your arsenal of drum mics, but might not necessarily be the best choice if it is to be your ONLY kickdrum mic."

"Other choices would be the AKG D112, Audio Technica PRO25 or ATM25, Beyer M380, M88, M700 or the old standbys — EV RE20, Sennhieser MD421, AKG D12 or D112."

Your PA system, the venue acoustics, and the kick drum configuration will all play a big part. But the best way to decide is to borrow or rent as many of these different mics as you can, and let your own ears be the judge.

Q A question reported as the number one, Frequently Asked Question on the Show Technology customer support line is:- 'I've connected my moving lights as I was supposed to, the controller's on, but nothing is happening. What's wrong?

A In a very general sense, ninety percent of communication problems with DMX controlled lighting occur due to signal problems usually caused by faulty cables. Check, check and check again. Then call!

ADAT or DA88?

Q We went to Entech to choose between the ADAT and the Tascam DA-88, 8 track digital format. With our close connections with the video industry we think the Hi-8 (Used by DA-88) format gives much better video quality than the wider S-VHS (Used by ADAT). However we feel Hi-8 tape is unreliable, new tape should be used each time, and once used for video it should be dubbed to Beta-SP for editing.

We feel Hi-8 tape suffers from dropout and should never be fast-forwarded or rewound, and certainly never "rock and rolled".

As shuttling, jogging, pausing and drop-ins are a major part of recording I wonder how Hi-8 tapes can be successfully used - or have Tascam found a means of overcoming tape drop-out?

-David Gibson, Copperfield Sound Productions, QLD.

A We prefer not to delve too deeply into Hi-8 technology in general, as >cont. over

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FAQ

DA-88 (continued)

our experience starts and ends with the DA-88. The DA-88 was designed and built 'from the ground up' by TEAC Corporation as an audio recording product, hence the transport was designed and built by TEAC to cope with the vigorous workout that it would experience in a production environment and, as such, fast forwarding, rewinding, 'rock and rolling' and shuttling back and forth are part of the day to day performance requirements of the machine.

Of the thousands of DA-88's used in production studios throughout the world, we are not aware of any problems with the transport, or tapes performing inconsistently in the aforementioned functions.

-**Theo Kougioumtzis, TEAC Tascam Division, Melbourne.**

DAT VIA SCSI?

Q Do you know of software available that will transfer audio DAT tapes to audio files on a hard drive for transfer to CD-R disks? The software ideally should be able to transfer directly down a SCSI bus to the hard drive.

-**Once Byten, Fairfield.**

A We don't know if a DAT recorder with SCSI exists. However you can transfer with AES/EBU or S/PDIF to a ProTools, Session 8 or Audiomedia II card. Then you can convert your audio to any format that you like.

-**Connections.**

EMPTY- WHY?

Q Why are entire rows of apartments abandoned in the Harlem part of NY?

A Taxes have accrued beyond the value of the buildings.

DAT VIA SCSI?

Q What is MIDI Show Control?
A. Shriver, Townsville.

A MIDI messages suit audio control because a program change command can change parameters on an effects unit, for example. So after MIDI appeared for keyboards in the early 1980's, lighting users started exploring the possibilities. As John Huntington states in his book 'Control Systems for Live Entertainment', "Standard MIDI messages don't translate well to disciplines like lighting control: what message do you use to initiate a cue? How do you control a submaster?"

With a rash of differing applications based around MIDI, a standard implementation for show control was devised, after **Andy Meldrum** (then with *Vari*Lite*, now with *LSC*) put forward a proposal. **Charlie Richmond** from Richmond Sound Design (Canada, *Charlie gave a seminar at ENTECH on this topic*) then went on to organise a theatre messages working group within the MIDI Manufacturers Association. MIDI Show Control (MSC) Version 1.0 became a standard in 1991.

REFERENCE: The standard is fully detailed in John Huntington's book 'Control Systems for Live Entertainment', ISBN 024080177-6, distributed by Butterworth Keinemann.

HQ format hassle

Q Why don't HQ Holdens handle?

A There is no answer to this.

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Mark IV Audio News

NEW from CONNECTRONICS is a range of **Patch Bays and Cable Reels.**

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The **XB Series** are either 16 or 32 connector XLR **PatchBays.**

& The **PV Series** that is the Audio Visual range in either 20 or 40 channel isolated or non-isolated with high grade phono connectors front and BNC rear connectors.

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- The **CR3** will hold 600mtrs. of 6mm, 175 mtrs. of 12.5 mm & 120mtrs. of 16mm cable.

All **Cable Reels** are built with steel frames and the **CR2** and **CR3** have detachable steel drums.

The new **Electro-Voice** music product catalogue is now available, please call or write for a copy. **EV's** outstanding little **S40** compact monitor is now available in a 70/100v transformer version, called the **S40T**. It has 85 - 20,000Hz, 84dB 1w/1m, 100 x 25 degree dispersion and 5 power taps 1 - 30 watts in 3dB increments. The **S40T** is available in black or white and with or without mounting brackets.

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Sound & Recording - an introduction

What can you learn from a book? I learnt how to fly myself, doing the syllabus by correspondence. It was tough, but the book got me through, well - it was the theory part of the process, culminating in four three hour exams. This gave me a healthy appreciation of what a teaching book should - and shouldn't - do.

Sound & Recording: An Introduction is a solid work with a very nice layout. This is important with deep theory, due to the noddy syndrome to afflicts the 98% of us who are not reading machines. 'Fact File' boxes appear through the 360 pages, these are a good way to get the info out of the text.

It's a book about sound and recording, with some departures from recording - meaning if you seek audio theory and if you don't plan to do any recording then it's

still useful to you.

This is the 2nd edition of the book, which was first published in 1992. Thus it deals with topics of the day and the recurring techniques quite well, but falls a little short in terms of digital recording. You cannot expect any book to stay current in this area more than a few months, likewise hard disk recording is dealt with in more of an overview manner. Having said that, it's a concise overview.

However, the principles behind digital recording are well explored, sampling and the time domain view are laid bare in a no-fuss manner, vis: "The sampling process employed in an A/D converter involves the measurement or 'sampling' of the amplitude of the audio waveform at regular intervals in time. The samples can be

considered as rather like instantaneous 'still frames' of the audio signal which together and in sequence form a representation of the continuous waveform, rather as the still frames which make up a movie film give the impression of a continuously moving picture when played in quick succession". It makes sense to me!

The first two chapters deal at length with sound and auditory perception, this sets the tone for what is to come, for all elements of sound as relevant to recording are dealt with. 17 chapters in all, with an appendix that touches on a few things missed in the rest of the book.

Whatever the authors skimp on or miss they make up for with suggestions for further reading at the end of each chapter and the book. This in itself makes Sound & Re-

recording worth every cent of it's \$55 cover price.

•Reviewed by Julius Grafton.

AUTHORS: Francis Runsey and Tim McCormick

CRED: One comes from theatre sound, the other is an academic. Both are muso's and engineers.

STYLE: Educational, well explained. Not stuffy.

HUMOUR: Scarce.

DENSITY: 9 point type like Connections, more leading (or white) between lines. Good value.

ILLUSTRATIONS: Plenty, with pictures of apparatus of 1992.

REFERENCE: Distributed by Butterworth-Heinemann Australia, Published by Focal Press.

ISBN: 0240513835.

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Duncan Fry- Random Noise

The Money And The Gun

I have a confession to make. Once, when I was hard up and had no gigs, I did the sound for a disco! Disco Nick ran a mobile disco, and one day he called out of the blue.

"I've got a big show coming up and I need a complete system because there's a band on as well. Are you interested?" he asked.

"Maybe," I said, "Where is it? Local or country?"

"Bacchus Marsh," he replied.

"Bacchus Marsh?" I said, "Jeez, it'll cost you plenty."

"I know," he said, "But I quoted extra on the job because I knew you'd stiff me! What do you say?"

Although it's only about an hour out of Melbourne, Bacchus Marsh is a pretty isolated place. It only really joined civilisation when the Hume Highway became a major interstate truck route. Now that the Hume Freeway bypasses the town, the place has slipped back into being a backwater again.

Perhaps I'm being harsh on the town, but that's the way it affected me. So, Col and I drove out there, set the gig up, and waited for showtime. Good old Disco Nick arrived, plugged in his console, the band arrived, did a soundcheck, and headed off to the bandroom. We went over to Nick. "Shit, Nick, those guys are terrible. Hope you're not paying them too much." we said. "No, I'm not paying them anything," he laughed. "They want me to be their manager!" I smiled at Col. Some things never change.

The night was some kind of youth group function. I was pleased to see that Nick hadn't economised on the bouncers; three solid looking guys on the door who looked like they wouldn't take shit from anyone.

During the night one of the local loonies rolled up continually at the door, wanting to get in for nothing. He was quite a few bricks short of a load, and really did look like one of the hillbillies from Deliverance. Each time he rolled up, the bouncers sent him away, and he'd shuffle off mumbling to himself. Col was mixing, and I was roaming around the hall, when suddenly there was a scuffle and commotion by the front door. I went to see what it was....

Young Deliverance was coming through the door with a f-----g double barrelled shotgun in his hands. "Are youse gunna let me in now," he asked, giggling and waving the gun around. The bouncers put their hands up and backed off.

"Sure, mate, sure, come on in."

"I wanna hear the music," he said and headed into the hall, pointing the gun at anyone who was in his way. The band took one look at the situation, and stopped mid-note, dropped their instruments and ran backstage. When the people in the crowd saw him and the gun, it was like Moses parting the Red Sea. People screamed and ran out of his way, tripping and stumbling over chairs, scrabbling on their hands and knees to get out of his line of sight. Us too.

There is something about a loopy pointing a gun at you that really gets the old reflexes moving like lightning. Col took one look and dived under the mixing desk; I leapt behind the black drapes around the stage. Only Disco Nick didn't move, and that was because he had his head

down and the headphones on cueing up some tapes. And then, just as suddenly as it started, it was over.

With a CLUNK, one of the bouncers whacked young Deliverance over the head with a chair and he crumpled to the floor. I threw the bouncer the trusty Gaffer tape. "Here, wrap the bastard up in this," I yelled. So when the Police finally arrived about an hour later, there he was neatly trussed up like a chicken in black gaffer. Very kinky.

As the Police car pulled up outside, a woman claiming to be his sister came yelling into the gig, and bailed up the bouncer. "Ere, why didya call the cops," she screamed, "He can't help it. He wouldn't have done no harm, he was just kidding anyway."

The bouncer broke open the shotgun. Two shells sat glistening in the barrels. "Just kidding, eh?" he said, and gave the gun to the police. So now you've probably got a fair idea why Bacchus Marsh is not on my list of favourite holiday spots.

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R.E.M.

A CONTROVERSIAL SHOW

The team of Joe O'Herlihy (sound engineer) and Peter 'Willie' Williams (lighting designer), who bought us the Zoo TV U2 show last year, were back in town with R.E.M. Knowing what respect these two have in the industry, it was surprising to read such bad reviews of the show with scathing attacks on the lighting and sound. There were reports of punters leaving the shows in disgust and the band treating the audience with contempt. I know my night started badly when I was told that either I would have to pay for my ticket, as apparently the band didn't believe in guest lists, or Joe would. Perhaps this put the critics off to a bad start?

The mammoth Zoo TV tour had its final show in Japan, December 1993 but by the time the production actually closed it was March 1994 and Joe O'Herlihy had a couple of months off. Joe was then contracted to work as the Audio Design Consultant on Woodstock 1994 dealing with the sound requirements for 64 bands.

For the last fifteen years Joe has worked fairly exclusively for U2, both in the studio and live, but for most of '94 and '95 U2 have decided to take time off from touring and recording to pursue individual projects.

"It's sabbatical time in U2 land," said Joe. "It's good because it's an opportune time for me to work with other people. The two bands know each other really well. R.E.M. went to Dublin to launch their new album 'Monster' and there's a lot of comradery there. It's worked out really well because we finish this tour in South America at the end of November when U2 should be ready for studio work. At the moment it's only a rough plan.

"I respect R.E.M. enormously. I feel they've stuck by who they are, what they are and how they approach everything they do. They haven't sold out to the mainstream. It's quite avant-garde, very arty and maybe not everybody's cup of tea but that's R.E.M. There's no glitz, glam and gloss. It isn't crash, bang, explosions and off we go. It's very much an R.E.M. show and coming from the huge Zoo TV experience, which in itself was a major technical undertaking, to this

is exceptional because you're going back to the raw energy of from the heart to the heart. They're not getting involved in the huge production trail which most bands have in the

icians were brought in to play the parts the band didn't want a machine to play. Nearly fifty song titles were rehearsed and they alternate from night to night on the tour.



nineties."

Joe admitted that after working for one band for such a long time it was strange to deal with a new act but, as a professional, it wasn't a problem.

"there were reports of punters leaving the show in disgust"

"The R.E.M. people are very well balanced in the sense that they know what they want," he said. "So far we seem to be hitting it off."

Rehearsals were in October 1994 at Atlanta, USA and lasted three weeks. Two extra musi-

"It's a lot of work with the programming but we have the technology to deal with that so it's not too labour intensive," said Joe. "I'm using a Clair Bros. audio system and we're using Jands in Australia. It's a 56 box S4 system and we have sub-bass on that also. At the moment we're using Piston P4 boxes for front fill along the barricade. The FOH board is the ATI Paragon Series which is a 56 output console. It suits me fine for what I've got in the house. The processing is a Clair Bros. processing system. We have TC Electronics Active Moving Fader for the EQ and the effects and treatments are: 480L, PCM70's, SPX9900's and SPX1000's. The whole program computer changing is done by Aestheticlogic which basically calls up at random the various different program settings for treatments and effects changes for whatever song we're using. We have cassette and DAT playback which is basically for pre-show. It's all quite small and precise.

"With the ATI console you have on board dynamics, things like noise gates and compressors that are built into each individual input channel so there isn't the need to have an extra rack of that stuff to the side. We've bought all the FOH, monitor desk, staging, microphones and cabling with us."

Radio Station in-ear monitors were being used for Michael, Bill and occasionally Mike Mills. Although Joe has used them extensively with U2, it's the first time R.E.M. have used them.

"I introduced them to Michael because he likes to hear, as distinctively as possible, what's going on around him," said Joe. "So far he's enjoying them and can sing properly because the monitoring is exceptionally good. Ultimately you can control it yourself as you have a belt pack with your own volume control and things like compression. You can't take somebody's ears off with stray noises or massive doses of feedback!"

Monitor engineer for the show



was Vish Wadi who was using a Yamaha PM4000M. Microphones were very 'live show and low tech' orientated rather than 'high tech and studio' orientated. Old reliables like 57's on guitars were used as well as 58's for vocals and EV408's on the toms, M88 on the kick, 57 for top and bottom snare and C451's on the cymbals and high hat. On the bass there was a 421, two DI's, a bass effects treatments DI and a straight bass DI.

"Peter has got a Vox AC30 and a Mesa amplifier which he alternates on various different songs," said Joe. "There aren't any electronic gadgets, sampling devices, tapes or triggers. It's technically challenging to a certain extent with all the various different instruments the band play. I have to make sure all the parts that are played have a distinctive part to play in the structure of things which is time consuming in creating but when it works it's brilliant. We also have the acoustic characteristics of the room to deal with and here at the SEC it has been fairly tough so far. I know they've done a lot of work on the acoustics here but I think they've still got quite a way to go."

"It's really challenging, both visually and sonically."

It was at this point I tentatively bought up the issue of the Sydney Morning Herald review of the first show by Bruce Elder. Describing the show as a performance that 'just did not deliver' and 'verging on the unforgivable'. Bruce went on to say the sound was 'beneath

contempt'. He also said the band 'can't, or won't, hire a decent sound system'.

I don't know anything about the gentleman in question but I think you can mention how bad the sound is once and that should be enough," said Joe. "To mention it three times sounds, to me, like he's got a bee in his bonnet about something. The problem is that people believe what they read.

He's perfectly entitled to write what he likes but he should remember that thousands of people will believe it and it's only one man's opinion. I try not to get involved in that game and it is a game. In any part of the building the sound is completely different. You can't take that stuff to heart or you'd be a bucket of bones in the corner.

"The first night, which was reviewed, it was particularly tough. A building settles, sound wise, as you go along. You have to EQ as you go along, with sound checks you EQ as good as you can for the room acoustic but as soon as the people come in it changes. As the gig progressed, we changed to the best of our ability and we do have people walking around to check the sound. If there are inefficiencies in the system we rectify them but if there are inefficiencies in the building, there's nothing we can do about it. You just have to bite your lip, grin and bear it because, no matter how good you are or your equipment, it can be awful. Last night was a far superior show both performance wise and the audio environment



Joe O'Hershey

in the room was much better."

Willie insists that after the Zoo TV tour, he lay on the floor for about a month before going to work with Bryan Adams for a while.

"That was fun," he said. "He'd been on the road for about a thousand years and was going back through Europe and America for the third time so he wanted a new show. I also did some MTV stuff before chasing this job as I really wanted to do it. I spent a good couple of months putting proposals together and having some time off."

With a hint of self-mockery, Willie said he was eventually hired because of his creative genius.

"They suggested I work with Mark Fisher (stage designer) who had also been submitting ideas," said Willie. "It's unusual for a band to suggest you work with somebody else but it was absolutely great and I think Mark enjoyed doing something smaller. It's handy because whilst we are here, the European production is being put together in London and he's overseeing that. That show is going to be a lot

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R.E.M. (cont)

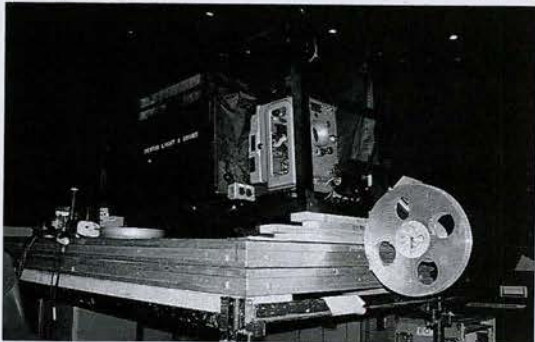
bigger with nine film projectors. As it'll be a 360° production you can't use a cyc so we're using gauze screens which you can see through. Most of the projectors will be close to the stage as I'm really interested in using the projector beams because they look so cool."

Willie said that when talking to R.E.M. it became very clear that they have a strong tradition in the way that they do things and there was never any question about having to re-invent them.

"They're probably not aware of it but they do have a very distinct way of working," he said. "It also became clear that the show needs to be very simple. The lighting is really a giant club rig. I felt it didn't require a 'clever' system at all although the looks are very strong and bold. The other side of R.E.M. is that they have this wonderful sense of irony, they're very self depreciating in a way and that gave me license to have some fun with it too.

"They're very into using the 'found object' although they are not as calculated as Dada. The most interesting thing about them is that they work purely on instinct, it's not a cerebral show at all. It's not based on an intellectual level which is really refreshing. There's no great plan behind the show. It's just a series of beautiful images which, when put together, make some kind of sense of their own. We designed some groovy stanchions for the floor lights but Michael said 'let's not design something, let's try find something'. That's been very much the watch word of what we've done."

Michael also wanted a pop art feel to the show and so a lot of the colours that Willie is using are very toxic.



The 35mm projector

"There's this fantastic new Lee gel, Lee 100, which is called Spring Yellow but *Piss Yellow* would be a far better description of it," said Willie. "It's wonderful, it's such a horrible it was a real winner. They're really into these pop colours. I also found these Unipars - plastic par cans which are absolutely ideal because they are such revolting colours. They're completely useless because more light comes out

of the side of the can than the front but in this application they are just perfect. They make them in these wonderful puke green and red

push it and they say 'push it, we'll let you know if you've gone too far'."

It was Willie who bought up *that* review where the lighting was described as 'just plain silly' and the film clips as 'pretentious and pointless'.

"I thought it was great and I'm going to laminate it," he laughed. "It is pretty silly I suppose and he would of seen the show which opened with five minutes of total darkness."

Willie stated that he had actually gone out of his way to make the rig as boring as possible describing it as a complete and utter non-statement. It's mainly just a lot of par cans, a few Lekos and what are called the chicken coops which were especially designed for Australia and are supposed to vaguely mimic the big

Wybron colour changers made of nine par 64's which will be used in Europe.

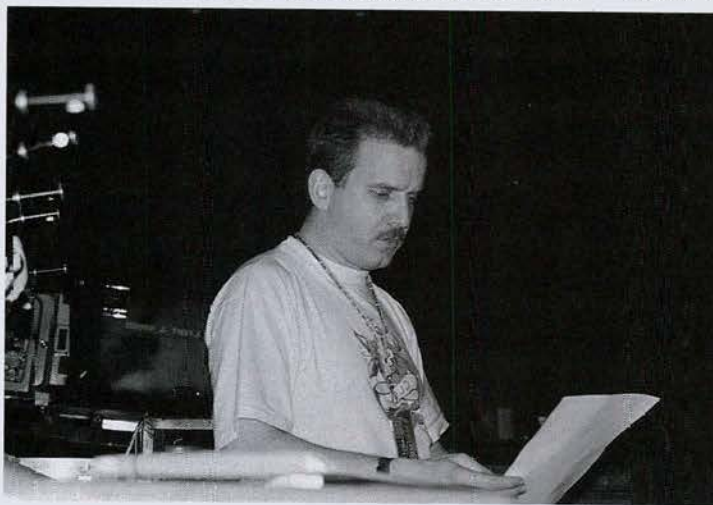
"The rig is very plain and unfancy but it delivers the looks that I want," said Willie. "What more can you want. I'm really enjoying using the film as I think the beam gives you a

..Lee 100, which is called Spring Yellow but Piss Yellow would be a far better description of it."

fantastic light and I'm looking forward to spending the year experimenting with that. The brief for the film makers was that they weren't to make films for specific songs and they weren't to edit the films to a sound track. So they've just made these four or five minute films which hold together really well purely as a visual piece rather than an edited rock video. Consequently they are much more flexible and can go anywhere.

"It isn't a very user friendly show and I think a lot of journalists are going to have problems with it. It's absolutely not a 'let's all come on down and feel beautiful together kind of show'. It's really challenging both visually and sonically. People are either going to get it or not. There are so many people who have never seen R.E.M. play and have certain expectations to what they'll be like live. But they're not a crowd pleasing band and that's reflected in the visuals which are very unforgiving and challenging. It takes some effort on the part of the viewer."

● Cat Forcer



Willie checks the set list for surprises

colours so they're absolutely everywhere.

"The whole stage is very under designed. The Unipars are just clipped on wherever they happen to be, the rope ladders are left in and there are lamps clipped onto those."

The film aspect of the show is a major part of the production. Seven film makers contributed and although Willie only need 10-15 ideas, he ended up with about 150 ideas. It was up to Willie to choose what would work best in context. The most notable film maker was Gus Van Sant, who made *My Own Private Idaho*, but there was also Lance Bangs, a 19 year old who shoots on 8mm.

"Again with the colour stuff it's very pop and toxic," said Willie. "The last R.E.M. Green tour was very organic and Michael wanted this one to be 'prefab'. What has been really important is that the set list constantly changes. Tonight we're doing 'Night Swimming' which we've never rehearsed. I don't always want to show the same films in the same songs so every day we're making more film loops and playing around. I don't want the show to settle down, I want it to keep this kind of momentum."

The projection was via a 4K 35mm projector but in Europe there will be eight 7K 35mm projectors and one 10K 70mm projector.

Willie has really enjoyed working with people who are un-raid. He admits that some of the looks are very severe especially with the song 'If Ever I Took Your Name'.

"I only use it if I can open with it," he said. "The band come on and just the cyc is lit in white and nothing else. They arrive onstage and perform the entire first song in silhouette. The punters have waited six months to see them and they can't. It's a really heavy song and a ballsy opening. I've been delighted that they are prepared to go with it. I've explained to them that I'm not sure how far to



AUSTRALIAN COMPANIES PRODUCE A SPECTACULAR EVENT IN THE UNITED ARAB EMIRATES



Despite stiff competition from the US and UK, Accolade Communications, based in Sydney, recently won the contract to produce the opening ceremony for the 12th Annual Arabian Gulf Football Team in the United Arab Emirates. The event was staged in the massive Abu Dhabi football stadium.

Producer and Director Andrew Walsh was assisted by Associate Producer Rosemary Walsh and they employed a strong Australian crew including Mike Emerson *Production Manager*, Garry Brokenshire *Lighting Designer*, Ken Dodds *Audio Director*, Anthony Moffat *Audio Operator*, Jeffrey Mackenzie *Communications Manager* and Bruce Brown *Staging/Operations*. Andrew also decided to take his own *Television Director* Keven Lacey and *Television Technical Producer* Greg Roberts.

The opening ceremony started with a spectacular pyro display followed by the telling of a story detailing the history of the UAE in three parts - the desert, the maritime and modern

history, particularly the greening of the desert.

"The problem was that they kept changing the script on us!" said Mike Emerson.

"Also, doing a show where you've no concept of what they are saying is quite difficult," added Ken Dodds.

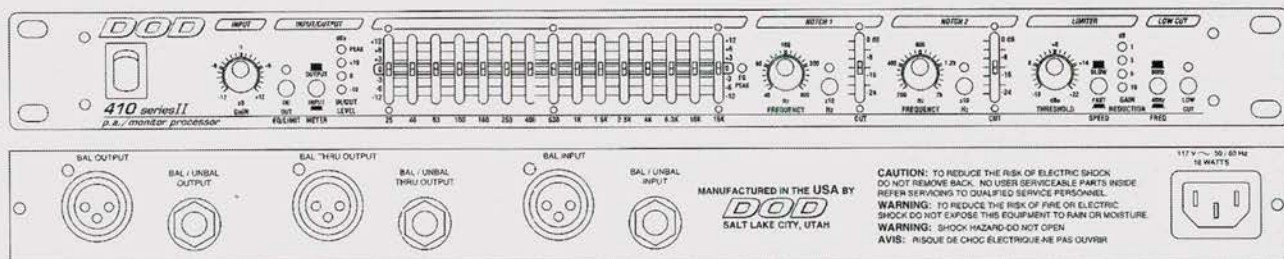
The floor of the stadium was covered in white fabric onto which the four Xenon 7K projectors, supplied by ETC Audiovisual of France, displayed an array of looks turning the pitch into a desert, an ocean and a floral scene. In the centre of this was a large football, designed by Andrew and built by Rooftop Balloons of Sydney, which opened up into a desert oasis. From this platform a boy told the story with a giant video screen behind him displaying corresponding images. Included in the event were white stallions (which galloped off in rehearsals but were fine on the night), camels, female dancers who swung their hair in circles like at a heavy metal concert and a cast of about 3,000. Of most amusement to the crew were the traditional

male dancers who shuffled around in a morose fashion (despite being paid about \$65,000 a year) and needed about forty rehearsals.

Production actually started ten days before the event and, because of the intense heat, the crew were limited in the amount of hours they could work. On an earlier visit, Andrew had had the foresight to spec some heavy duty power supplies. Consequently the local power company put in an extra 4 megawatts of power at eight points - four on the roof and four mirrored on the ground. Unfortunately the stadium electricians were rather reluctant to touch this power leaving more work for the crew.

"Trying to get things there on time with their budget was one of my biggest problems," said Mike Emerson. "You'd get promised delivery times which just didn't happen and we had stuff coming from such different places. Also we were working in the capitol of the UAE Abu Dhabi but the main port is Dubai and, although both cities had airports, everything had to be

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flown to Dubai and then trucked to Abu Dhabi. It's only 150 kilometres and I drove that in an hour and a half but there are many restrictions on trucks over there. They don't have enclosed trucks so what went in 4 trucks from LSD in England went on 9 trucks at Dubai. They then took up to 8 hours to drive to Abu Dhabi due to restrictions like what hours they could drive on the highway. All through the event we were promised everything by the local contractors and people we dealt with but it just didn't happen when it was supposed to. Then when it did happen, it happened in a poor and lack lustre fashion."

Ken Dodds of the PA People arrived at the stadium on the Sunday morning expecting his gear to be there, only to be told it would arrive at 5pm. It actually arrived on the Wednesday lunchtime.

Ken was using the Bose Pan Array system and his biggest problem was the heat which kept effecting the drivers resulting in spares being flown in. As the system is designed for installations and is not yet in a touring form, it had to be well planned in advance. Before set up, the PA had been designed by computer acting on information gained by Ken on a reconnaissance trip earlier.

"It's difficult to describe sound but if you stood 200m away from the speaker box, which looks like a JBL Control 1 or Bose 101 from that distance, and it's cranked up, then you'd have difficulty hearing yourself speak," enthused Ken.

"We took a lot of coms - about 50 radios, 3 bases and set up a repeater so you could drive into town and talk," he said. "We had to have a lot of channels due to all the different languages. It was a bit of a challenge as we weren't told what frequency we were allowed to use until two days beforehand. We also took four channels of radio mics because there were these three tenors who were supposed to mime but we didn't trust them! You never know what's going to happen until it actually happens."

The spectacular lighting design was the work of Garry Brokenshire who had spent the winter months working for LSD on the US. There he was trained as an Icon tech/operator and as a result he used 76 of the moving lights for the show. Analogue lights included many Fresnels with colour changers - 48 4K HMI Fresnels with dower units and colour changers on the front of each, 6 12K HMI Fresnel units with dowers and colour changers and 48 8-light units with colour changers. Control wise Garry triggered everything from the Icon console as it accepts DMX input as well as running the Icons.

"I really like the Icon lights and some of the

features on the console are very good," said Garry. "They've certainly done their homework putting the system together."

Due to the excessive heat Garry started to have problems with the colour changers and the ballasts for the HMI's.

"We had some problems with the ballasts shutting down," he told me. "The way we got around that was to leave the lights off during the heat of the day and didn't turn anything on until as late in the evening as possible. On show day we left it until the last minute until striking up the HMI units and we got through the show just fine. The Icons were fine and hung in there during the heat.

"We used the HMIs because they are so bright and throw a long way so we were able to light the pitch from the roof really well. We worked out that we had about 9 kilometres of cable."



The crew travelled in style

The equipment and six crew came from LSD in England and Garry had a lot of praise for the crew who battled on through the heat every day.

"It was certainly a difficult job with the heat and communication problems with the local labour," said Garry. "They'd never done a show of this size over there and these guys had no idea what was needed from them. I had one guy who was in charge of supplying spot operators to me and he would bring a bunch of guys in who he swore spoke good English. That certainly wasn't the case and for every eight guys he bought in, we'd use maybe one so we went through about forty guys until we ended up with eight guys who could run the spots. Even then it was difficult to communicate with them but we managed to get by. The followspots were eight Gladiators."

The lighting was greatly enhanced by the use of two JEM Roadie foggers, one at each end of the stadium, which Mike Emerson described as absolutely fantastic. Apparently they had no trouble filling the giant stadium with smoke.

Lasers were supplied by Laservision Australia with the laser effects doing the graphics.

Pyrotechnics were designed by Howard & Sons of Australia who flew the fireworks in from all over the world.

● Cat Forcer

ROLAND DM-80 FINDS A THEATRE APPLICATION

Need to fire 8 tracks to random cues? Try a Hard Disk!

Theatre audio design sometimes means a lot more than projecting voices and playing taped cues. In the case of a recent Sydney production, it involved a quadraphonic system and a soundtrack that had to be actually created by the designer, starting with nothing more than the scripts suggestions.

Peter Eades soundtrack for 'The Hour We Knew Nothing Of Each Other' was created on six audio tracks. His problem then was how to replay these tracks, stopping and starting for each of 36 cues. "I was resigned to using an eight track tape machine, and because the venue is an open space without a soundproof control room, a lot of clunking as the tape transport starts and stops. A lot of directors are resigned to the sound of the Revox at the back of a theatre", said Peter.

Roland provided salvation in the form of a DM-80 8 track hard disk recorder, which has proven an unbelievably good theatre device. Here's why - the show is run by Sonja Stockwreiter, who has the DM-80 control unit up on the lighting tower. Why this is so good is because Sonja is also the lighting operator! I was curious how she viewed the Roland control panel. "No trouble at all", she said, "I had 15 minutes to get used to it before technical rehearsal!" Sonja impresses as an organised and efficient individual, who has had eight years experience in lighting.

The DM-80 is made up of a hardware rack with two 200mb hard disks on board as standard. The unit we saw had a pair of 500mb external drives, to give something like 200 minutes recording time. Each drive handles four tracks. In addition to the quad tracks, Peter had a mono track across all four sends and a sub woofer track, for a total of 6 tracks. His end-to-end recording time was around 30 minutes, so he had a lot of space left on the drives.

Peter had called in a favour and conned Andrew Scott at Roland into lending the unit when the audio budget ran out. Peter had com-

pleted the Roland/AFTRS audio course a year ago, which he described as 'invaluable'.

The sounds for the show differ except for a recurring noise that the script described as the rustle of leaves. Peter thought this too wimpy, so he put together a more starting bushfire sound with some wind. This cue repeats several times in the show. For the rest of the sounds, they typically move around the North, South, East and West speakers, hung above and behind each tier of seating for this show performed in the round.

To get the sounds, Peter took his Mini-Disk walkman recorder, truly the audio engineers best friend, to a place where he could access a CD Library. Then he went out and did some field recording which included sitting in his local park and recording the aircraft coming in to land. This is a touchy subject around Sydney since that idiot Federal minister with the big nose abruptly closed the East/West runway at the airport, forcing more planes to approach from the North and thus track over the Connections office. Vote independent next time?

Peter's home studio is based on the Amiga 3000 computer, which is sadly a relic of the past, but ideal for audio editing according to Peter. Then, he got the Roland and locked it to the Amiga via time code. This way the Roland controlled the Amiga, and the reason was that the Amiga output two tracks at a time only. "I ran the RCA analogue output from the Amiga through two line transformers to give the Roland two balanced inputs", Peter explained. "I predetermined as best I could the levels of each sound effect as I edited them at home."

Thus with some tweaking in rehearsals, you have a show that runs like clockwork and an audio system that is operated by the lighting operator! The control panel need only be glanced at, for the 'Next' or 'Previous' cue are a button push, also up to 40 markers, or auto-locates, are available. Hard disk is very friendly for audio cues, especially with immediate cue access or random cue access, because - of course - you don't have to fast forward or rewind a tape!

I asked Peter about redundancy in the event a hard disk doesn't want to co-operate, he said that in the case of this show he hadn't made provision due to the faith he and Andrew have in the Roland, but he had several options. First, he could run a mono track on either of the internal drives, second he could have his Mini-



Peter Eades with the Roland DM-80 rack, beneath Sonja Stockwreither's control tower.

Disk on hand as a backup. In any case, he points out a tape recorder is quite capable of chewing a tape at any time too!

Levels can be adjusted (although they are left set) on the inputs to the shows mixing console, a Yamaha MC monitor console supplied by CODA Audio who supplied the rest of the system. It is made up of four CPA-12 Tannoy speaker cabinets, four subs under the seats, and a rack of Jands amps.

Coda Audio is another theme that Peter warms to, after he's finished praising Andrew Scott and Roland he throws in some for Michael Wilkie and Phil Murphey at Coda. "In Melbourne there's System Sound, in Sydney it's Coda, for theatre audio", he said.

As a theatre production the show has a striking concept, and is performed by young people from the Australian Theatre for Young People - ATYP. 33 performers create over 200 characters, in fact upon entering the wharf warehouse at Pier 8 in Pyrmont, on Sydney Harbour, the seating tiers and lighting tower are all to see - except for two very long rows of wardrobe at each end of the complex. The space hasn't any performance facilities at all, and this play doesn't need anything more.

• **The Hour We Knew Nothing Of Each Other.** Michael Gow, *director.* Lee Biolos, *associate director.* Robert Kemp, *designer.* Mark Shelton, *lighting designer.* Geoff Cobham, *production manager.* Steven Champion, *production co-ordinator.* Sara Gaynor, *stage manager.* Brenna Hobson, *assistant stage manager.*

● Julius Grafton



Sonja Stockwreither, Lighting Operator who also fires the DM-80 audio cues!



PERFORMING ARTS

SYDNEY FESTIVAL & CARNIVALE

The 1995 Sydney Festival & Carnivale runs for just twenty days and has a strong emphasis on theatre and dance. This year, the Festival was to be closely involved in the opening of three very different theatre spaces

The program involves major productions from nine overseas countries and important collaborations with the Sydney Theatre Company, the Australian Theatre for Young People, Youth Music Australia and other leading companies and organisations from Sydney and Interstate.

In July 1994 there was a new turnover of staff at the Festival offices and Geoff Cobham was appointed as Production Manager.

"It was a bit late really," he told me. "I know a lot of people wonder what we do the rest of the year but it is a full time job. We've already started on the 1996 Festival."

Geoff has the unenviable task of liaising with all the interstate and overseas companies, who will perform at the Festival, on all the technical areas. That involves moving all their freight, getting all their lighting and sound, all the sets, props and costumes. He also employs a staff of twenty people rising to thirty in the last couple of months. Despite his hectic schedule, seven opening nights in three days, Geoff found time to talk to Connections.

"I also have to do all the budgets," said Geoff. "The majority of the flexible areas of the budget are in production so there's lots of guessing. This year we have about twenty companies in the Festival but we would have done budgets for about sixty and then chopped them down. The detail is phenomenal. Then once they arrive you have to be very flexible."

DRUID THEATRE COMPANY

Along with the programming department, Geoff is also involved in deciding which venues are used for which production. At the York Theatre, Seymour Centre, the Druid Theatre Company from Ireland were presenting the *Black Pig's Dyke*, an epic tale of murder, mystery and Celtic mythology.

"They had tried to come to the Festival before but one of the biggest technical problems was getting them into the York Theatre as they are used to doing a proscenium," explained Geoff. "The main problem of the Festival is finding venues as there are such a lack of

venues in Sydney. The Seymour Centre is a great venue but not many companies are able to use the thrust in the form it's in. After many faxes we managed to work out the set and had it built by Big City Productions. They sent us a 1:25 model and set of drawings and it worked out well. I employed someone for three weeks to do the prop shopping, as there were many. The lighting designer sent us a plot and we did the pre-rig so he only had to focus and plot when he arrived. The lighting and sound was fairly simple but we had other problems. They wear straw masks and getting them quarantined and into Australia was an absolute night-

given us little information and when they arrived they just kept wanting more things. They're still asking. They use video projection and wanted Barco's which we just couldn't afford. It should have been one of the simpler shows of the Festival but you just can't predict as it has turned out to be the most emotionally difficult for all the crew involved. It's a communication problem with different ways of working."

GUANGDONG ACROBATS

"We got a lighting plan which looked like it had been done by potato cuts," said Geoff. "There was not much information from them before but the Entertainment Centre were fantastic and very open to just excepting that when they arrive it will all happen. We had done a four colour wash for them which they didn't like and redid to make the colours even more hideous. It had a very fifties look to it. Opening night was very difficult with a lot of sound problems. Their orchestra, who had not worked with the circus before, were trying to mix tapes with live sound and they had a lot of trouble. Again it's a cultural thing. To us its really important to do a fade in with sound but they just plug it in and it comes on. To them it's not a problem but it was to me and it was reflected in the reviews. They resolved it for the second night.

"Also, because they were a bit jet-lagged, they did drop a lot of things on opening night! In fact they dropped all of the plates into the orchestra pit which made a fabulous sound as they all had mics in there.

"We had big freight problems with them as well. Four of their items went to Hong Kong instead of Sydney so we had them shipped up from Melbourne, at the last minute, instead. There were also quarantine problems because when customs opened their containers they were full of food.

"I should have got the lighting operator a manual board as he could not deal with the desk he was given. I couldn't find a technical Chinese translator so it was very difficult. A lot of the words you have to translate to the translator because they don't know what things like 'crossfade' mean. He couldn't work things like the Go button and it was very frustrating.

"Sound wise, they seemed to be familiar



Even simple straw masks can cause major problems

mare. They had to be fumigated in Ireland and then sealed because the fumigating company over here was on holiday. A major problem for the Festival is the fact that many businesses close over the Festival period.

MAURIO GIOIA

"Oh joy," he wailed. "Mauro Gioia is a fantastic show but they are very difficult to communicate with. We had translators but there was a big cultural difference. The Harbourside is a very difficult space and for lighting and sound so we involved a lot of people to make it work. We employed a designer to decorate the venue with blow up and plastic toys. We also got Big City to extend the stage and Staging Rentals supplied curtaining and tracking to make it work. Prior to their arrival the company had



with most of the gear. I think they just played cassette and the recordings they made, which they were quite happy with, were just full of crackles and hisses. But considering all this, it was still quite a smooth bump in."

The Polish Wierszalin Theatre Company

"Roll-a-Pea is a beautiful little show," enthused Geoff. "Their technical specs are amazing. For lighting, I sent them the Belvoir Street Theatre Upstairs spec and a plan and they're the first people to ever rave about the theatre. Usually people complain it's too small. Their complete lighting design was a drawing of eight red squares with arrows pointing out of the front and that was it. They just wanted eight lights to light the whole space and some of the lights were drawn actually out on the street! They used more lights than that in the end and we put a surtitle system in which is run by an IBM computer. They were every nice people to deal with but had no technical requirements. They wanted some Christmas lights which they're so impressed with they want to take them back to Poland.

"Again Big City built the set for them. Their original set is made of rough timber straight from the woods but we could only use refined timbers. They couldn't find what we can buy on the shelf and we couldn't find the only thing they can get which is rough logs.

"They didn't do a tech or dress run although we tried to persuade them. They just said we were good people and doing very well!"

The Douglas Wright Company

"They're playing at the Everest Theatre, Seymour Centre and they have a fantastic use of film," said Geoff. "Many times in dance and theatre they've tried to combine film with live movement and this production is the most successful I've ever seen. They've shot on 35mm and have several large projection screens towards the back of the stage. During the show, the dancers will either talk to someone on the screen, which works very well, or they'll be seen on the film and then appear step out of it to perform live. The timing is great and you actually believe that it's live.

"Mind you it does cause continuity problems. One of the dancers got sick and because it's all on film, they had to re-shoot the film. You have to remember every time you change something on stage that the film is locking you into the same thing every night.

"The bump in was very smooth with a simple set. The lighting designer, Helen Todd, was great and was in touch with the head electrician a lot. Often lighting designers can be very arrogant and think they know how to light your space without talking to the people who work the building. Kevin Davidson did the sound which was just DAT."

The Pokrovsky Ensemble

The Russian performers were at the Concert



The AYTP perform at the improvised Berth 8 space

Hall, Sydney Opera House.

"They have four Disclaviers which are player pianos controlled by a portable Mac and a program called Performer. Via Midi we sent the signal to the pianos which then played themselves. It was a nice contrast of high tech with the traditional, folk dancers of the company. I thought it was very successful but the reviews thought it was an abomination to mix the two. There was no recorded sound it was all acoustic, and the lighting was very simple."

Zarzuela!

The flamboyant Spanish production was also performed at the Concert Hall.

"With 1000 costumes and £2 people in the company it was an enormous undertaking to get them here," Geoff said. "Again we had a lot of trouble communicating with them, everything was 'manyana'. They were supposed to send a technician three months beforehand to look at the venue and he didn't come until December which was fairly late for us. We put a full rig into the Concert

Hall, which they don't often do, and we also built wings and put a plastic black cyclorama up. There's a Pani 4K HMI projector behind it which has slides they bought with them to use as backdrops.

"They have an orchestra of 24 who play along

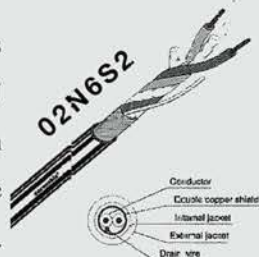
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SYDNEY FESTIVAL & CARNIVALE (cont.)

to DAT. They're using radio mics which they've had a lot of trouble with because there are so many costume changes and they kept breaking the ariels off. It's all opera house equipment and I thought the lighting and sound was fantastic. They bought their own follow spot operators which is a bit unusual.

"When I first saw the sets I thought they were really rough and awful but they knew their stuff because under the lights, and with



Zarzuela!

the forty foot rule applying, it all looked fine."

The Hour We Knew Nothing Of Each Other

Presented by the Australian Theatre for Young People, this play was originally scheduled to show at the Wilson Street Theatre, Redfern.

"We had to change venues because we had a lot of trouble getting approvals for Wilson Street," explained Geoff. "One of the reasons was there was heavy metal left over from the trains and also with the residents. City West let us use Berth 8 at Pyrmont which is a huge warehouse. We perform in a small area, about 20m x 20m, and the seating is in the round. The show has 400 characters in it with 40 performers from AYP. Mark Shelton was the lighting designer and he did very well. The sound was by Peter Eades and I have to say it's the best sound I've heard (for a full story on the sound for this production, turn to page 39). The music and sound effects just appeared out of nowhere. He did a lot of sampling including an aeroplane which the audience believed was real. It really added to the atmosphere of the piece. I am so pleased with what they have done there."

One of the most important events of the Festival is the Philippe Decoufle Dance Company who are scheduled to be the opening act at the refurbished Capitol Theatre. This pro-

duction will be featured, in detail, in next month's Connections.

Outdoor venues were obviously at the mercy of the weather and Geoff said that the decision to pull the plug on any event was always difficult because you let so many people down. Other problems included EPA due to noise levels.

"There are a wide variety of acts and some draw more complaints from residents than others," said Geoff. "We have a lot of staff working on the outdoor and they are all people who

were chosen for their ability to improvise and respond to things as they happen. Every day there are always two or three problems. Revolver Audio do the Bacardi Club, they have done it for many years and are always getting better. The Domain concerts are done by The PA People who are using their new Bose Pan Array system. They had teething problems with it but I've just listened to it today and it sounds fantastic. It's improved our PA problems no end because we can actually control where the sound goes now. The lighting is very simple for the operas and the symphony but will be more complex for the Australia day celebrations which are being televised. We have the large Starvision screens which are fairly old technology but we need them because it's still daylight when we start."

Geoff admits it has been difficult to oversee so many productions at one time but he believes the key to his success is being able to let go enough to trust the people he had employed to make decisions.

"We've done a lot of preparation over the months and that has paid off," he said. "Annette Alderson and I did the indoor productions and Gemma Purcell the outdoor shows. Despite the preparation there are always plenty of unknown things and so we've put production coordinators on each of the shows."

● Cat Forcer



THEATRE NOTES

● Following the enormous success of their touring production of *The Pirates of Penzance*, Esgee Entertainment have announced that they will be touring a new production of *The Mikado*.

Rehearsals will begin in May and the show is due to open at the Lyric Theatre, QPAC in early June. Other capital city seasons will follow.

● For the first time ever, an Australian Theatre production will travel to Thailand to perform. The successful production of *South Pacific* will open a new theatre in Chang Mai this May.

● The remaining wharves at Walsh Bay, Sydney are to be developed for residential and commercial purposes. A proposed 1,800-seat Lyric Theatre and smaller performance space are planned.

Vivian Fraser & Associates, who refurbished wharves Nos 4 and 5 for the Sydney Theatre Company in 1984, are the architects appointed for the theatre venues. It is important to preserve the wharves in their entirety without any alterations to their fundamental appearance. The exception to this will be the Lyric Theatre which has a proposed fly tower extruding from the roof.

● The summer run of outdoor performances of *A Midsummer Night's Dream* has been playing at Sydney's Botanical gardens yet again. As usual the local wildlife are unimpressed and one fed up possum decided to interrupt a show by landing with a thump on the lighting control desk. Apparently no damage was done to the beast or desk.

● During 1995 Melbourne Theatre Company goes on the road taking theatre into Victorian schools, both suburban and regional.

Since 1989, MTC has been offering teachers and secondary school students relevant, accessible programmes to extend and enhance their studies and appreciation of theatre.

Following a successful pilot scheme in 1994, the popular Explorations series will tour *A Doll's House*, *Macbeth* and *A Midsummer Night's Dream*. The Victorian Arts Council is supporting the *Macbeth* production which will visit regional towns.

The Play Starters series, which aims to contrast a literary approach to a text with a dramatic perspective, will uncover the main issues and themes of *A Man For All Seasons* and *Accidental Death of An Anarchist*.



DARWIN

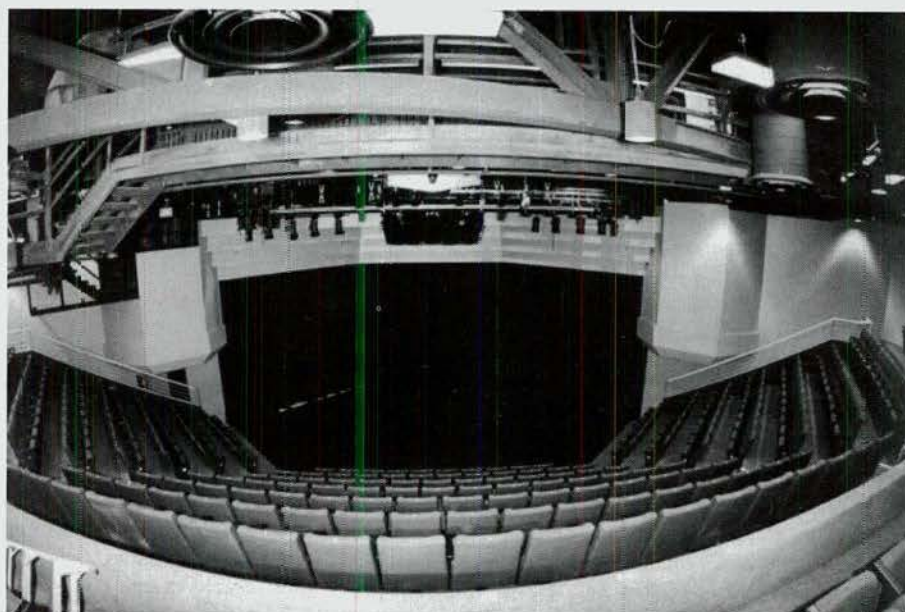
PERFORMING ARTS CENTRE

Darwin, I remember, not so long ago was around seven hours by turbo prop direct flight from Melbourne, memorable as being the longest single hop between Melbourne and London. Public facilities were few - those at the airport for instance being some huts on the edge of the RAAF airfield, other such things as theatres or galleries being impossible pipe dreams of only a few.

Since then of course there have been many changes - the one we are concerned with being what was originally the Beaufort Centre, a commercial development incorporating the Beaufort Motel and two theatres. Now totally separate from the hotel administratively, the theatres were renamed as the Darwin Performing Arts Centre, with the larger venue confusingly known as the Playhouse opening in 1986 and the smaller unfinished and anonymous until this year.

Your scribe and the acoustics consultant Bob Fitzell from Sydney were called in by the then General Manager of DPAC John Young in June 1992 to look at the dirt floored shell with 150mm concrete slab roof, and consider what could be done within it to accommodate the dreaded 'multi-purpose' brief which had been drawn up by the DPAC board, with input from the Darwin City Council and the Northern Territory Government, both of whom had financial and potential use interest in the outcome, to say nothing of the political overtones which always loom large over public buildings.

As can be seen from the drawings, we had quite a task. Target seating capacity was 300, performances to range from small dance groups, drama, music of all kinds, film and conference etc. in raked auditorium mode. Additionally, seating had to be somehow easily removable, thus converting the space into a flat floor venue for cabaret/restaurant, exhibition, product launch or whatever. As well as the very solid shell and two huge roof trusses, we were also restricted by site boundaries, and the need to use existing foyer spaces, dressing room areas and so on.



View from the back of the theatre

Compensating factors were the considerable understanding and co-operation from the NT Department of Transport and Works as the constructing authority, and a budget which genuinely provided for a high standard of finish and a good compliment of facilities and equipment from day one. A rare treat.

The transformation from flat floor to raked seating and vice versa follows a system pioneered in the Adelaide Convention Centre, whereby each bay of seating is supported on a steel frame hinged several rows back, with a chain hoist system used to pick up the frames bay by bay, revealing the flat floor beneath. Aside from being relatively quick, this method has the great advantage of not requiring separate seat storage space, in this case just as well as there isn't any. The original designers thought more of audience access than stage access, and had planned a corner stage with fixed seating backing onto the foyer. Our more rigorous brief dictated better stage access with some adjacent off stage space. so the plan was

in effect rotated 90° anti-clockwise. Although this vastly improved matters at floor level, it bought many problems with clearances overhead, and entanglements of catwalks, ducts and existing trusses. 20/20 hindsight shows that demolition of the old roof and trusses would have been an economic proposition with better result, though at the time, six inch concrete and large steel sections, and a desire not to change the roof line dictated otherwise.

Given the seating arrangement, stage location and access requirements, the design then became a technical jig-saw puzzle, led and frustrated by the inevitable air conditioning.

Bob Fitzell naturally had strict limits on air velocity, hence duct design, and we had priorities for lighting locations and scenery handling and it all had to work in seats-up or seats-down modes. So the seating plats have open mesh fronts, meaning they are more or less transparent to air conditioning or sound. But not to rays of lights - so, alternative plug in control points are provided, and pivoting light-

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DPAC (cont.)

ing bars attached to underside of seating in locations giving when raised, angles corresponding to the bridges.

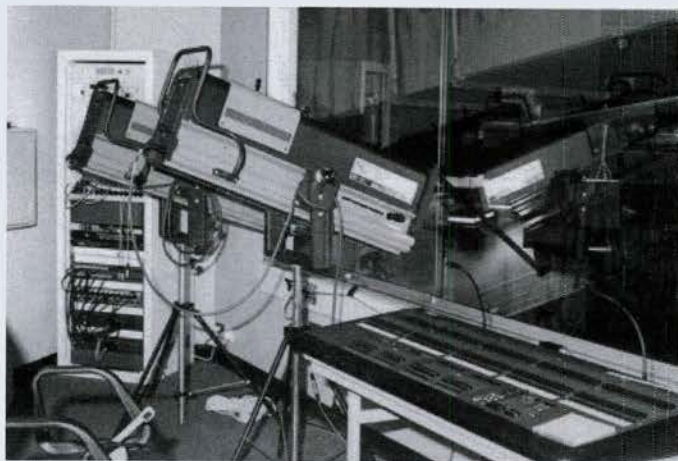
Each side of the triangular stage are towers which 'frame' conventional staging and provide via removable panels, levels of side lighting and control points (for slender operators). Alternative control connection points are also located centre floor, and centre of one side wall, with accessible cable trenches linking all with the rear stage corner. The principle control room is directly opposite the stage, in which are the audio racks; house lights master control; DMX patch field; video patch field and the AMX control system for lecture/conference audio visual presentation. There is direct access from the control room to the lighting bridges and side towers, and a high level side door through to back stage areas.

On OP side of the triangular stage is a large sound proof door through to the dock area, which has in turn a roller door to the side lane truck access. Also on this side is a viewing hatch behind which is one of several positions for the re-locatable SM desk.

Over the stage are eight 300kg capacity electrically driven batten and winch sets, one dedicated to lighting and one special following a rear cornice line, on which a full width white cyclorama can be hung. A further short barrel and winch carries the JBL speaker cluster. Across the corner of the stage is a roll down film screen, and a variable speed curtain track and drapes double as screen masking and alternative stage backing.

There is no dimmer room, and no fixed lighting outlets are provided. Instead, a 3 phase 20a or 40a power outlets are distributed around the theatre at all levels, each having an associated GPO and DMX control connection. A number of 5 channel and 12 channel dimmer packs can be plugged up as needed, with luminaires connected directly to 3 pin sockets on the dimmer packs. With 512 channel level conscious soft patch on the Jands Event 60 plus control desk, this gives a wide choice of lighting arrangements using all Selecon range of profile. PC and Fresnel spots included. As the stage shape awkward, it is surrounded by seven TV studio style self climbing hoists, each with remote up/down control and on board dimmer pack and DMX feeds. The DMX feeds are arranged as a number of daisy chains, three sets to each location run back to a patch bay with distribution amplifiers. 3 sets? Yes, so apart from the dimmers, one can also run scrollers or moving lights on separate lines if desired - or just have spares for safety.

Another daisy chain DMX cable set connects the various control locations to the control

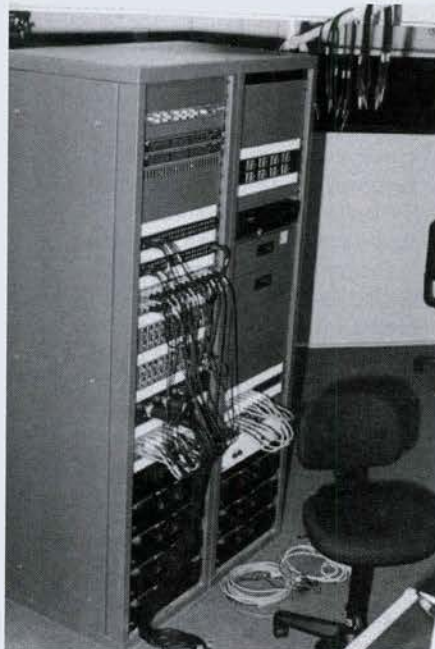


Lighting control and follow spots

room patch bay. In case of trouble, a Li'l DMX'er is there for testing, and as an 8 preset emergency backup.

A portable SM console has the usual clock, house light controls and a 2 ring talk back master, cabled to outlets all around including FOH and dressing rooms.

For audio visual occasions, an Electrosonics Lectrum contains an AMX panel in turn operating the normal range of audio, slide projection and video gear - except that no video projector has (at the time of writing) been



Yup, it's a rack!

purchased, awaiting trials of newer single lens varieties as being easier for the varying set ups which will be needed. Slide projection can be set for side-by-side or dissolve modes either the AMX or with an Arian dissolve - the two Ektopro projectors, though electronically clever, are no better than the 'old faithful' SAV's in picture quality, and have a distressingly loud fan noise.

The sound system design process began with extensive consultation with the then technical manager of DPAC, Dean Lewis. Various design

issues were thrashed out such as loudspeaker and microphone patching requirements. A schedule of desired equipment was prepared i.e. signal processors, microphones, recording/playback equipment etc., and preliminary microphone input and loudspeaker outputs locations were determined. The system had to be simple enough for non-technical users from community groups to operate, and flexible enough to cope with all the requirements of the dreaded multipurpose brief mentioned above.

The core of the system is a central cluster of three JBL 4892 Array mid/high cabinets and two JBL Array 4894's for sub-bass. The system runs in mono, but enough space has been left in the racks to convert to stereo (by adding another JBL ES52000 controller) if required in the future. The cluster was able to be squeezed into the congested airspace above the stage after much discussion with the air conditioning consultant and myself. The 4892's provide smooth coverage in the central cluster configuration with their 45) horizontal high frequency coverage. The sub-bass cabinets were initially intended to fly directly above the 4892's but this did not occur due to sight line and height clearance problems. The cabinets are now flown either side of the 4892's, and while not ideal, is working OK.

Four Jands SR3000 amplifiers power the central cluster, with three SR3000's for foldback and auxiliary requirements. All amplifiers, signal processors and patch panels are located in the control room.

Over sixty microphone inputs are distributed around the theatre which terminate at a patch panel. Twenty one Neutrik Speakon loudspeaker outputs are available in the theatre for foldback and other applications, with six JBL monitors at hand for this purpose. An alternative mix location is located on the floor at the rear of the theatre for the flat floor seating mode. Connection to the control room equipment at this location is via four 48 pin Burndys.

An effects rack contains two Yamaha SPX990's, Rane equalisers and compressor, ARX gates, a cassette deck and CD. Another houses Yamaha equalisers for the foldback/auxiliary sends and the radio mic receivers.

Mixing requirements are handled by two Soundcraft Delta SR16/4/2 mixing consoles which were selected on the basis of flexibility (with a 4x4 matrix), portability, price and ease of use by inexperienced operators. Two smaller consoles give the theatre more flexibility than having a single 32 or 48 channel permanently installed in the main control room. A range of standard microphones including Shure Beta 58's and a Beta 58 radio system are available.

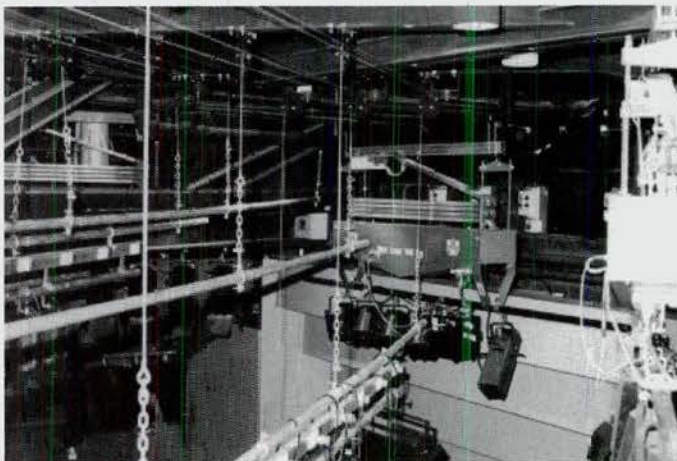
In the miscellaneous department - a



DPAC (cont.)

Sennheiser Infrared assisted hearing system is available with the transmitters attached to the central loudspeaker cluster, with a Symetrix voice processor to clean up the assisted hearing signal. Sixteen transformer isolated tie-lines connect the control rooms of both theatres, and JBL 4206 loudspeakers are installed for control room monitoring.

By now some readers may be muttering dark thoughts about the level of equipment in a relatively small space. However, it should be remembered that Darwin has no other professional venue of that size, that the brief was comprehensive, and that the range of immediately hireable goodies in the Territory is limited. This by the way is no criticism of the local suppliers, 'tis



Fly bars and lamps

to John Holland Constructions in Darwin, and to local lighting and sound contractors Integrated Media for their close interest and quality of work without which the project could not have come together so well.

It is DPAC management intention to keep the Studio Theatre as it is now known, self contained and sustaining as far as possible. Once their technicians have been trained and approved, local hiring groups will be allowed to run their own shows, in order to keep rental changes within reason. The whole idea being to see the theatre in use practically continuously as a

valuable city resource.

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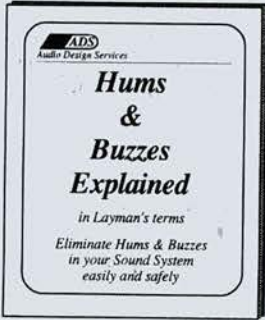
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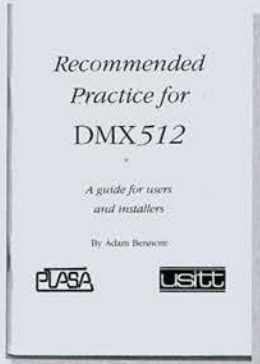
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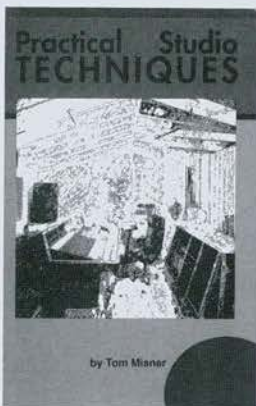
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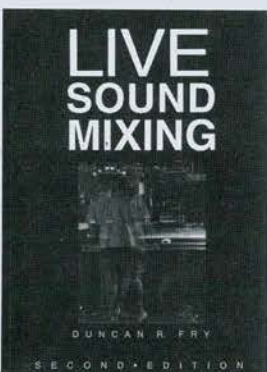
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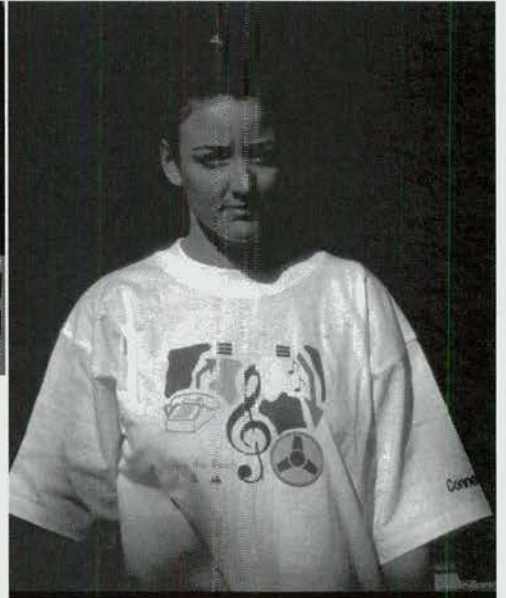


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STOLEN PA EQUIPMENT ALERT!! The following equipment was stolen from Brisbane Sound Hire on Wednesday 11 January 1995. The thieves gave the names of: Michael JACOB, 4/158 Main Street, KANGAROO POINT. Ph: 015 678221 and Michael A. Light, 38 Cramond Street, WILSTON 4051 Ph: 015 677221 (I.D. + Monarch Security Photo ID Card M.S.S.# 487/4673/95). Description: 5'11", Sold Build, Fit, Appearance: Mid Dark Brown Hair, Medium Complexion, Clean Shaven. White, Short-Sleeve Shirt, Dark Trousers. Hire was paid for with cheque "Michael A. Light" NAB KELVIN GROVE. Equipment was delivered to Beenleigh Tavern Brisbane by Brisbane

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AUDIO VISUAL OPERATOR MELBOURNE

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Interested applicants should contact Brigitte Fairbank or Daniel Segal on 839 0222.

Sony Music Australia Limited 



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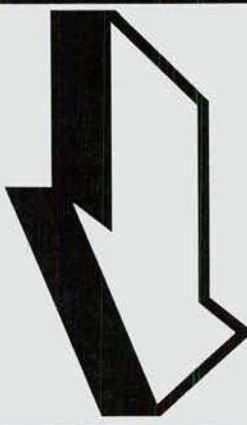
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PRODUCTION & HIRE NEWS

With Caroline Grafton

Archer Sound have installed on permanent hire, 10 Community CSX35 single 15" 2 way cabinets and 3 Crest LA 901 amplifiers at CABLES SKI PARK in Penrith. Call Stephen Archer on (02) 631 4538.

Audex Concert Sound has taken delivery of an additional 24 Crest CA-9's to bringing their total CA-9 count to 40 amplifiers. Call Keith Crammond on (09) 328 3188.

BJs Light & Sound in Brisbane have been busy with a swag of hires including an installation of 4 x Martin Roboscans and range of DJ Series Effects into the Monkey Bar in the Queen Street Mall, 4 x Roboscan 805s into the Melrose Place style bar, Hogies (ex Transformers). Call on (07) 854 1122

Centrestate Productions Orange, has made the annual trek to Tamworth's Country Music Festival over 10 days with acts including the Black Sorrows, Anne Kirkpatrick, James Reyne, James Blundell and the Fargone Beauties. Call Allan Brown on (063) 62 0587.

Chameleon Touring Systems of Sydney were busy on New Year's Eve at the star-studded 'Cats' opening night party at the Man 'o' War steps, Chameleon also provided the lighting on the VIP Stand at the 2 Day FM Skyshow. Some other claims to fame include the Pay-TV Galaxy launch and Prime Minister Paul Keating's National Strategy Conference at the Park Grand Hotel. (02) 517 1111.

Concert Lighting Systems Pty Ltd's, Trevor Lloyd was surprised early this month to be offered for hire a large quantity of stolen truss and winch up stands. He paid a visit to local disco, lights and sound hire company and was kindly shown his own equipment which he was told was available for hire and that a price list was currently being prepared. The equipment including 4 x Winch Ups, 14 x Sections of Tri Truss, Socapex cables, looms, leads and headers has since been recovered at no charge. Readers should be on the look out for more. CLS say they are still awaiting payment for the 70's Superstar Tour, having been offered 30c in the Dollar. Call CLS on (03) 646 8444.

Custom Audio Newcastle, was kept busy when the BOAC Yacht Race hit Newcastle with yachts being raced from Sydney by planes, trains and automobiles. When the competitors hit Newcastle the celebrations began with a concert at the Civic Theatre (with special guest Margaret Urlich) and a foreshore concert on the following day. Colin Rothapfel used 4 x new Martin Roboscan PRO1220 RGs to light the show and a high resolution LCD projector to visualise a nautical theme. Call Colin on (049) 29 4996.

dmc Lighting and Sound of Sydney now have a total of 16 x Miniscan 300s and a JEM Roadie fogger available for hire. dmc are about to tour their huge Colossus dance party with, events in Adelaide 11/3, Qld 18/3, ACT 25/3, Melbourne 1/4 and Sydney 15/4. Call Jared

Hawke (02) 319 7177.

Genesis Productions - otherwise known as 'G.P.' is a relatively young Sydney based production firm and count among their current clients The Truth; Things of Stone & Wood; Mental as Anything; Horsehead; Swoop; Bellydance; Nathan Cavaleri; Penny Flanagan and Juice. They supply full production for any venue in Sydney and NSW (excluding Concert Halls - as they don't fly yet!!). Staff Are : Steve & Katrina Woolcott (Owners), Malcolm Hill and Kathryn Thompson. Call or fax on (02) 948 7557 or after hours on 018 285792.

Gottalite in Adelaide were a very happy hire company over the holidays. Hire stock - he had none! Over 50 x Martin Roboscans were all hired out over Christmas and New Year. Call Phil Doherty on (08) 269 4524.

Intelight a Perth production company, recently looked after a hoard of Scouts at the 15th Australian (17th South East Asian) Scout Jamboree at Perry Lakes, lighting the little darlings pre-dominantly with Golden Scan 3s, all run on a Scancommander lighting desk. The guys are also looking forward to providing the lighting production for soul band D-Tech tour in Perth. Call (09) 3701073.

Lots of Watts of Sydney have been busy working with Channel 9 and their Super Scan Zooms and Golden Scan 3s for the World Vision Telethon and Carols by Candlelight at the Domain. Oh! Don't forget LOW have moved just around the corner to 1 Mary Street Rydalmere. Call (02) 638 0302.

McLean Audio of Melbourne has upgraded their hire inventory with the purchase of 6 Crest CA-9 amplifiers. Call Richard Bilinski on (03) 429 5381.

Skypak in Brisbane were kept busy over Christmas and the New Year. The biggest event was the massive Fantasia Dance Party on New Year's Eve at the Roxy Nightclub. The guys supplied Martin Roboscans, JEM Pyrotechnics, and an Optikinetics Strobe Flower all running off Martin 3032 PC controller. Skypak are also providing for the tour of Floyd - The Concept, a Pink Floyd covers band, who will be touring Queensland and the Northern Territory with 72 moving lights! Call (07) 852 2757.

Soundworks Productions Perth had just a few jobs on during the holidays....like supplying Martin lights & PC controller to Aberdeen Hotel, Frost Bites Tavern, the Brooklyn Tavern and a New Year's Eve Rave! All run on Martin's 3032 PC Based controller. Call (09) 271 5611

Vibes Audio of Adelaide supplied the city's biggest New Year's Eve Dance Party "D-Tech", held in Adelaide's Flinders Street car park. They provided 8 x Martin PRO218s, 8 x Roboscan 805s, Robocolours and a Laser. Call (08) 341 0080.

International Production Notes

Buck Freeman reports from Detroit

Woodstock Stat's

Perhaps the most startling recollection of Woodstock comes from Randy Wade of Audio Analysts, who supplied 637,000 watts of PA for the main (North) stage. He recalls some people running about in the crowd jabbing others with bad LSD.

The event almost collapsed under weight of freeloaders who took the crowd count to 350,000. Lessons learnt by the promoters include:

- Don't try to contain the entire site with fences and security, only surround the stage fields.

- Book all available hotel rooms early. Some opportunist booked 54 rooms at the nearest Howard Johnsons and held out for a ransom. The nearest motel, called the Super 8 in Saugerties charged the promoters \$350/nite for a room that normally sold at \$49.

- Get an extra 1,000 shuttle busses. The 1,070 busses couldn't cope, and the organised parking lots, some up to 60 miles distant, were not organised for long. People who'd paid \$500 for a ticket simply chose the first parking lot they saw. And the rain chundered the roads.

- Charge the quarter million freeloaders to get in. The promoters are weeping that they presold tickets and didn't have a way to tax the punters who turned up anyway!

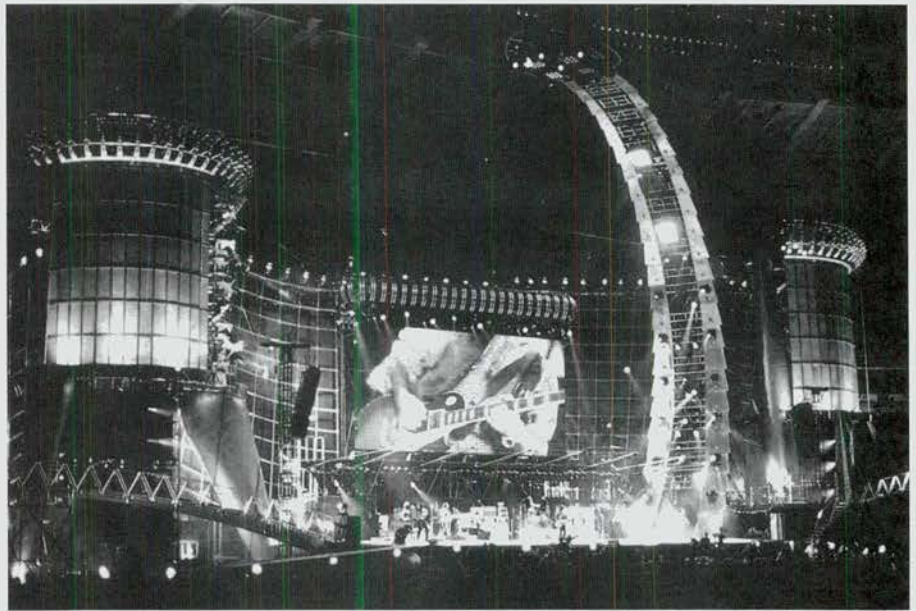
STONES TO BRING IT ALL DOWN

Forthcoming concert dates for the Rolling Stones will see the whole production utilised downunder, rather than a cutback version. According to a report by Katherine Tulich in Billboard, the tour will incur costs of more than \$2 million per week in wages, venues costs and transport alone.

The show features a Fisher Park set design, Showco PRISM sound system, and 180 Vari*Lite automated luminaires. On time Led Zeppelin FOH engineer Benji Lefevre does the mix on a Harrison HM-5 console with 52 inputs, notably using a pair of Neumann U87 tube mic's for drum overheads.

Monitor engineer Chris Wade-Evans has 26 sends running, and the band have rejected in-ear monitors. Due Mick Jagger's travel of the stage and set he is required to blitz the area with foldback, the distance across the set between the PRISM arrays is 160'.

The lighting for the tour is the work of designer Patrick Woodroffe, vendor Concert Production Lighting provide an A-Z list of inventory controlled by a Whole Hog desk. 900 little Par 20 lights are built into the back wall of the set, 9 Sky Art searchlight heads and colour scrollers do grunt work, and there's more. You can be assured of a full tilt show, I've seen it, it kicks.



AUDIO VISUAL CO-ORDINATORS/ OPERATORS

Opening in 1995, the Brisbane Convention and Exhibition Centre will offer a portfolio of world-class facilities which will be home to many international, national and local events, meetings, conventions and exhibitions.

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proven industry record of a minimum of 5 years supervision/co-ordination and/or operating experience in a major venue or production company.

Casual operators (of all grades) for the above areas are also invited to apply at this time for commencement in May 1995.

All applicants should be computer literate and possess good communications skills. You will need to be flexible, reliable, punctual and a "team player".

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Incorporating the **BASF** National Tracking Guide

February 1995

Edited by Caroline Grafton, and sometimes Julius Grafton too.

LOVING TO HATE TOM

By any measure, the most successful studio identity in Australia is Tom Misner. So why does he cop so much heat? Julius Grafton visited the new MIRAGE STUDIO to find out more

Tom Misner, Australian owner of 19 studio schools containing 40 recording studios around the world, swears he doesn't know why his name invokes ire. Mention him in some Melbourne studio circles and you'll get the idea he is perhaps an axe murderer who deals coke to six year olds.

Writing this story I had two callers ask me if I went to the opening of Tom's new studio - Mirage. They were both grasping at straws, trying to find something to criticise about the place!

He wears the flack. "Tom is straight down the line" an acquaintance told me, "but he is abrupt - a typical German. But he's good to his staff, if he likes them". Staff are what makes the SAE operation tick along, and clearly Tom is one organised individual, because he operates SAE in many different countries now, with a manager in - say - Glasgow - reporting direct to Tom. Chances are Tom will be at home in Bayview, a Sydney Northern Beach suburb, at the time-which will be around midnight. "I start the day dealing with New Zealand, then Australia, then in the afternoon Perth and Asia". Global business from downunder is a 'round the clock affair.

If you let Tom go, he will tell you at length what SAE represents in the global scheme of things, and convince you his company is larger in terms of turnover and staff than some of the really big

names in audio equipment. This is acceptable if you see Tom at a tradeshow overseas, where vendors track him around the place and plot ways to consummate a deal.

"We spend more than US\$25,000 every week on equipment" he told me. This then brought on a lengthy dissertation on the merits of local distributors. The subject is one which Tom studies from both sides, as he once owned a magazine for pro audio in Australia, which he ran against Sonics for eight years. We emphasise!

I'm talking to Tom inside ground zero of the SAE conglomerate, which is the Sydney school premises in Wentworth Avenue. This is level two of a non-descript office building above a city Suzuki dealership. From the street you can look across six lanes of traffic to where trains from the underground railway emerge to rattle over the viaduct to Central station. It's the gritty Surry Hills end of the city, handy to everything.

SAE has been going for 17 years now, and has reached a critical mass of 19 schools that makes it easier in a way, because if the worst scenario occurs and a school manager in -say- Munich departs on the spur of the moment, Tom can fling in a replacement from Europe. He explains how his staffing works: "We start with a graduate of our school. They can start as a supervisor, helping students with small problems. Then they

Pictures by Suzi Precanica



become senior supervisor, eh?" Tom has this Tuetonic way of punctuation, it involves the "eh".

"They become a junior teacher, then have to earn some real experience". Tom says they must work on their own recording projects or go and do some live band mixing before becoming a school manager. I hope they actually do.

At this time the subject of where the thousands of SAE students find a job comes up, and some of Tom's critics have been accurate in pointing out they cannot be gainfully employed in a recording studio.

This is quite true, according to Tom, who insists his courses, and there are at least six different courses offered, prepare an individual for an audio career.

It's almost subjective, is this topic, but Tom says his graduates can find work in conference audio, court audio, broadcast, venues and anywhere audio is practiced. To reinforce the point he says the major radio and TV networks have traditionally sent staff to his schools for training, and all have had SAE graduates on staff. At the end of the day, we suppose a student needs to be informed as to what the expect, and

(next page)

CD-ROM UPSETS

Sony and Philips propose multisection music CD's

Exclusive from Buck Freeman

DETROIT: CD-ROM releases in the USA are starting to lag due artists demanding that the CD-ROM play on a normal audio CD player as well as on a multimedia CD-ROM player. The necessity for either user to access the data - or pictures - and the audio played on a respective player is a technical snafu that has developers hopping for solutions. Some releases playable on both types of players have made the market, but it is held that a CD-ROM is not commonly capable of replay on all audio CD players.

To this end, Philips and Sony propose a 'CD-PLUS' format which allows audio CD be playable on all players and that CD-ROM content be compatible with 'major multimedia computer platforms'. The multi-session CD will comprise normal audio recorded in one session, then additional data information will be recorded in a second session, or 'pass'.

A panel was held during the recently concluded CES (Consumer Electronics Show) in Vegas, titled 'Celebrity Multimedia: Merchandising the Mega-Stars'. Billboard reports panellist Leo Rossi of Highway One CD-ROM publishing as stating that the recording industry must be sure to include audio only tracks on CD-ROM, otherwise the average CD-ROM will end up getting played only a handful of times.

End users seek value from CD-ROM purchases it seems, and having the release limited to CD-ROM alone appears to limit sales potential. Philips and Sony have circulated their proposed new CD-ROM standard amongst record and computer companies in the USA. They hope to finalise the specification within months.

many thousands buy courses each year from Tom.

Without any layer of management between the manager of an SAE in Kuala Lumpur and SAE HQ in Sydney, Tom is it. The idea is that a prospective site for a school is known to the new manager, who will be an SAE graduate. "If I choose to open in Greece then I have 100 students (of various Eupropean SAE's) to choose from". A school is just now being opened in Stockholm, and the manager is one of dozens of Swedes who has done an SAE course.

Coincidentally, at this moment a tiny blonde blue eyed girl bursts into the inner sanctum ("no students allowed in office" says the sign) and delivers Tom his mobile phone. Nakita is two and some years old, mother Katrina Misner follows, herself a striking blonde Swede. The happy family. It's nice.

I think Tom gets flack because he's achieved a lot. In the early days of SAE there most certainly were students who may have had an unrealistic expectation of the courses. Also the audio education business has been mondo-ultra-competitive. Is that a crime?



MIRAGE - New Magnificent Mixdown Studio

Tom Misner's new studio is the only Australian mixdown site with a new console - in this case the NEVE VR Legend with total recall and flying faders. \$600,000 worth.

The room has Aro Technology diffusers, Dyneaudio, KRK, A esis and NS-10 monitors, and a Sig:ech time domain room EQ altering

device. This makes different room equalisation a push button away.

Studer analog multitrack with Alesis 32 track ADAT -and- ProTools III make a lot of mixdown options. It's a \$1 million room

Outboard is extremely comprehensive and included in the \$1250/ day hire cost.

Take your pick:- Lexicon PCM-80, 480L, TC 2290, H3000, TC M5000, etc etc.

Computers- Power PC, Atari, Apple Vx with Digidesign SampleCell, Cubase, Opcode Vision, etc etc. This is one heavily featured mixdown room, folks!

• Call 02 211-3915.

DIGIDESIGN ADOPT DIRECT DISTRIBUTION

Pro Tools is possibly the leading hard disk recording and editing system on the Aussie market just now, set to be bolstered by the release of Pro Tools III. Digidesign has an unusual approach to the local market which must be seen to be working.

Digidesign has an Australian office headed by David Corazza, (ex

Electric Factory) who offers 'on the ground' support. This role is usually adopted by the importer/distributor. Digidesign instead deal 'direct' with state distributors, who buy direct from the USA.

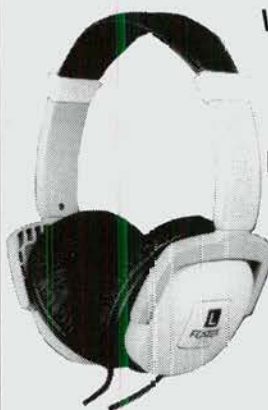
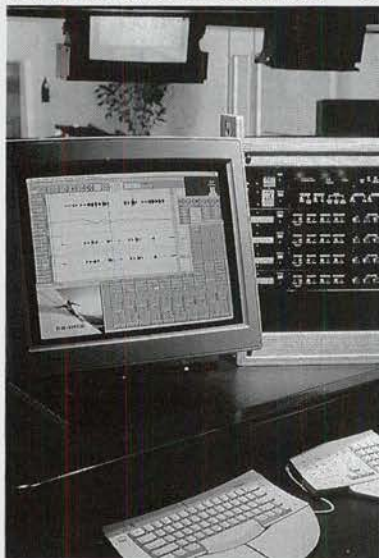
They are ISMT and Manny's in Melbourne, Studio Devices in Sydney, Australian Academy of Music in Qld, Kosmic in Perth and John Reynolds Music City along with Multilearn in Adelaide.

This is a system mode led on American domestic distribution which cuts the distributor out, the manufacturer deals with the outlets via a rep.

We are not too sure if this means the product carries a uniform price state by state, and what happens if you try to buy interstate.

It has, however, yielded excellent market penetration for Digidesign, to date. For details of ProTools III see over.

• Digidesign Australia - David Corazza, call (03) 820-0585.



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Pro Tools III DARS

If you don't know what DARS means, you don't need Pro Tools III. Seriously, this Digital Audio Recording System allows up to 48 tracks of record and play, and up to 64 analog or digital channels.

New is the TDM virtual mixing and plug-in environment, and the new software version.

Pro Tools III is sold as a core system, comprising:-

- Disk I/O NuBus card which supports SCSI and up to 16 tracks or record/play;
- DSP Farm, a NuBus card with hardware processing power for mixing and Plug-Ins,
- Pro Tools 3.0 application software which includes support for the DigiDesign ADAT Interface;

- TDM-enabling software and bundled DSP Plug-Ins;
- DAE, the Digidesign audio operating system.

The core system thus allows 16 tracks (or voices) and support for 8 channels of input/output with the required addition of an Audio Interface. These 8 channel interfaces come balanced (model 888) or unbalanced (model 882), and allow analogue and digital connection to the system. They have also LED metering onboard.

Price points are \$15,000 for a 16 tracks system (unbalanced) or \$18,000 (balanced).

Further options are available, as Pro Tools III is an expandable system. •Call (03) 820-0585.

Alesis MidiVerb 4

The new MidiVerb 4 Dual Channel Parallel Processor is the latest generation in Alesis's MidiVerb line of digital signal processors. According to Alesis, the unit features a 20 bit DSP engine, 48kHz sampling rate, 18 bit/128 times oversampling A/D converters, 20kHz bandwidth, over 90dB signal to noise ratio, and a large, backlit custom LCD with programming help prompts. Got that?

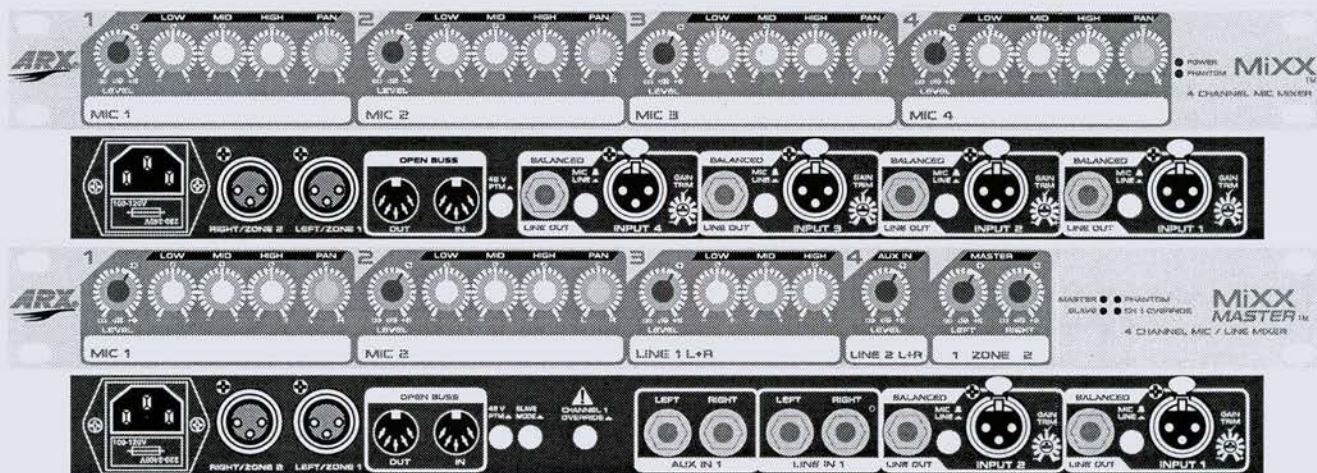
128 preset and 128 user programs and 32 effect configurations cover reverb, chorus, pitch and delay effects in stereo or fully independent dual channel/stereo output operation allowing two parallel, completely independent, stereo effects from the same unit.

A special Cascade mode routes the output of one channel to the input of the other for stacked effects. MidiVerb 4 also has Auto Level Sensing, a feature that automatically sets optimum input levels to maximize the unit's wide dynamic range.

MidiVerb 4 represents a milestone for Alesis's core technology: very large scale integrated chip design for digital audio. The MidiVerb 4 is actually a refinement and maturation of their efforts. Opening a beta unit there's almost nothing inside. Actually, there's a whole lot, but most of it resides on the chip. As the circuit board shrinks in size, the functions grow. •Electric Factory, (03) 480-5988.

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WORKBENCH

With Howard Jones

REPAIRS BY PHONE, SHORT CIRCUIT FINDER, & AKAI PHASE ANOMALITY

Studio Solutions has lately digressed into repair by phone. Or, more accurately, I should say diagnosis by phone - the repair was completed on the bench as usual. Here's how it happened...

I was working on some particularly urgent repairs on the workbench when a customer rang to say that he was in the middle of a recording session and that his console had gone noisy. Could I come around and fix it? I explained that it would be very difficult to come immediately, but suggested that we might be able to make an initial analysis of the problem by phone. The customer could then remove the faulty module and bring it around to the workshop where I could change the suspect component(s).

My suggestion to tackle the repair this way was also tempered by my past experience with this console. The fault was pretty clearly in the monitoring/output section of the desk, and this consists of three PCBs joined together by nylon standoffs and screws. These three boards are connected into the mixer by both edge connectors and flying leads. The upshot of all this is that none of these boards (in fact, none of the boards in this console) can be run out of the desk. Certainly, the middle PCB in the sandwich cannot be got at with a CRO probe or multimeter lead, so a different approach to fault-finding is needed.

The complaint was that the right hand monitor output had suddenly gone noisy. I got the customer to hold the phone up to the monitor

and I could clearly hear white noise typical of a frying IC. Armed with the circuit diagram of the console's monitor section, I then got the customer to plug into the circuit at different points and tell me if the noise was still there. Both the main and the alt speaker outputs showed the noise - OK, let's work backwards from there. When the main faders were moved up and down the noise increased and decreased accordingly, so the faulty IC was prior to the faders.

Moving the Monitor Source Select switch to the three available positions didn't affect the noise. OK, this was narrowing things down - the fault must be between this switch and the main faders. Finally, experiments with various PFL settings showed that IC4, a TL072 op amp, was almost certainly the culprit producing the problem.

At this point, the customer removed the monitor module from the console and whipped around to the workshop with it. IC4 was duly desoldered and a replacement inserted. The customer disappeared back to his studio to reassemble the module into the console. He was able to ring back a short time later to report that we had indeed cured the fault.

SHORT CIRCUITS - A TIP

After last issue's column on tracing short circuits appeared, John Berry, a reader from St. Leonards in NSW, faxed in his tip for making this task a lot easier. He disconnects the equipment power supply and hooks up a bench

supply set to 5V or less and current limited to about 1A.

He then uses a multimeter set to the mV range to sniff around the PCB for the reading showing the lowest volts across the supply rail. Using this technique, John says that you can usually get to within a few square cm of the faulty component or shorted track. As he says, it sure beats random searching.

MURPHY'S LAW - THE RETURN

Recently, we were phase testing the wiring and equipment in a project studio. Amongst the gear tested was an AKAI S3200 and we were surprised to find a phase anomaly. When in sample mode, the output phase agreed with the input phase - no worries.

When the 3200 was switched to *programming mode*, the audio output was then out of phase with respect to the original input. Further testing showed other phase problems, depending on which combination of balanced and unbalanced, mixed and direct connections were used.

The moral of the story is - if you are using samplers and other memory based devices and your mixes don't sound as sharp and punchy as you think they should, check out your system for phase problems - it could be that assorted phase reversals are detracting from the overall sound quality.

And now for:- The Plug: Howard runs Studio Solutions in Sydney, call 906-4363.

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4Ω Stereo	500W	600W
2Ω Stereo	-	750W
8Ω Bridged	1000W	1200W
4Ω Bridged	-	1500W

CA 9	(20Hz-20kHz)	EIA (1kHz)
8Ω Stereo	550W	600W
4Ω Stereo	800W	900W
2Ω Stereo	-	1000W
8Ω Bridged	1600W	1800W
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Write in Reader Service number: 123

STUDIO-NEWS

With Caroline Grafton

A# MOVE TO RIVERSOUND

A# Studio have relocated to Riversound Studio and upgraded to 1" 24 track and a Soundtracs Automated Solo Logic console with the capable Jeff Cripps (Ex-Ol'55 drummer) providing an efficient relaxed atmosphere for song recording. Call (02) 534 4440.

Eclipse Renovate

A small change made a big difference at Eclipse. During the Christmas/New Year break, the venerable Studio A at Eclipse Music Studios was working around the clock! Apart from busy lockout sessions for 'GF4' and 'Silverchair', work crews used all the remaining time making cosmetic upgrades to the control room.

Although there was the odd bit of hammering, gluing and screwing going on, the major part of the upgrade involved replacing the acoustic fabric lining the walls of the control room. Previously a dull and dirty grey colour, the new fabric is a much cleaner and brighter sandy colour, giving the room an airy and open feel. Known as 'Bondi' the fabric is part of the 'Front Runner' series manufactured in Australia by Melded Fabrics, phone (03) 706 5228. Although relatively inexpensive, the upgrade has turned a dark and depressing room into a very light and 'upbeat' room.

By varying the lighting levels, the client can now create virtually any mood they desire, from bright and open to warm and intimate. According to Kevin 'Caveman' Shirley, who is currently mixing Silverchair's forthcoming release at Eclipse, 'the room feels much brighter and lighter. It's f*ckin' great!'

Studio A at Eclipse offers SSL console, Studer 24-track analogue and Mitsubishi 32-track digital recorders, Lexicon 480L and AMS reverbs, and a host of other professional recording equipment - all housed in a room that's a pleasure to be in. For further details or to make bookings, contact Jodie or Elise at Eclipse Music Studios on (02) 264 7734.

MEGAPHON NEW

Megaphon Studios Sydney, have a new telephone number. You can now contact Kristen Wolek for bookings on (02) 550 6576.

PLANET UPGRADE

Planet Sound Studios Perth WA, have had recent upgrades in both studios. Studio A is now equipped with a 4064G-E Frame, 8 Mono G Series Modules, 8 Stereo G Series Modules, 48 E Series Mono Modules, Centre Section G Upgrade and G+ Computer. Studio Z now boasts 4040E - G Centre Section Upgrade, 32 Mono E (4G Mic Pre), 8 Stereo Modules and E Series Computer. Other recent equipment purchases include, an original C-12 Valve Mic, C-12 Re-Issue, TC 5000 Dual Conf., an Eventide

DSP4000 and Focusrite Red 2 EQ. Call (09) 382 2211.

RB-X GOES SONIC SOL.

Studio RB-X Vic, has announced the installation of a Sonic Solutions digital system complete with No Noise and Digital Pictures. The No Noise side of the system should be of particular interest to artists recording live material at gigs where inevitably a touch of buzz, hum, distortion or other inexplicable gremlins find their way onto that otherwise perfect take. No Noise is designed to repair these frustration's. Chief engineer, Mark McDougall is stunned by the achievements so far.

Maybe Studio RB-X can save you too from expensive re-recordings and wrist slashing. Call (03) 429 6199.

TARAMALIN GOES CD-R

Taramalin Sound Qld. have now installed CDR (Compact Disc Recordable) facilities. Call Allan Lahey (07) 208 9736

Tracking Office Shifts

Tracking Station Recording Studio Sydney NSW in conjunction with the JMC Academy have moved their administration to just around the corner to Level 3/25 Cooper Street, Surry Hills. But still have the same number Ph. (02) 281 8899, Fax (02) 212 4801.

The latest 'Allan Caswell' album was recorded there on three Tascam DA88's, courtesy of Audio Visual Design - AVD. Martin Cass's comments on the machines were that they performed flawlessly during the heavy tracking of the Caswell album. Call (02) 281 8899.

IT'S BIG AND IT'S RED!

Warehouse Recording/Rehearsal Studios & The Big Guitar, Rydalmere NSW. Australia is a big country with a lot of oversized (natural and un-natural) landmarks and Sydney is no exception. But the latest on offer is a 12m high red guitar (to my knowledge it doesn't actually function) mounted above Warehouse Studios. Six workers, a two day installation and reportedly \$4000 later, the guitar has fast become a local attraction as well pulling in new clientele.

The studios have attracted 'You Am I', 'The Beatnix' and 'John English'. Call (02) 684 2039. (I told you:- the biggest retailer of electrical appliances! CG)

ADAT FOR WOMBAT

Wombat Rd. Studio Vic.- following the installation of a new ADAT recorder and a BRC, Wombat Rd. Studio has also installed in their FX rack 4 extra noise gates and a Tube (valve) pre-amp/compressor. Call (051) 454 204.

Soundwarp's to Emerald

Emerald City Studio has been leased to Soundwarp Audio Services for 3 years, who will expand the facility to provide mastering. Meredith 'golden ears' Brooks and Bill Syrratt are both ex-Sony Music... Meredith was Senior Mastering Engineer for 13 years and Bill was Senior Technician responsible for the design and installation of Sony's five mastering suites at Huntingwood.

Emerald City will run in the background per say - the 24 track system including the MM1100 2", A.P.I. Console and custom 12" and 15" per side HPD Tannoy Monitors will remain... a high power Perraux amp for more headroom and clarity may be appropriate, whilst still maintaining the warmth, wide range and even stereo spread.

Freelance engineer, Michael Stavrou was extremely persuasive that the monitors be preserved at all costs. Soundwarp offers a variety of services for the Audio Professional. Whether you need a few dubs done yesterday or a complete Studio re-build, they can be of assistance. When you talk to Soundwarp you talk directly with the person who will look after you and your project.

Soundwarp: 13/505 Pittwater Rd./PO Box 571 Brookvale, NSW, 2100.
Phone: (02) 905 7144, Fax (02) 939 1943.

JOHN Z GOES HOME PS

In the meantime, John Zulaikha ex Emerald says he "is taking an indeterminable sabbatical returning to civilisation ... is that lucky?" John continues (and continues for most people that know him) "About the time people read this, I would have been settled into my home E.C. Project Studio (can't beat 'em join 'em)... I took home all my musical computer stuff so I can have more time to write fewer words and play less notes in between the air molecules. After 25 years studio'ing, I am now doing the full circle to play about in a PS".

The J.Z. Project Studio will be detailed in a future issue. Call him:- (02) 953-4699.

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BASF NATIONAL TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	PROJECT
New South Wales			
Af Sharp Studio Jeff Cripps (02) 534 4440 24 Track 1'			
Heartworm	Band/Jeff Cripps	Jeff Cripps	CD
Ron Mey	Ron/Jeff Cripps	Jeff Cripps	CD
Potion	Dave Steele/Band	Jeff Cripps	3 Trk. CD
Abusement Park	Jeff Cripps	Jeff Cripps	Demo
Airmotion Studios Kristen Wolek (02) 550 3863 24 Track			
Rolling Stones Tribute Show	Jason Blackwell	Steve Cole	Demos
Godstar	Tim Whitten	Tim Whitten/Godstar	O/Dubs
Alter Ego	Jason Blackwell	Terry Funnell	Demos
Sydney Museum	Colin Simpkins	Allessio	Sound FX
RTA	Jason Blackwell	Peter Glashoff	Voiceover
Artrage Peter (Feeny) Williams (02) 564 2509 24 Trk.			
Circus	Ted Yanni	Rusty	EP
Skunkhouse	Band	Muff	EP
Bush Tracks Recording Studio Ruth & Dave (066) 89 1290 24 Track Ruth Miller			
Kristy Gentz	Jeff Andrew/Steve Thompson	Dave Highet	Demo
David Reeve	David Reeve	Dave Highet	Demo
Edward Martin	E.Martin/D.Highet	Dave Highet	Demo
Greg Gardner	G.Gardner/D.Highet	Dave Highet	Album
Vivid Image	Band/D.Highet	Dave Highet	Album Tracks
Darren Ottery	D.Ottery/D.Highet	Dave Highet	Demo
Charing Cross Studio David Sykes (02)387 8362 - 24 Trk Neve Analogue			
Dog Trumpet	Martin White	Martin White/Aaron Pralley	EP
Tumbleweed	Paul McKercher	Paul McKercher	Mixing Single
Clouds	Paul McKercher	Paul McKercher	EP
Very's	Paul McKercher	Greg Wales	Mixing Album
Loose Goose	Dave Quinn	Dave Quinn/Keith Cooper	EP
Falling Joys	Paul McKercher	Paul McKercher	EP
Cloud Studios Parris Macleod (043) 532 429 48 Trk Analogue/Digital Mastering Suite			
Amsterjam	Parris Macleod/Band	Parris Macleod/Kim Lemke	Album
Scott Læce	Parris Macleod	Parris Macleod	Final Mix Album
Malakye Grind	Parris Macleod	Parris Macleod	EP
Helen Howe		Parris Macleod	
The Mix	Parris Macleod	Parris Macleod	Demo
Crystal Clear Recordings (02) 975 3769 David Tozer 24 Tk Digital ADAT System & BRC			
Bruce Mathiske	Dave Tozer/Bruce	Dave Tozer	Demo
IOU	Dave Tozer/IOU	Dave Tozer	EP Mixing
Killing The Ritual	Dave Tozer/Band	Dave Tozer	Demo
Welcome The Terra Federation	Dean/Vajra	Dave Tozer	EP Tracking
Vaughan Michael	Dave Tozer	Dave Tozer	Demos
Damien Gerard Studios Contact Marshall (02) 660-8776 2 x 16/32 Track			
Jackson Code	Band	Dave Trump	Demos
The Verys	Paul McKercher	Dave Trump	Album
Died Pretty	Brett Myers	Mike Woods	Tracking
Dave Steel	Dave	Russ Pilling	Album
Norma Murphy	Rod McCormack	Russ Pilling	Album
O.U.A.T.	Marshall Cullen	Marshall C.	Tracking
Eclipse Music Studios Elise Huntley/Jodie Sharp 24 Tk. Analogue/32 Tk Digital SSL 4000E Series			
GF4	Rick Will	Rick Will	Mixing - Track/Single
Silverchair	Kevin 'Cave' Shirley	Caveman	Mixing - Album
Kibwe		Matt Lovell	Mixing - Tracks
Blek Bala Mujik	Ian Faith	David Lumsdaine	Mixing - Album
Bellydance	Bellydance	Martin White	Mixing - Tracks
The Moods		Richard Mieke	Tracking
Festival Studio Anne Bellairs (02) 660 3927 24 Analog, 32 Trk. Dig. Neve			
Silverchair	Kevin Shirley	Mark Thomas/Asst. Matt Wilton	Album
Swoop	Swoop/Robbie Rowlands		Album
Mother Hubbard	CVraig Portells	Mark Thomas/Matt Wilton	Single
Louie Shelton	Louie Shelton	Mark Thomas/Matt Wilton	Album
Kindred	Kindred/Mark Thomas	Mark Thomas/Matt Wilton	EP



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EX-TRACK

With Caroline Grafton

Darling Harbour Studios - I received a fax promo sheet from the ever so nice lunatics down in Ultimo Sydney and decided to run it word for word with some spelling adjustments. "Promo Sheet for Labels J.O.K.E. (Just Ofta Kuff Entertainment) & WITCHETY (World Music Label) two very different labels with one aim - promoting artists with unique styles.

Darling Harbour Studios Pty. Ltd. and Intergalactic Pictures have combined resources to produce two new labels they feel best represents a new movement in music, both nationally and internationally. The J.O.K.E. label is designed to cater for the funk-rock groove style of music. The label has attained a few new bands including Hobo Posh, "a rag-tag gang of musicians thrown together by the twists of fate, jamming on the welfare line, banging oil drums in a vacant lot, sharing cigarettes in the doorway of a church hall, singing high harmonies in the wind and rain..."

The Witchety music label plans to promote artists with a blend of international styles. One such artist is Yungchen Lhamo, a Tibetan singer of international renown who has performed with Tim Finn, toured India in 1993, performed in the major capitals of Australia and is set to perform at the highly acclaimed WOMAD Festival, Adelaide in 1995. Both labels operate from within the Darling Harbour Studios Complex which also provides rehearsal, recording and video production facilities. Please direct all enquiries to Suzie Novak on phone/fax : (02) 211 1474"

Outlaw Records Qld. - tell us and

I quote Uncle J, "it is too hot in Cairns at the moment for any news. Melbourne's Dead Metal Band, 'Entasis', during recording there in Cairns says it is Pisser weather and they have been "dead" regularly every night. But they reckon they'll be back soon. (070) 576 742

Tracking Station Recording Studio Sydney NSW - 'The Wiggles' have been recording their latest album release, bringing out the child in everyone involved. They have promised to return much to the delight of staff. Production should be just about to start on Tracking Station's next major album with country singer 'Wayne Law'. Call (02) 281 8899.

Damien Gerard Sound Studios, Ultimo NSW. Christmas's approach lent no peace to the wicked at Damien Gerard's with both studio's working overtime into the holiday season.

'Deadly Nightshades' have completed their album and reluctantly handed over Studio A & Engineer Russel Pilling to 'Dave Steel' for his new solo project as well as sessions with 'Jim Hillburn'. Russell and Studio A have also played host to 'Swirl' doing B sides and the 'Simpletons' working on a three track release.

Engineer Colin Simpkins comment on the new more spacious refit to Studio B was "It's like being inside the TARDIS" (i.e. bigger inside than it looks from outside). Colin's been working on the 'Brent Williams' (Eastside Music & Cluster fame) solo EP, the first project in the new look facility.

Other passing trade in Studio B included 'Dog Trumpet', 'The

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ARTIST	PRODUCER	ENGINEER	PROJECT
48V Studio	Clare Britton (02)211 6663 48 Track, 24 Digital/24 A'log		
Screaming Jets	Robbie Adams	Robbie Adams/Dave Henderson	Album
Glebe Recording Studios	David Jacobsen (02) 552 1299 24/32 Track, 24 Track Pre-Prod. suite		
Julia Daniels	D.Jacobsen	D. Jacobsen	Album Tracks
Corporate - Private	Larry Muhoberac	Michael Vidale	Presentation
Hullabaloo	Glenn Heaton 02 684 2039 24 Track, Pro-Tools	Editing	
Strum Jungle	Strum Jungle	Glenn Langford	Demo
The Krye	The Krye	Glenn Langford	CD Release
Disney Live	Disney Live/Heaton	Glenn Heaton	Stage Show Soundtracks
Heaton/McGarvey	Heaton/McGarvey	Glenn Heaton	ABC TV Themes
JMF Studio Fran Esther (02) 790 4097 24 Track			
Just For Kicks	Band	Ralph Esther	Demo
Bowl Weevil	Ralph Esther	Ralph Esther	Demo
Tony Martin	Tony Martin	Ralph Esther	CD Tracks
Main Street Studio	Rob Specogna 042 834 515 16 Track		
Bell Tower	Band	Rob Specogna	Demo
Rock'n Horse	Rob Specogna/Band	Rob Specogna	Demos
The Fine Line	Band	John Hresc	CD
Cheyenne	Band/Rob Specogna	Rob Specogna	CD.Comp & Demo
Vaughan	Ben Robertson	Jeremy Thomas/Rob Specogna	CD
Scatamouch	Band/R.Specogna	Rob Specogna	Demos
Megaphon Studios	Kristen Wolek (02) 516 3917 24 Track		
Cruel Sea	Tony Cohen	Paul Mc Kercher	Rec. Album
Dig	Jeremy Allom	Jeremy Allom	Rec. Tracks
Skunkhour	Skunkhour/David Hemming	David Hemming	Rec. Tracks
Mirage Studios	G. Nixcn (02) 211 3915 16 Track Digital, 48 Tk. Digital 24 Track Analogue		
Silverchair		John Murtagh (Mobile Mirage Studio)	Album
Marc Hunter	M. Hunter	T. Misner	Album
Allan Lancaster	T. Misner	T. Misner	Single
Power Supply	T. Misner/M.Kennedy	T. Misner	Album
Winter House	T. Misner/M.Kennedy	T. Misner/M.Stavros	EP
Paradise Studios	Bill Field (02) 357 1599 48 Track A'log, Custom Mixer,		
McCormack Brothers	Garth Porter	Ted Howard	Album Tracking
Alchemist	John Hresc	John Hresc	Album Tracking
Screamfeeder	Wayne Connolly	Wayne Connolly	Album
Bashful	Simon Holmes	Tom Blaxland	Album Tracks
Big Top Blues Band		Mark Roberts	Album Tracks
Carlo Giacco	Carlo Giacco	Glen Phimister	Jingles
Powerhouse Studio	Contact Doug Henderson (02) 318 1220 24 Ch. Studer/32 Input Neve Console		
Nuno Bettencourt	Nuno Bettencourt	Nuno Bettencourt/Assist. Craig Beck	Solo Project
The Deep End	The Deep End/J. Hresc	John Hresc	Single
Drill	Drill	Matt Lovell	EP
Prime Mover	Prime Mover/Craig Beck	Craig Beck	EP
State of Mind	State of Mind/Craig Beck	Craig Beck	EP
Robyn Gorell	L. Berger/D.Henderson	Doug Henderson	Album CD
Rathouse Studios	Mark Macedone (069) 622307, 018 270 731 16 Track		
Knucklehead	Band/Mark Macedone	Mark Macedone	Album
Peter Jones	Peter Jones	Mark Macedone	Jingle
RockingHorse Studio	Allan Devandra/Kim Reid ((066)884131 24/48 Track		
Marielle Harcourt	Greg Courtney	Greg Courtney	Demo
Fondula	Ramesh Sathia	Ramesh Sathia	Single
Carmella	Yantra De Vilda	Greg Courtney	Single
The Strange	Greg Henderson	Greg Henderson	Album
Sony Music Studio (02) 332 0320 Ross Ahern. 24 Track Analog./Digital/Mastering			
Silverchair	Kevin Shirley	Kevin Shirley	Album Tracking
Godstar	Godstar	Tim Whitten	Album
Graham Jesse	Graham Jesse	Simon Tonx	Album
Alchemist	Alchemist	Jon Resc	Album
Bluebottle Kiss	Bluebottle Kiss	Wayne Connolly	EP
Lucinda Marty	Lucinda Marty	Simon Tonx	Demos
Sound Level Pty Ltd. Joe Breen (02) 552 3200 32 Channel - Live to DAT.Multi Track Available			
The Deep	Rory McKenzie	Rory McKenzie	Demo
Sunshine Crowd	Paul Gannell	Paul Gannell	Demo
Swoop	Fulvio Colaiacolo	Fulvio Colaiacolo	Demo
Oliver	Paul Gannell	Paul Gannell	Demo
Exploding Daisies	Fulvio Colaiacolo	Fulvio Colaiacolo	Demo
Bitch	John Hresc	John Hresc	Demo
Studio Arts Productions (042) 849128 Ed Lee. Independent Recording Studio			
P. Harness	Band/Ed. Lee	Ed. Lee	CD
Ed Lee	Ed Lee	Ed Lee	Image Video Sound Track
Studio Shift Contact Nonda/Tom Kazas (02) 398 4268 24 Track 2"			
Martin Aranovitch	Martin A./Nonda	Nonda	Album
Astronomer	Astronomer/Tom Kazas	Tom Kazas	E.P.
Francis Greening	Tom Kazas	Tom Kazas	Album
The Vault Contact Terri Barnett (02) 953 0332 2" 24 Track			
Audio Murphy	Mark Moffatt	Mark Moffatt	Tracks
"Back of Beyond"	Mark Moffatt		Movie Soundtrack
Trackdown Geoff Watson (02) 550 6890 24 Trk., 8-16 Tk. A-Dat, 8 Tk Pro Tools			
Radio Zero		Brent Clark	Album
Gypsy Logic	Dennis Keath	Kathy Naughton	CD Single
Vaughans	Ben Robertson	Rob Specogna	Album
Mighty Morphin Power Rangers	Tony Oliver	Kathy Naughton	ADR
Tracking Station Studios Contact Martin Cass (02) 281 8899 24 Track A'log			
Allan Caswell	Allan Caswell/Martin Cass	Martin Cass	Album
Michael Beaumont	Michael Beaumont	Mal Shepard	Demos
Cats - Musical	Peter Carol	Aaron Ruig	Voice Overs



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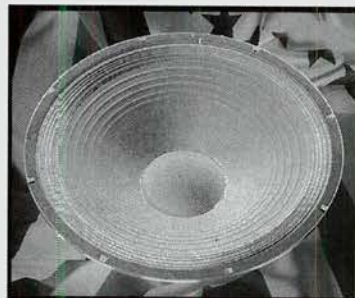
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EX-TRACK

ARTIST	PRODUCER	ENGINEER	PROJECT
Wiggles	Wiggles	Aaron Ruig	Album
Sila	Ali Sayan	Steve Pomfrett	Demos
Jonny Ashcroft	Eric Watson	Martin Cass	EP
Troy Horse Studio	Michael Lewis (02) 557 3129	24 Track	
Grand Lodge	Band/Colin Wright	Colin Wright	Album
Nadya	Francis Takatho/Colin Wright	Colin Wright	EP
Brenda Webb		Liberty	Demo
Disneyfist	Stuart G Robertson	Liberty	Single
Lawnsnell	Glenn Smith	John Vittorio	E.P.
The Beaver Bros.	Colin Wright	Stumpy Stephens	Love Song Album
Wirra Willa Studios	Contact Will Rout (02)605 1203	24 Track/8 Track Hard Disk	
Kokaso	The Band	Will Rout/Ian Cooper	CD Album Track
Schultz Sisters	Mick Ferguson	Will Rout/Ian Cooper	CD Album Track
Midnight Hour	Malcolm Bateman	John Moussa/Will Rout	Video Musical
Ray Perrone	Ray Perrone	Ian Cooper	Album
Peter Kaye	John Charters	Ian Cooper	Corporate Presentation
Touch of Brass	Michael Rohanek	Will Rout/Ian Cooper	CD Album Track

Queensland

Grevillea Recording Studios	Malcolm Jacobson (07) 262 8422	24 Track Analogue/16 Tk Digital	
Ewan MacKenzie's Blues Project	Tony Byrne	T.Byrne/Malcolm Jacobson	Album
A Company of Voices	John Webber	Rodney Jacobson	CD Mastering
Transmission Communication	Trans.Comm.	Malcolm Jacobson	CD Mastering
Creation Party	Diane Cilentio	Malcolm Jacobson	Soundtrack
Old. Theatrical Touring	Old.Theatrical Touring	Bruce Jacobson	Musical
Kakadu Studios	Ken Hutton 089 411344	24 Track, Mobile, Digital Mastering	
Mimi Band	Ken Hutton	Ken Hutton	Aboriginal Contemporary Album
Paul Francis	K. Hutton	K. Hutton	Cover Album
Alex Taare	K. Hutton	K. Hutton	Original Songs - Album
Harry Melius	K. Hutton	K. Hutton	Original Songs - Album
Best of Arnham Land	K. Hutton	K. Hutton	Original Songs - Album
Maestro Music	Lindsay Masters 089 321 754	8 Track	
Karen O'Shea/Cat In The Hat	Lindsay Masters	Lindsay Masters	Demos/Originals
Outlaw Recording & Records	Jerry Reinisch 070 576742, 018 772380,	32/64 Ch./16 Trk. Digital	
Entasis	Rick Martin	Uncle J.	Demo
Tony George	Kirk Steele	Uncle J.	Album
Mantaka	James T.J.Reinisch	Uncle J.	CD Mix
Sunshine Studios (07) 844 6844	Leon Prescott 36 Channel	Neve 24 Trks	
Roy Mills	Nick Coetzee	Kevin Stantiv/Murray Lalor	Album
Nick Coetzee	Nick Coetzee	Kevin Stantiv/Murray Lalor	Album
Robert Hesp	Robert Hesp	Leon Prescott	Demos
Brian Cavenah	Brian Cavenah	Mark McElligott	EPs
Suite 16 Audio Productions	Murray Lyons (07) 369 8733	32 Track	
Suzu Gamble	Garry Smith	Julian Lynch	Demo Songs
Anthony Russell	David Richards	David Richards	Album
Buzz & The Blues Band	David Richards	David Richards	Album
Ton Ton Marcoute	Brent Clarke	Brent Clarke	Demo Songs
Taramain Sound	Allan Lahey (07) 208 9736		
Harmony	Band	Allan Lahey	Gospel Album
Pharaoh's Playground	Band/McElligott	Mark McElligott	EP
Glass Pig	Leroy Bath	Allan Lahey	Album
Sound Development	Bob Moore	Jeff Urbacher	Album
Mutation Parlour	Orryelle	Allan Lahey	Album
Chris Foenander	Chris Foenander	Allan Lahey	Demo.

South Australia

Disk-Edits	Neville Clark(08) 340 1377	Digital Editing/Mastering Suite	
Quire St. Nicholas		N. Clark	Location Recording
Goofy Footer	Peter Kolomitsev/Band	N. Clark	Mastering CD Single
Steve Ashley	Steve Ashley	N. Clark	Mastering for Demo
Juice Records	Theo/Donato	N. Clark	Editing & Mastering for Show Tape
Rob Royce	Rob Royce	N. Clark	Transfers
Mixmaster Productions	Mick Wordley (018) 822 986	24 Track 2" Dolby	
Mark of Cain	Band/Wordley/Sheldon	M.Wordley/S.Sheldon	Tracking
Blood Sucking Freaks	Wordley/Band	M. Wordley	Album
Cold Reality	Band	S.Fieldhouse	Tracking
Ronnie Taheny	Wordley/J.Grace	M. Wordley	Album Mix
J.B.E.	C. Davies/M.Wordley	S.Fieldhouse/M.Wordley	Album Mix
Don't Bring Lulu	G.Nicols/M.Boundy	M.Wordley	Album Mix



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(continued)

Jackson Code', 'Stale Acid Track', 'Brent Williams' and 'The Unloved' all being engineered by Dave Trump, while Mike Wood took over the engineering chair to turn the dials for 'Died Pretty'.

'The Verys' have also just completed recording their latest album in studio B with the infamous Paul McKercher producing. Paul had a host of Neve pre-amps and vintage mics to help the session along.

The new Neve pre-amps/EQ's have scarcely had a break since they arrived. DG's kicked off into the New Year with 'Norma Murphy's' country album featuring the 'McCormak Brothers' in Studio A and Brent Williams has been continuing his solo project. Russel Pilling and Colin Simkins will be engineering the two sessions.

Studio owner Marshall Cullen has just returned from recording in LA with Sydney act 'Once Upon A Time'. Vocalist Elia Bel was touching up some vocals and re-recording parts for the US album release. "The LA studio was 2 inch analog with racks and racks of tube gear and all the latest Hi Tech stuff as well; HEAVEN !" commented Marshall. Damien Gerard's also has a new studio co-ordinator, Michelle Green, who will also remain as PA to Marshall Cullen. Call Michelle on (02) 660 8776.

The Boat House - Benalla, Victoria. In-house producer and Degen-erates' guitarist Jamie Durrant is hugely vided up upon reading that the first Boat House production - 'Incursion's' "Afterglow" has been listed as single and production of the week in the Melbourne music mag/street press - In Press.

Currently recording an LP is Benalla's Spudgun, a allegedly huge young band aged 16/17 -

Melbourne's 3RRR claims they will be bigger than Silverchair. Boat House hopes so. The Boat House is a 12-track studio in country Victoria catering for an indie budget, however claiming a huge sound, and specialising in Grunge and Butch Vigg type tastes. Call (057) 633 293.

Skye Nevin parts from Studio FX. The very lovely Skye Nevin has departed to work in a different studio - a Health Project Studio. Skye's going away party was held at the Iceburgs Club, and was attended by a nice mix of male and female studio type persons! Wishing Skye a clear blue sky, from all at Connections.

A notable cryptic item from John Zulaikha - "Max Sharam (who won New Faces) and Nick Mainsbridge (eng-co-pro with Producer Daniel Denholm) is now enjoying airspace with her catchy poppin' porn lyrical *Coma*."

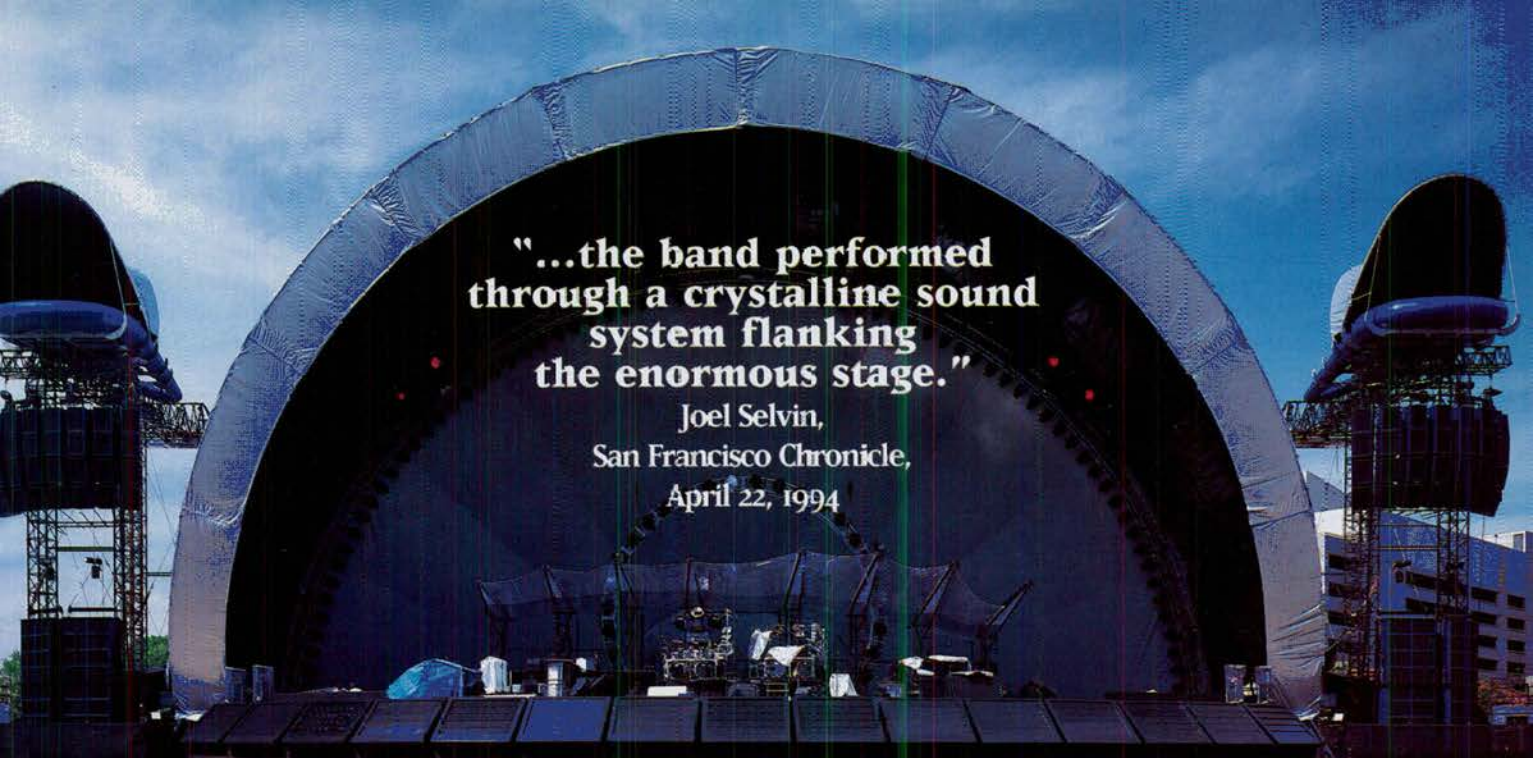
Vickie Larnach and Jim Hare get hooked up in L.A. buy house in Roseville Sydney, and to maintain the peace have opted for equal share time in their home project studio....settling (out of court) for one each = 2 new project studios. Jim brought back a Power Mac 8100 AV with a new risk chip, 80 megahertz, 2 gig HD, 16 meg ram (will expand to 64 asap) Radius Video Vision Studio hardware and Native version Adobe Premier, Photoshop and Video Fusion video FX software enabling full pre-post-pro video and audio to CD Rom capability. Vicki's MIDI musical studio coupled with Jim's multi media will connect and studio meld, amongst other more interesting things.

SAMIs - At the third annual South Australian Music Industry Awards, held in November Mick Wordley of Mix Master Productions took out "Most Outstanding Engineer/

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Yes We've Moved



"...the band performed through a crystalline sound system flanking the enormous stage."

Joel Selvin,
San Francisco Chronicle,
April 22, 1994



**The Pink Floyd
1994 World Tour**



"...and the monstrous speaker system produced the delicate sound of Pink Floyd's thunderous music nearly to perfection."

Gerald Defilth,
Pittsburgh Tribune Review,
June 1, 1994

"...a quadrasonic sound system that was near perfection."

Craig Marine,
San Francisco Examiner,
April 22, 1994

"...a quadrasonic sound system that rendered the 27-year-old band's music with fidelity previously unheard in stadiums.."

Sam Wood,
Philadelphia Enquirer,
June 3, 1994

Photos: On May 8, 1994, Pink Floyd played to a sold-out audience of nearly 50,000 at Vanderbilt Stadium, Nashville, TN. With Britannia Row & Turbosound, there wasn't a bad seat in the house.

Exclusively Turbosound.

"...pristine high-fidelity sound..."

Jim DeRogatis, **Chicago Sun-Times**,
July 14, 1994

"Production ruled the performance, and the sound quality was nothing short of amazing. When Tim Renwick strummed his acoustic guitar to start 'Wish You Were Here', the strings snapped crisply and clearly, as if he was sitting in his living room in front of the fire."

Joel Selvin,
San Francisco Chronicle,
April 22, 1994

"...The sound may have been the true star of the show, however... No rock band can match Pink Floyd when it comes to making a stadium show come off sounding as if it's being held in your living room."

Michael Norman,
Cleveland Plain Dealer,
May 27, 1994

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ATT Audio Controls Pty Ltd 439 Gaffney Street, Pascoe Vale Vic. 3044 Phone: (03) 379 1511 Fax: (03) 379 9081

Turbosound wishes to express its sincere thanks to Pink Floyd, Robbie Williams & Steve O'Rourke. Floodlight is manufactured under licence from Funktion One

The quadrasonic reinforcement system for Pink Floyd's worldwide 'The Division Bell' tour consists exclusively of Turbosound Flashlight and Floodlight enclosures, loudspeakers, management systems, BSS/Turbosound amplifier racks, rigging and cabling.

Producer". His studio also picked up "Best Studio". Call (018) 822 986.

Ernie Rose of Metropolis Audio Melbourne, was recently heard espousing philosophy at the Soundcorp Xmas party in Melbourne. He was relating to the problems faced by most people when they retire, at the age of 65, when they then spend two years gardening and then drop dead of boredom, as they are not used to relaxing.

So Ern has come up with his own theory which, it is reported, is under current implementation. He decided, I'm told, that once he turned 40, he would add an additional week to his annual holidays. Meaning that at 40 he would take 5 weeks, at 41: 6 weeks and so on. The effect of this would be that by the age of

64 he would enjoy a total of 28 weeks annual leave. Subsequently, on retirement Ern will be so used to not working he would feel comfortable in his new role.

Personally, I think Ernie's brain is too active to really relax and luckily for the industry his retirement is still a ways off. Call him on (03) 696 2111 with a better idea?

Foghorn Records Sydney, act 'Once Upon A Time' have recently returned from LA where they blazed a publicity trail and met all the Trauma Records (now part of Interscope) crew and also had some fun in the studio re-mixing and re-recording some vocals for the international album release which will be a combined version of the 1993 self-titled EP and current 'COG' album.

On the home front expect some big changes from Foghorn in the New Year with an office relocation and further collaboration with Ravenswood Records who will be helping out with promotion and publicity. The joint Ravenswood/Foghorn release for 'Pete Wells' already has airplay on RRR in Melbourne for 1st single "Crisis Point Casino". Call (02) 660 8776.

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BASF NATIONAL TRACKING GUIDE

ARTIST PRODUCER ENGINEER PROJECT

Victoria

Bel Air Sound	Danny Olesh (03) 563 7887	24 Track Analogue	8 Track Digital	
Elysium	S. Segal	S. Segal		Demos
Jonestown	Simon Segal	Richard Smith		Album
Voice Over America	V.O.A.	Danny Olesh		EP
Steel September	Simon Segal	Simon Segal		Demos
Brad Walker	Brad Walker	Danny Olesh		Demos
Mein Swartz Baume	Danny Olesh	Danny Olesh		Demos
C'est Ca Audio-Visual Services	Moirra McCourt (03) 419 1506	Auto 24 Trk - Digital	Mastering	
The Celts		Siiri Metsan		Album
Penelope Swales	P.Swales/S.Metsan	Siiri Metsan		Album
Snapdragons	S.Metsan	Siiri Metsan		Album
Squid	K. Bird	Siiri Metsan		Album
Brazil Nuts	S.Metsan	Siiri Metsan		Demo
Various	S.Metsan	Siiri Metsan		Girl Zone 2
Gotham Audio	Tom Kehoe (03) 879 9400	48 Track Dig.		
John Farnham	Ross Fraser		Post Prodn. Concert Video	
Cranky	Mark Forrester	Mark Forrester		Mixing
Mantissa	Michael Letho	Michael Letho		Album Mixing
Merril Bainbridge	George Ooi	Tony Espie		Mixing
The Lovers	Jeremy Alsop	Doug Brady		Album Mixing
Jenny Morris	Mark Forrester	Mark Forrester		Remix Single
Hot House Audio	Contact Cruss (03) 525 3703	24 Track		
Mark Walsh	Mark Walsh	Paul 'Woody' Annisson		Demos
Bloodstone	Band	Craig Harnath		Album
Sean McLeod	Sean	Ross Cockle		Demos
The Jaynes	Chris Dickie	Chris Dickie		Demo
Wish	Wish	Paul 'Woody' Annisson		Demos
Skunkhour	Band	Muff		Album
Metropolis Audio	Contact David Warner (03) 696 2111	24/48 Tk Analogue/Digital SSL + Harrison		
Cruel Sea	Tony Cohen	Tony Cohen/Paul McKercher		Album Mix
Falling Joys	Paul McKercher	Paul McKercher		Single Mix
Boyz II Men	Paul Kosky	Paul Kosky		Outside Broadcast & Mix
Tribe of New	Daryl Aberhart	Tim Johnston		EP
Stiff Kittens	Band	Tim Johnston		B Sides
Dave Arden	Chong Lim	Cam Craig		EP
Newmarket Studio	Contact David Bates (03) 372 2722	24 Track 2 Studios		
The Preachers	Robert B. Dillon	R.B. Dillon		Album Mixing
Chris Lewis	Chris Lewis	Tim Cole		Album Mixing
Archie Roach	Jen Anderson	Cameron Craig		Pre-Production
Andrew Stanford		Robert B. Dillon		Album Recording
Stephen Dinj	Stephen Dinj	Chris Corr		Album Mixing
July Small	Hugh McDonald	Robert B. Dillon		Album Tracks
001 Recording Studios	Contact George Siew Ooi (03) 348 1300	24 Track/Midi Suite		
Nova	Tony Espie	Tony Espie		Single
Hub	L.Maddy/M.Dennis	Lawrence Maddy		Single
Pendulum	T.Espie/Band	Tony Espie		Single
T-Bones	N.Derricks/Band	Nigel Derricks		Single
Merril Bainbridge	George Ooi	Brian Marsh		Album Tracking
E.V. Experience	Evan Kelly	Brian Marsh		Single
St. Andrews Recording Studio	Mark McCormack (03) 583 2341 or Paul 018 102519	24 Track		
Bengal Tigers	Band	Mark McCormack		EP
Jellyfish	Band	Mark McCormack		EP
Factory 5 TV Show	Mark McCormack	Paul Sherrit		Live to Air Bands
Sing Sing Studio	Phil or Kaj (03) 428 4622 - 24 Tk Digital & 24 Tk Analogue			
Bad Loves	Doug Roberts	Doug Roberts		Album
Nick Cave & The Bad Seeds	Band	Victor Van Vugt		Album
Fraiment	Robbie Rowland	Robbie Rowland		Album
Greg Champion	Greg Champion	Kaj Dahlstrom		Album
Mick Harvey	Mick Harvey	Victor Van Vugt		Album
Supersonic Recorders	Dave Hannan 015 352 348	Mobile Digital 24 Track		
Midnight Special	D.Hannan/D.Binotto	Dave Hannan		Album Live
Meg Kirby	D.Hannan/L.Underhill/Meg	Dave Hannan		Album
Chris Young	Dave Hannan	Dave Hannan		Album Tracks

Peter Leeming	D.Hannan/P.Leeming	D.Hannan/M.Kennedy	Demos
Monsalvat Jazz Festival Artists	D. Hannan	Dave Hannan	Live Recording
Studio 52	Paul Higgins (03) 417 7707, 32 Tracks & Studio 2	ADAT 8 Track	
Damian Manassa	Trevor Carter	Trevor Carter	Track for New Album
Mad Dog	Band	Trevor Carter	Demos
Hard Luck	Band	Trevor Carter	Demos
Premonition	Band	Trevor Carter	EP/CD
Ron Martini	Trevor Carter	Trevor Carter	Album
Wheel	Band	Trevor Carter	Track for Nu-Music 10
Studio RB-X (03) 429 6199	Ross Burton 48 Track, SSL & Digital Post.		
Annette Densley	Ross Burton	Mark McDougall	Album
Greg Champion	Mike Brady	Mark McDougall	Cricket Single
Raw Deal	Band	Matt Voigt	Demos
Nemesis	Band	Melita Jagic	Demos
Greg Champion	Greg Champion	Mark McDougall	Album Mix
Brady/Harding/Severini	Themselves	Various	Jingles
The Boat House	Jamie Durrant (057) 633 293	12 Track	
Spudgun	Jamie Durrant	Jamie Durrant	Album Tracks - Rec.
Jamie Durrant	Jamie Durrant	Jamie Durrant	Mix Album Tracks
Whirled Records	Craig McArthur (03) 427 1436		
Ian Chia	Ian Chia	Craig McArthur	Star Dragon - Music. Theatre Prodn.
Barry Michael	Paul Hester	Craig McArthur	Album
Wombat Road Studio (051) 454204	Barry Clissold 24 Trk. (16 Analogue & 8 Digital)		
Roberta Fax	Roberta Fax	B.Clissold	Demo Tracks
Blackfoot	Blackfoot	B.Clissold	Demo (Midnight Oil support act)
BCMC	Lee Forster	B.Clissold	Club Album
Gladys Campbell	S.Langley	B.Clissold	Live Album
5th Eastern Arterial	B.Orr/B.Clissold	B.Clissold	Demo Tape
The Firz	Greg Hoepner	B.Clissold	Demo Tracks
World Recording Studios (03) 866 8643	Don Nadi 24 Track		
Kate Ceberano		Jewels Michael	Demos
Bad Girls	Bad Girls	Paul 'Woody' Annisson	Album
Sally Boyden	Gumpy	Paul 'Woody' Annisson	Album
Nova	Nova	Jewels Michael	Single
Angie Bekker	Don Nadi	Paul 'Woody' Annisson	Demos

Western Australia

Bonsal Recording Studio	Tom Thorpe (09) 349 6029	24 Track	
Andrew Breen	Tom Thorpe	Tom Thorpe	Demos
Studio Trax	Tom Thorpe	Tom Thorpe	Demos
Criminal Force	Tom Thorpe	Tom Thorpe	Demos
PMFM Morning Crew	Tom Thorpe	Tom Thorpe	Jingles
Planet Sound Studios	Contact John Villani & Denise Preston (09) 382 2211	48 & 32 Tk Dig./24 Tk Anal.	
Novak Langer	N.Langer/J.Villani	John Villani	Album Tracking
Grant Hart	G.Hart/J.Villani	John Villani	Album Mix
Dystonia	Damien Ward/Band	D.Ward/J.Villani	EP Mix
Mintu D.Souza	J.Villani	John Villani	Album Tracking
Ammonia	Ammonia	John V./Damien Ward	EP Tracking
Freemantle Dockers	Ken Walther	John Villani	Theme Song
Poons Head (09) 339 4791	Rob Grant 32 Track		
Beaverloop	Rob Grant/Band	Rob Grant	Album
Hedonists	Rob Grant/Band	Rob Grant	Album
Ditch Witch	Rob Grant/Band	Rob Grant	Album
Hard Marshmellows	Rob Grant/Band	Rob Grant	Mini Album
Sourpuss	Rob Grant/Band	Rob Grant	EP
Yummy Fur	Chris Dickey	Chiss Dickey/R.Grant	Single
Troppo Sound (091) 922394	Mick Connolly 24 Track Dolby S	Dat Master	
Kuckles	Band	Brett Lyons	Corrugation Road
Raymond Petherick	David Hymes	Brett Lyons	Demo Album
Witzend Recording Studio (09) 331 1818	Alan Dawson 16 Track		
Shaun McVicar	Alan Dawson	Alan Dawson	Album
Andalusia	Alan Dawson	Alan Dawson	Single



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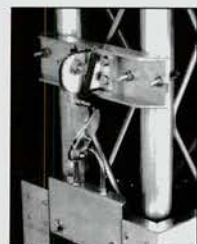
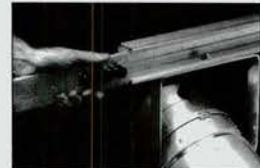
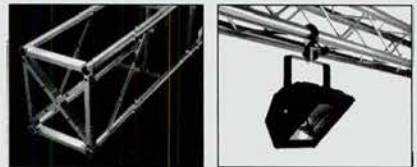
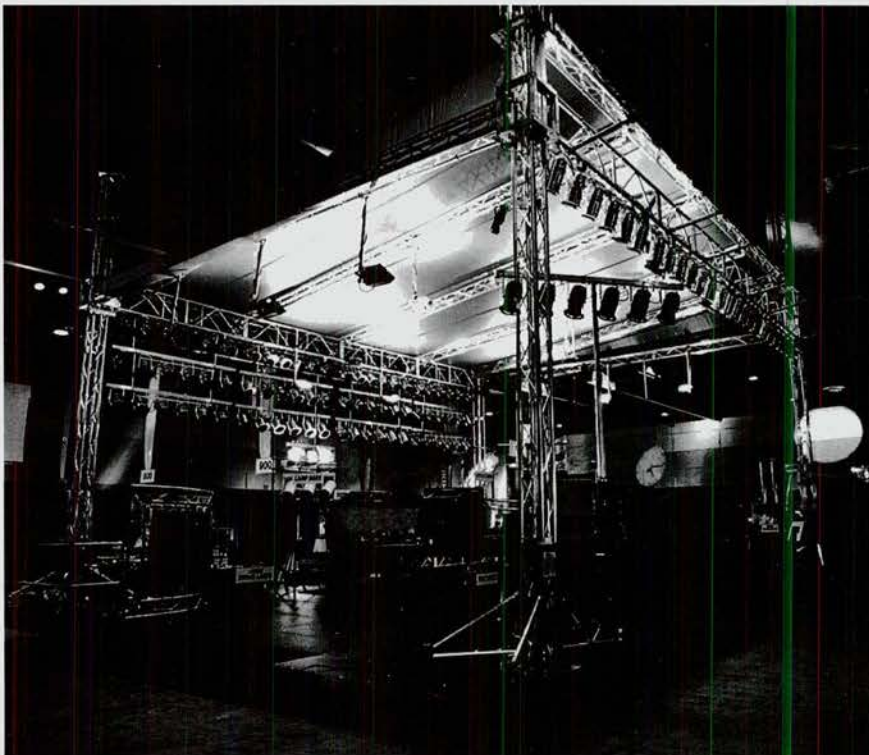
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CONTRACTING



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- **Wild Gravity** (Townsville) to fit out a huge new venue there shortly, which features room for 2,000+.
- **Topstage** (Canberra) supplied and fitted five JBL 4892 Array cabinets powered by Jands SR 3000 and SR 1500 amps to the Canberra School of Music.
- **Entertainment Installations** (Central Coast, NSW) supplied and installed sound and lighting to Erira Leagues Club, including Jet Speakers, Martin lighting, CD players, etc.
- **Black Express Light & Sound** of Sydney have fitted out The Spike nightclub in Oxford street with Clay Paky Miniscan 300 moving lights and an Elektralite CP-1 controller.
- **Integrated Media** (Darwin) have recently fitted up the new lecture theatre with JBL Control 8SR cabinets and Shure wireless. They also installed JBL Control 1 monitors in the ceiling loudspeakers, along with Rane processors and Jands amps. Integrated also did the Darwin Performing Arts centre, see story this issue.
- **Mick James Electronics** (Gold Coast) have been busy with recent installations at: Mebas On The Park Nightclub, JBL audio upgrade and lots of Abstract lighting. The REO'S Nightclub at the Ballina Hotel - a complete design and installation project. This job features an APOGEE AS-8000 ARTIST SYSTEM, powered by Apogee amps with Yamana YDG2030 digital EQ's.

TOA MATRIX SWITCHERS

AWA Distribution has announced the first two TOA Matrix Switchers have been installed in Australia.

The first unit is installed at the "Greensborough Shopping Centre" in Melbourne, Victoria, and the second unit is moving the program inputs around the Central Coast Rugby Leagues Club in Gosford, NSW.

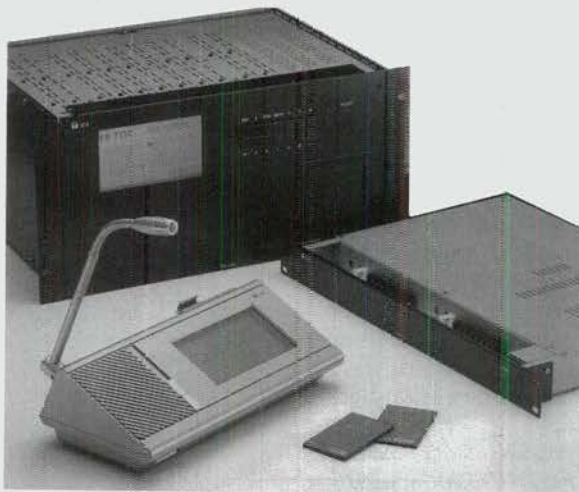
The new owners are both pleased with the function ability of the TOA Matrix Switchers and the sound contractors who did the installation in both cases are delighted with the system.

The TOA Matrix Switcher represents a shift in PA Management systems. Its 16 x 16 input/output matrix configuration makes it ideal for installations such as hotels, conference venues, exhibition halls, factory complexes and shopping centres or just about

any application requiring signals or BGM to be distributed to selected locations.

A menu driven LCD display on the controller mainframe indicates operations carried out by the function switch on the front panel and makes programming changes easy.

Being Modular, it is possible to configure the mainframe controller for 16 different settings, varying the ratio of inputs to outputs, from 8 x 8 to a maximum of 16 x 16, adding monitoring functions, or with monitoring functions and fade in/fade out. It has 9 levels of priority whereby individual inputs may be assigned their designated level of priority according to the requirements of the installations. Also included is an emergency priority which allows all outputs of the matrix to be overridden. •Call AWA Distribution in your state.



Top 10

New Media Systems (NSW) are flexible when it comes to product selection during the engineering stage of an AV project. The following list is comprised of unsolicited, long time favourite technologies.

1. Video/data projectors : **Sony** - They work first time, provide a great image, are easy to align and virtually never break down. The memory architecture allows flexibility in VGA displays so that a good picture is obtained from any PC.

2. Teleconference Mixers : **IRP DE-4000** series - They have so many configurations and features for the price, the design is to traditional concepts, and control is via relay contacts. The auto gate sounds natural.

3. Matrix Mixers: **Ivie 884PW** - It can be programmed to do exactly what is required and operation is live on the computer monitor. Once programmed, control is via trusty relays again.

4. Control Systems : **AMX** - What can we say? We push it hard and it keeps singing.

5. Speech Microphones : **Crown PCC** series - Their sensitivity and feedback rejection is good for tabletop and lectern use.

6. Wireless Microphones: **Shure SC** series - The battery indicator, one switch mute/power, auto squelch/mute and on-site frequency change. Why hasn't this been done before?

7. Motorised Screens: **DaLite Cosmo** series - They are actually so silent, they're creepy. The range of surfaces provide all the gain you need, never curl at the edges.

8. Rear Projection Screens : **DNP** - It is the only screen where high gain, wide angle and high resolution are optimised.

9. Video Recorders : **Sony SLV-X811** - A dual standard Hi-Fi stereo machine that does not compromise on either PAL or NTSC.

10. Ceiling Speakers : **Sonance S2R** - This little beauty installs easily, grille is to fabric, operation must be low impedance.

11. Equalisers: **Sabine FBX-1802** - I know this list goes up to 11- we had to include this feedback controller is a dream to set up and really works. Lots of eye-candy too!

SEND US YOUR TOP 10!

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AV FOR BRISBANE CONVENTION CENTRE

The PA People (Sydney) have recently signed a contract to supply the loose Audio Visual equipment for the Brisbane Convention and Exhibition Centre due to open in April.

"We'll be supplying a fully functional video control suite, video edit suite, video graphics production and audio studio," said Chris Dodds. "We'll also be supplying a full concert production style inventory covering video produc-

tion, audio, lighting, projection and communications for the centre."

The contract for Fixed equipment was won by Philips. The Centre is gearing up with AV Manager Ian Laird, and well known audio personages Steve Gilbey (Technical Systems Manager) and Geoff Baker (Production Manager) already on the job.

Full report in a future issue.

PAP CHOOSE AMX AT JUPITERS

The PA People have recently been contracted to supply and install a Background Music System at Jupiters Casino, Brisbane. The system had to cover two buildings and consisted of an AMX Software Control System, Crown MPX6 Remote Control Mixers, two Autopatch Routers, Creative Audio amplifiers, monitoring panels and distribution amplifiers.

The system covers twenty-one zones in the Treasury Building and seven zones in the Lands Building. There are four sources, individually selectable at a location in each of the zones, along with volume control for those zones.

• Meanwhile, AMX have announced the AXB-PCCOM PC Buss Interface is shipping now. This provides an RS-232 to AXlink conversion, allowing a PC or any device that can generate RS-232 codes to control an AMX AXCESS system. AXB-PCCOM operates on AMX's four-wire data/power bus, which can be placed as far as 1,000 metres away from the AXCESS control system.

Any number of interfaces can be installed, along with any number of AMX control panels to a total of 255 devices.

Details- AV Technology, (03) 764-8443.

Neat Rack System

The AX-S system from Middle Atlantic Products Inc, is a neat solution to rack access.

Ideal for installation or service, the system allows an entire bay of equipment to be rolled out from its installed position along a caster track than is about 1.2m in length.

While the rack is out, a portable service stand is placed beneath, this can be variable in height.

The AX-S System comes in various rack heights, and can be used in multi-bay configurations by simply bolting units together. For efficient cable handling, dual articulating cable carrier assemblies are provided, while access for closing and locking the entire assembly can be gained via the bottom panel. Ball bearing travel makes sliding a heavy rack easy.

• Middle Atlantic Products:
Fax USA +1,201-839-1976.





MUSEUM CREATES CHALLENGE

Museum Contracting Technology Takes Off, Theatre Tricks Help

Originally the Mary MacKillop museum was to be organised by some nuns and was intended to be very low key. After a while, when nothing seemed to have happened, the producer Tony Sattler became involved. Tony used his normal production team and when it became obvious that a lighting designer was needed, he employed LD Roger Barratt.

The job was due to open in early November but is about two months behind schedule. The museum covers a couple of acres of buildings, part of the old convent in Mount St, North Sydney

"She was at the convent for about the last eleven years of her life," Roger told me. "The room we recreate as her death room is the actual room she died in. It's about a half hour walk through showing displays of her life and I've made it very theatrical. I've never done anything like this before so it's been a bit of a learning experience for me. I'm just using the normal knowledge I'd apply to a job except I'm working on a building site. A lot of the things were being designed as they were being built. In the beginning we tried to make it as flexible as possible as we ended up chopping and chang-

ing many things. Three months ago we thought we were well covered with the number of circuits and outlets but as it got further down the track, it got tight."

Roger has been assisted by Gavan Swift who liaised with the electricians. In fact Gavan has been working more on the job due to the fact that Roger had other commitments already planned.

The building has 108 dimmers supplied by Dynalite and 300 lights which are all low voltage Seleccns. Roger has treated the job as scaled down theatre and is using plenty of dichroic colour. Most fittings either have barn doors or shutters. There is a lot of 3 circuit track for mounting because, in much of the area, the ceiling is only three metres high. Concealed bud lighting and other theatrical tricks, such as bleed through gauzes and backlight, make up the atmosphere. The control system is AMX.

Tim Kennard from Herkes Electrical tells us they supplied support and equipment, the project Integration Expert was Paul Van Der Ent from Wintergreen Productions.

By Cat Forcer

Accountancy Firm Demand Pristine Projection

FUTURE-PROOF INSTALLATION

New Media Systems (NSW) Pty Ltd have recently completed a suite of rooms for Deloitte Touche Tohmatsu in Sydney. High quality audiovisual and communication facilities are being provided in this international accounting company's offices worldwide. Australian state offices are being fitted out with computer pres-

entation, video conferencing, audio conferencing and sophisticated data, telephone and communication systems.

The main presentation rooms are equipped with the new Ivie 884-PW programmable automatic mixer for speech reinforcement throughout three areas that can operate inde-

pendently or in tandem. NMS say this is an amazingly easy product to set up and control. Although the AMX system could interface via RS-422, instead a sequence of 14 relay-operated presets was chosen for simplicity.

These rooms feature a DNP optical rear projection screen with Sony VPH1252 video/data projection as well as Kodak Ektapro dual dissolve slide projection. The two are achieved on the same rear screen by a linear actuated tilting mirror that aligns the optical paths for each of the video and slide projectors. The resultant image quality is awesome.

Designer Mike Dodds considers the security of rear projection room as crucial for reliable operation of complex audiovisual systems. If these rooms are not locked, every man and his dog prod and poke the equipment and walk straight through the mylar mirror. Or they use the room as a dumping ground for bulk office supplies. At DTT this was avoided by providing a cupboard beside the rear projection screen for access only to the slide projectors and video/audio checks. The projection room door remains on 24 hour security.

The video/audio conferencing room is one of New Media's most successful to date. This has been due in no small part to the close coordination between all consultants and trades. Generous use of acoustic wall panelling, colour matched PLC downlights and plug-in Crown PCC-130 table microphones have resulted in a room which is visually and acoustically almost perfect.

Apart from the bold and imaginative architectural design, to the credit of the architects, one of the major features of this fitout was the incorporation of many spare terminations and cables. Virtually all ceilings were to be set plaster - the AV contractor's nightmare. There was absolutely no chance of adding extra cable runs once the ceilings were in. To crystal ball the services and facilities that may be required in the future took some careful planning. An effective approach was to apply 'what-if' strategies to future multi-media and communications requirements; calculate the quantity and types of cabling needed and triple it. This also helped in designing the specialised joinery units to optimise storage space and yet allow for built-in presentation systems to be added later.

Client: Deloitte Touche Tohmatsu.

Audiovisual Consultant/Contractor: New Media Systems Pty Ltd.

Architect/Project Manager: Davenport Campbell & Partners.

Builder: Rintoul Pty Ltd.



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AR AUDIO ENGINEERING SEEK MORE SYDNEY 2000 OLYMPICS WORK

Providing 20 kilowatts of quality audio and SPLs in excess of 110dB to Sydney's Athletic Centre at Homebush was only part of the challenge of the job for AR Audio Engineering. AR Audio Engineering successfully tendered against both Australian and overseas contractors to win the contract that was funded by the Sydney Olympic 2000 bid division of the NSW Government of Public Works Department.

The specifications were originally written by consulting audio engineer, Louis Challis & Associates. The strict specification was to supply and install a system that could produce adequate sound levels to all areas of the stadium, enclosed halls and training areas etc. The system speakers also had to meet an outside environment specification to handle Sydney climatic conditions.

A R Audio Engineering utilised a new concept in public address system design they call the SST system or Stadium Sound Technology system. The SST system focuses on a 'single point source' philosophy, whereby the sound for the whole stadium comes from a single speaker cluster, as per A R Audio's SST Systems at Concord, Belmore, Brookvale and Leichhardt ovals. In this instance from two speaker clusters that had to be positioned atop 100 foot poles. This constituted a logistics challenge in both confinement of the sound as not to disturb neighbouring areas, but also the positioning of the 200 watt Electrovoice horns. This concept is opposite to the more common practice of a series of small speakers located around the ground thereby reducing echo effects.

To fit the Homebush stadium specifications, the A R Homebush stadium system was computer modelled prior to installation. Supported by a CAD Acoustic Analysis Sound System every point within the stadium was plotted to show exact SPLs and delay coefficients. The programme also allowed RASTI and MTF (Modulation Transfer Functions) to be determined at any point in the sta-

dium.

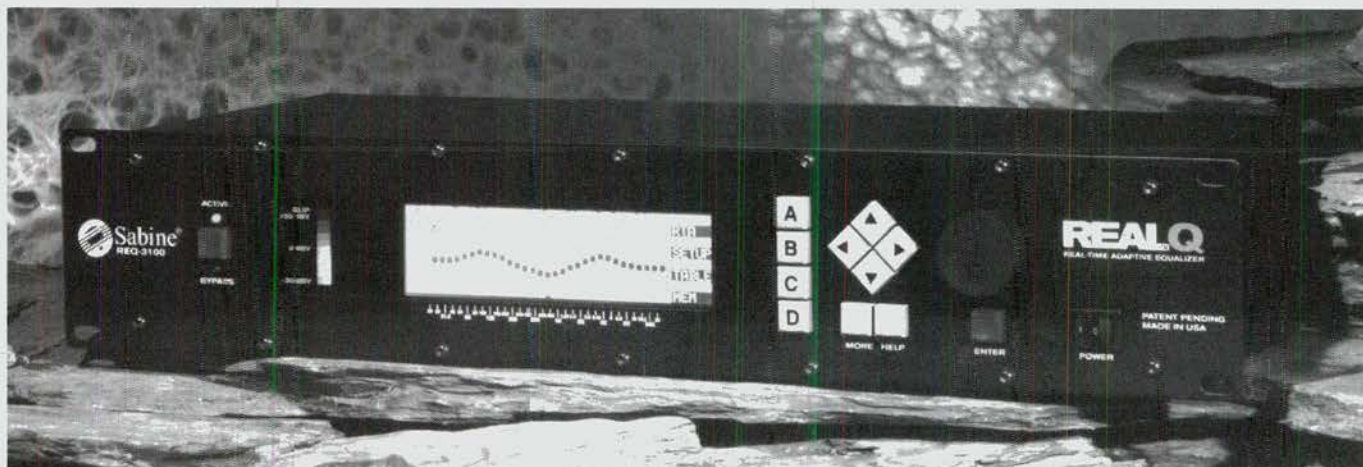
The heart of the system was the SST PT 2200/2000 monitor/switcher 7-way zone and amplifier switcher which address a CD player, DCC player, commentator mics, tuner etc via a Yamaha MC803 mixing console. Equalization and compression/limiting is accomplished by SCV EQ231 equalizers and SCV BLC2 compressors.

The source material is then fed to a bank of ten Australian Monitor AM 2100s. The AM2100 single channel power amplifier each rated at 2500 watts then feeds a cluster of four Electrovoice MH60/40 full range horns, and Bose Panaray Grandstand fill speakers.

Monitoring is accomplished by Shure SM66 microphones with 2 Sabine 900 processors monitoring and eliminating feedback from both tower areas, grandstand and ticketing zones. All switching is then done automatically to compensate for ambient noise levels in all zones.

In commenting on A R Audio Engineering's successful winning of the contract Tony Russo stated "I am delighted that our company is playing such an integral part in the Sydney 2000 Olympics. Our experience in installing PA systems to demanding and complex installations such as Concord Oval, the Family Law Courts, Park Hyatt Sydney and QVB has given us the technology to complete major audio systems to world standards and I believe that the creativity and skills in audio system design available in Australia will ensure that whatever should be heard will be heard during the 2000 Olympics".

**MIDI integration
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SABINE DEBUT REAL Q

The REAL-Q is a signal processor that constantly monitors the response of a performance hall and maintains the specified equalisation curve. This means no matter how radically the sound field changes due to the presence of the audience or changes in temperature and humidity, the response of the sound system remains true to the response achieved during installation.

This is a completely new concept, according to Sabine, who

state that the REAL-Q automatically adapts to the real world conditions of a performance area.

"Since it doesn't measure changes in the program material, mixers, conventional equalisers, compressors, delays - even FBX Feedback Exterminators - all operate exactly as they normally do", says Doran Oster from Sabine.

"The REAL Q works in the background to provide a constant baseline frequency response."

The device includes pink and

white noise generators, a real time analyser, 31 band digital master and adaptive EQ's, inputs for two reference microphones, MIDI compatibility, digital in and out and 100 different memory locations. The two EQ screens can be superimposed on the bright LCD display, and the Master EQ screen can be superimposed over the Real Time Analyser.

This thing could be very good indeed, thinks Connections.

•Audio Telex, (02) 647-1411.

Dynalite at CEDIA

Dynalite have built an enviable reputation as dimmer manufacturers whose dimmers interface with AV equipment. To this end they have developed their own 'closed system' total control loops, and also interface with other control systems likely to be found in a project.

They will display the latest in Smart House Systems, and conduct some workshops at the CEDIA EXPO - to be held on February 25 - 27 at the Hyatt Kingsgate in Sydney.

CEDIA is a show for the custom installer, it stands for Custom Electronic Design Installation Association, which is well established in the UA.

• The local chapter of CEDIA invites membership, contact them at PO Box 191, Bondi NSW 2026.

Roland AR-2000 Audio Recorder

The Roland AR-2000 stores announcement messages, up to a whopping 500 different phrases for two hours and fifty five minutes duration, in fact. This is due

Roland's Digital Audio Coding technology. The phrases stored can be stereo, mono or standard MIDI files. Data storage is via a PCMCIA card slot on the front.

A built in RS 232C/422A port allows complete control of every front panel function. PC control software can be customised.

•Roland, call (02) 982-8266.



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MUSIC MI NEWS & UPDATE

FEBRUARY 1995

AIMS & ARIA ANNOUNCE SHOW *September 30 thru October 3, for giant music industry event*

The Australian Music Association - AMA - has announced the dates for this years Australian International Music Show - AIMS. The event will be held at Darling Harbour in Sydney from September 30 through to and including October 3 1995.

Due to the continued success, of what has to be Australia's largest music show, AIMS '95 will devour two pavilions, and shroud them with exotic manufacturer and distributor displays in an all out effort to will retailers and the public to expand their musical knowledge, ability and hopefully their instrument range.

This year will see a major coupe affected with the announcement that along side the

traditional AIMS Show, the Australian Records Industry Association - ARIA and the Australian Music Retailers Association - AMRA will present side by side with AIMS a major Recording Industry Convention under the banner of an ARIA backed Music Week to be held throughout Sydney, including the ARIA Awards.

Palatable features of the event will include, Talent Showcases, Exhibitions of product and services, Music Education, Recording and MI seminars and conferences. Promotion will be on a large scale incorporating a television campaign and will be approaching the South East Asian region as well as Australia.

•Details: Rob Walker 534-0144.

Margaret O'Loughlin to lead trade

The Australian Music Association - AMA has elected the intrepid Margaret O'Loughlin, Managing Director of Fender Australia as its President for 1994/95.

Margaret is a highly respected industry type person, having been MD of Fender for ten years during which time her leadership has established Fender Australia as market leader in guitar products. Margaret has a busy year ahead of her with the continuance of the AMA's Music Is For Life - Be A Player campaign, currently in pilot mode in Queensland as well as maintaining promotion and development of the MI industry one of the highlights this year being the Australian International Music Show.

Other committee member are : Vice Presidents; **Peter Hayward** (Australis Music Group) and **Phillip Burn** (Yamaha Music Australia). Executive Committee; **John Payton, Geoff Hyde, Neville Chambers, Alex Bolt, John Martin, Adam Johnstone, Hans Meyer and Janet Lindbom.**

MUSITECH '95 for MELBOURNE

What is it? Musitech is a MIDI kind of a show designed to enhance awareness, of what a powerful music tool the personal computer has become. Some of the greatest advances in the use of PCs has been due to the entertainment factor - music being the most omni-present.

Whilst we have not yet and probably never will replace the musical instrument, when used in conjunction with music computer hardware, software, CD ROM and MIDI technology, new and exciting experiences occur and traditional instruments and the players are enhanced, be it in live or recorded mode.

Musitech is staged by the Melbourne Music Festival with sponsorship including Channel 9 and the Melbourne Sun Herald who have rallied forward with valuable promotion.

What's in store for you? Insight into the world of music technology and it's opportunities, information and education on how to best utilise your PC and be entertained by cutting edge musicians demonstrating the convergence of performance and technology.

Musitech '95 (The Melbourne Music Technology and Multimedia Show) will be held in the Melbourne Town Hall from February 17 to 19 '95 inclusive. Workshops and Seminars are available and a special schools day is planned for Friday February 17.

MELBOURNE MUSIC FESTIVAL

The 1995 festival offers diversity, this year encompassing new talent showcases, celebrity events, seminars, conferences and educational components. The finest talent in contemporary music will perform and festival goers will also have the opportunity to see performers in intimate workshop environments. From the more regional events such as the St Kilda Festival and the Blues and World Music Day in Prahran to the induction of music industry pioneers to the MMF Hall of Fame, from the Myer Music Bowl with Tommy E. and the Australian Philharmonic Orchestra to the National Music Conference, Melbourne will find a treat for just about everyone from February 10 through to February 19th 1995.

Taxpayer Helps Out

EXPORT MUSIC AUSTRALIA led a contingent of Australian recording type companies to the annual MIDEM Trade Fair held in Cannes, France late January early February to present Australian Music to over 7000 International MI Professionals (Gosh). Yep! 7000 industry types representing overseas record companies, publishers, agents, lawyers and the media gathered for the "lets do a deal" event.

Austrade came to the party once again with funding for the Oz contingent which included Castle Communications Australasia, Albert Productions, Dino Music, Larrikan Entertainment and Possum Music. Not to forget BMAC, Bran Nu Dae Records, Dimension 3 Music and the Western Australian Music Association who received an additional 80% subsidy from The WA State Government department of Commerce and Trade.

Brian Peacock from Export Music Australia, in his fifth year in charge of the delegation is pleased with the attendance and deems the marketing of those companies who could not attend was beneficial.

The Shock Music and Mushroom Groups went all out this year with their own showcase stands.

-C.G.

1994 COCA-COLA Australian Music Awards

First Hand report by Caroline Grafton

Well I would have written about this earlier but this is our first issue since this surprising event. I say surprising because quite honestly I am still a little perplexed and my brain just can't come to terms with why this event even exists. It's not that I'm anti awards or even have a beef with Coca-Cola but why? Surely we already have awards in which musicians, writers, producers and engineers receive accolades not only from the public but also from their peers, which to me is far more relevant. The Producers MCM Entertainment, considering the venue circumstances, did a fine job and the Faaabulous Partying they coordinated both before and aft' was great and Jands did a fine job on the actual stage production, apart from the fact that someone kept forgetting to turn on the stage amps of those acts that chose to mime, but something was definitely flat.

Maybe it was J.B. embarrassing not only himself but his cohorts Ian Moss and Phil Small on national TV and- I must say I even felt sorry for Kylie M. sitting next to the guy on an international telecast. But I think the aspect that really got to me was the lack of Australian wit trickling from the PA. Yeah Pamela Andrews she was great, wasn't she? About as much stage presence as a Queensland cane toad, I think one of those disgusting little creatures could adlib better, or at least get peoples names right if they could read the Autocue, James (Reeknee - her interpretation) Reyne indeed.

Why was she there? Was it because Channel Ten covered the event and she is one of the stars of their block-buster series Baywatch. Can she sing? I can think of several Australian Music People/Performers who are more than capable of MC'ing this kind of event. For heavens sake, this was The Australian Music Awards not The American TV Awards for Tits and Bums.



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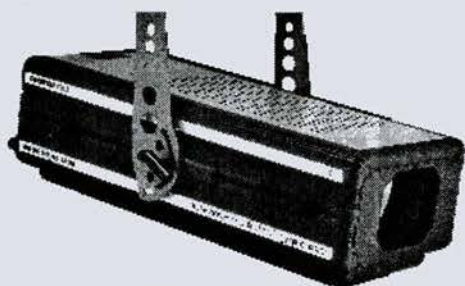
MONTHLY

February 1995

Edited by Catriona Forcer

NEW PRODUCTS FROM COEMAR

Coemar have released further products in the NAT range with the addition of the NAT PC1200HMI, a discharge version of the 1200W TH version. Offering colour mixing, zoom, hard/soft focus, and frost, the unit should prove



The NAT PC1200HMI

even more popular with the touring market as a replacement for the traditional scroller/luminaire combination.

Further to the range is the new TM1200DX, a scaled-down version aimed at the smaller operators in the moving light field. Maintaining the integrity of the 360 degree head, as yet unchallenged by any other manufacturer worldwide, the DX offers most of the features of the original TM1200: 360 degree movement, 1200HMI lamp, 16 bit positioning accuracy, 5 gobos, rotatable in any direction, motorized iris and focus, a colour wheel with seven saturated dichroic colours as well as 7 bi-colours. Removed for the DX version are the colour mixing and the rear digital display panel. Control is via DMX512, with control configurations for the NAT range being standard on Compulite's Animator range, and a personality template available for ShowCAD.

Compulite, makers of the Animator and Ovation range of control desks, released their Moving Light Adaptor (MLA) wing for their memory

consoles.

With the ability to allow complete control over all moving light fixtures from the standard Ovation



MLA - Moving Light Adaptor

desk, the MLA has three wheels with six banks each and an alphanumeric parameter/editor functions display providing easy access to all moving parameters. Including X/Y trackball, it allows all memories to be recorded on the MLA or the Ovation keyboard.

This useful addition now allows for ease of programming for moving lights in venues where previously cumbersome programming was effected from older style boards which were not intended for moving light control. An Ovation/MLA combination (known as the Super Ovation) now allows for a standard 1000 DMX channels of control in addition to control over 24 or more moving lights.

Compulite desks are currently touring with Pink Floyd, The Rolling Stones, and The Eagles tours, to name a few.

For further info call: CDA (03) 467 8666.

RIMINI SIB '95

The Italian tradeshow Rimini SIB '95 will be held from March 26th - March 29th. Heavily promoting the disco/nightclub sector of the industry, the show covers all areas of lighting, sound and decor.

Once again Connections' resident wild woman Caroline Grafton will be there and hopefully, she will bring back even sleazier photos than last year.

Bits

● Vari*lite Inc have expanded due to significant growth over the past twelve months. Promotions from within include David Alley as Executive Vice-President of International Operations, Loren Haas as Executive Vice-President of North American Operations, Susan Tesh as General Manager of Vari*lite Los Angeles, and Angela Hilton as Assistant Sales Manager for the Dallas Operations. Vari*lite is also pleased to announce the addition of Lee Magadini, formally the Director of Sales and Marketing for Vanco Lighting Services, to its New York sales staff.

● LSC's Axiom lighting control console has won a further award - a 'Powerhouse Museum Selection' award in recognition of its achievement in industrial design.

● CDA sales of TAS Synchro are booming with 8 sold since Christmas. Other sales include a Maclux Pro design package to Chameleon, sales of Cirrus Lowsmoke to a Melbourne Film/TV rental company, four DF-50's to Vari*lite Asia, large exports to Hong Kong of TAS and Coemar moving lights and a further TAS Mini Ultra Scan system was supplied to TCP.

● CDA's Richie Mickan is on the road demonstrating a wide range of the products distributed by CDA. The dates are: New Zealand Jan 23-Feb 5, Queensland early March, Sydney late February and Adelaide March 13-19. For further info call: CDA (03) 467 8666.

● Siel 95 kicks off this month from the 12-15 in Paris. The show will present sound, lighting, effects, stage machinery, decoration and computersised management.

For further info call: +33 1 45 22 35 40.

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HIGH END OPEN SE ASIA OFFICE

High End Systems Inc. have opened a Southeast Asia office for sales and technical support of Lightwave Research™ lighting equipment. The office includes sales administration, demonstration, training and storage facilities. The company's sales and marketing efforts in Asia will be spearheaded by Anthony Goh, who came to High End from Source One, where he has served as Director of Sales since January 1994.

According to High End Systems' International Operations Manager John Adams, "Anthony is extremely knowledgeable of not only the marketplace and the major players, but also of the cultural and business practices of many different Asian countries. He also possesses a great communication skills with his mastery of Asian languages and dialects." For further info call: High End Systems Inc. 512/836-2242 or fax 512/837-5290.

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Since 1989, Los Angeles based company Wildfire Inc. have developed a range of sophisticated U.V. visual effects. Their U.V. lighting fixtures, with throws of over 100ft, and their fluorescent materials, have positioned them at the forefront of Ultra-Violet lighting and fluorescent technology.



The WF-250 Wide Spot

Unlike limited backlight tubes and mercury vapour sources of the past, Wildfire's UV fixtures unleash a narrow bandwidth of invisible long wave UV light to achieve it's effects. It doesn't have to be completely dark either - tungsten, moving lights, projections and lasers can all be used simultaneously without interrupting the Wildfire effect.

Lighting fixtures include the: WF-400 S/F and the WF-400 F a high-intensity focusing UV spot/flood light and floodlight which are designed to excite luminescent materials at distances from 150ft to 100ft: WF-400 E, a high-intensity focusing UV framable projector designed to excite luminescent materials at distances up to 75ft: the WF-250 Wide Spot, a high-intensity UV fixture working from 10-150ft.

For further info call: Wildfire Inc. 310/ 398 3831

The Irideon™ AR500 Exterior Luminaire

The Irideon™ Ar500 colour-changing luminaire is the latest in specialized outdoor floodlighting. The luminaire features a patented, computer-controlled, dichroic colour-changing assembly and optional diffuser or douser mechanism.

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 spread from 9° to 68° and beam control is available via either diffusion or dousing time variable adjustments. The diffusion mechanism provides precise and dynamic control of beam distribution. The douser mechanism provides full-field dimming of beam intensity.

The AR500 luminaire may be controlled by many programmable lighting controllers with DMX512 output. Each exterior luminaire requires four DMX512 channels.

For further info call: Irideon 214/819 3208



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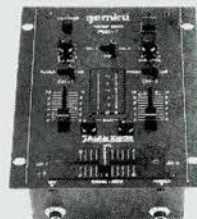
CD-9000 \$1,100

Professional Dual Work Horse Double CD Player with Variable Pitch Control.



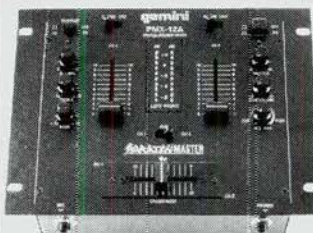
PMX®-7 \$185

6" rack mixer with 2 phono, 2 line and 1 mic input, gain controls for each channel, removable crossfader control, talkover switch, cueing, LED meters, 6 1/2"(W) x 8"(D) x 3 1/2"(H), 3lbs.



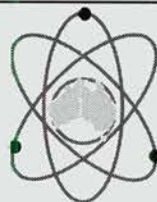
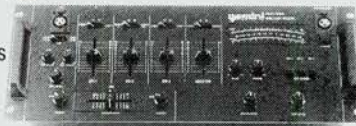
PMX®-12A \$239

10" rack mixer with 2 phono, 2 line and 1 mic input, removable crossfader control, master volume control, talkover switch, bass & treble controls for mic, cueing, LED meters, 10"(W) x 7 1/2"(D) x 3 1/2"(H), 6lbs.



PMX®-1000 \$449

19" rack mixer with 2 phono, 3 line, XLR and 1/4" mic inputs, bass & treble controls for mic, master bass & treble controls, auto mute to kover, assignable anc removable crossfader, DJ booth output, peak hold LED meters, XLR gooseneck lamp adapter, cueing, 19"(W) x 7"(D) x 4"(H), 9lbs.



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BODIES, LIGHT AND MOTION

The Australia Council and GUVT sponsor the intuitive explorations of dance and technology

The merging of art and technology is increasingly becoming the flavour of performance events for the 90's. Innovative lighting designer Esterpi Soropos has attempted to dismantle the traditional role of technology as the support system to the artistic moment, through placing emphasis on the technology itself. In this case it is the Intellabeam; "I always felt that this kind of equipment, particularly where dance is concerned, is the future. It may be designed now specifically for more intense music related dance parties, clubs and concerts but eventually the design will probably be refined, so it can be used more subtly."

Esterpi's January showing at the Performance Space in Sydney, clearly illustrated the subtleties and range that can be achieved with what is normally conceived as standard equipment. The performance piece radically utilised six Intellabeams, six track spots and three dancers; creating an event which blasted apart the barriers between performance art, technology and dance. The original idea transpired whilst at a club in Edinburgh, where Esterpi became fascinated by the use of illumination of bodies on the dancefloor in darkness creating the illusion of absence and presence. "What I wanted to do was take the element of music away and find the equipments own rhythm and see if the dance could be co-supportive, co-choreographed."

The effect was a stark performance operating on the timing of the physical body and the timing of pulsing pure streams of light. Resulting in the complete synchronicity between the dancer and the light with the light often becoming the fourth performer. Opinions after the showing reverberated much



Esterpi Soropos

praise for being allowed a taste of performance from a different viewpoint. Dancers were inspired by the fact that you could work with technology in an interactive way as for the dancer more than any other performer, moving light is very important. While lighting designers were grateful at seeing the possibilities of what can be done, often remarking "I'd seen this equipment used so many times, but I had no idea that you could do this with it." This feedback was exactly what Esterpi had hoped her work in progress would spark as she felt it was important for members of the industry to see what can be done with the medium via experimentation and creativity.

"It's certainly very satisfying to know that there is somewhere where we can take performance, and if you do have to bring a powerful new element into it, being moving light that's fine as everything progresses, everything changes, new ideas are always coming up and that's just part of it."

● Natalie Apostolou



Photos: Sally Tsoutas

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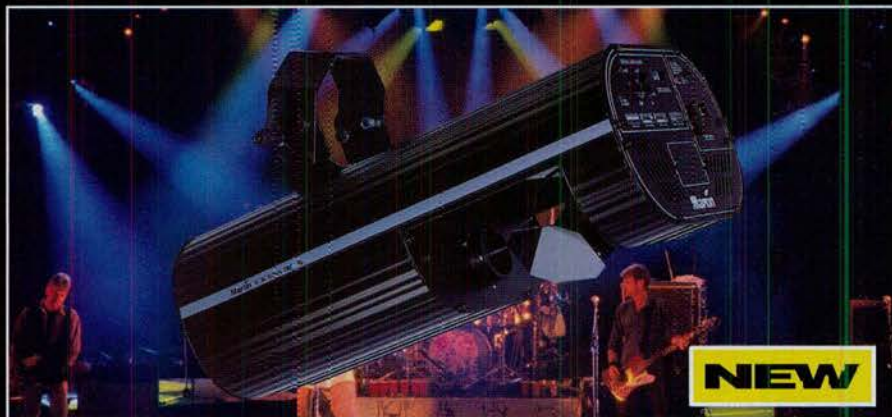
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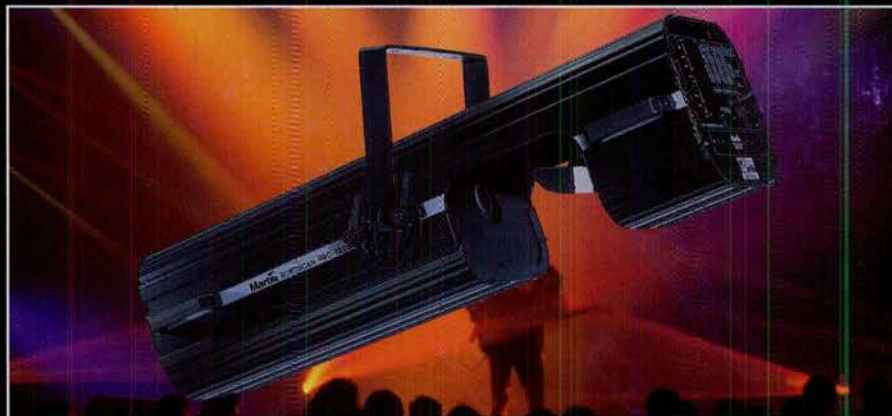
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Martin



LIGHTING SOFTWARE: CHOICES

Peter Kemps Columbe

This article is not intended to be a critique of all available software in this country, rather an overview of some of the types that are available. It may be useful to divide the software into several types:

Hardware Specific This software is probably epitomised in Strand Lighting's GSX and LBX lighting consoles and the Genius (operating software which provides the consoles basic operating functions), Kaleidoscope (extension software for additional effects and colour scroller functions), and *Communique* (extension software providing communications and auxiliary control functions) ranges of software.

Drafting - these software items are as varied as they are numerous. Broadly speaking, these programs are for the production of lighting plots for productions.

Talking to the industry will reveal that just about every software drawing package available commercially has been used at one stage or another to produce lighting plots - from Paintbrush in Windows, to MacDraw on the Apple, and everything in between.

Specialist, Lighting specific programs like *MicroLux 1000* and *MacLux Pro* are now relatively familiar to the Australian market, however other programs such as Argus, JCN's Lighting Designer, Stardraw 3D, Autocad, Softplot, Modelbox (running under Autocad), and even

WYSIWYG are in use throughout the country.

Often available via demonstration disks, it is very important for any potential users to thoroughly test programs for their suitability to their applications, given that most programs are quite expensive. In my experience, it is quite easy for people to become overawed with the features of a program and to not carefully evaluate it.

Lighting Paperwork - Programs such as Lightwright and Candlepower, Lighting Technician, and the Xenon Lighting Database are all paperwork programs, though, happily, Australian-produced versions such as LightDoc are also available.

Generally, this type of program allows for the production of LD documentation; including patch lists, gel requirements and sizes, stock requirements, illumination calculations, dimmer and circuit schedules, lamp requirements, etc.

Hire-stock inventory programs such as Hirepoint. dispense with the old multi-column book for a booking and stock system may well be your need, and it is in this area that such programs are invaluable.

Photometric Analysis - these programs are often useful for the "serious" student of lighting design and illumination. Examples include *Light Shop*, *Lightcalc*, *Argus*, and *CALA*.

Generally, they offer photometric information for particular combinations of luminaire and lamp, including beamspread, lux outputs, illumination angles, and throw distances.

Control - perhaps the latest and most vibrant of the lighting software field, control software

is a rapidly expanding area of interest to many manufacturer's. Examples such ShowCAD, Softplay, MacLights, and *Aladdin*, totally PC based control systems, are joined by other manufacturers whose products interface directly with a PC (e.g. High End).

The ability for the user to alter the program, and, therefore, the control console itself, to suit their own specific control requirements is an example of the power of control software in this industry. The ability to customise a configuration to one individual's requirements illustrates vividly the power of software technology when unhindered by hardware constraints.

So where to now? The recent Entech '94 exhibition brought home the impact of software on this industry with a number of manufacturers displaying or advertising software. Indeed, CDA devoted an entire display to software.

Programs such as *WYSIWYG*, and *MicroLux 2000*, along with others still in the pipeline, offer the end-user not only design and paperwork capabilities, but also real-time viewing of designs on-screen and the ability to actually control.

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Bits

● US Company **Lone Wolf** has formed a new Electronics Group to handle increasing interest from lighting and sound industries. Headed by David Scheirman, the division recently named it's first two licensing and applications engineers - Tobin Cooley and Rob Falconer. Also new is Jeri Keating who has been named as licensee communications assistant.

● Full production of the new Pearl console from **Avolites**, which was launched at PLASA 94 and recently made it's US debut at LDI in Reno, has begun. The Pearl has 512 channels, 400 memories and has gained a lot of attention since it's launch.

● The **Society of Television Lighting Directors** Queensland recently held a BBQ for it's members at Mount Cootha, Brisbane.

Food and drink was free! Sounds like it's worth joining.

For further info write to: The Secretary, PO Box 2045, Kelvin Grove, Q. 4059.

● Which large Melbourne lighting company is considering setting up a creche for the 3 newborns expected in the not too distant future (two of it's staff members and the other by a wife of the third)? Is this an act out of the goodness of his heart or a cunning plot to get his staff back off maternity leave quicker?

● **Selecon** have supplied the Southbank Piazza, Brisbane with some 'Performer' 1200 MSR's which replace the existing MSR 1200's from another manufacturer. "It proves all MSR's are not born equal," said Simon Garrett of Selecon.

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Interesting Products are an American company at the forefront of the latest in Liquid Nitrogen effects technology.

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For further info call: Interesting Products 312/738 5220

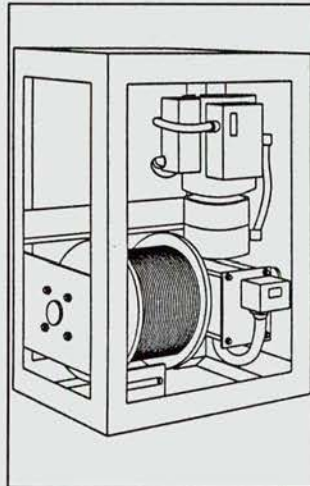
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Ultra Ray Blisters at LDI

40 watt laser boasts low operating cost, fibre optic delivery

By Julius Grafton

It might only be available in green, but Laser Ray's Ultra Ray is the brightest thing I've seen since I looked direct at the sun. At LDI the firm had the thing burning across the exhibition hall so you had to follow the beams to find out what they were.

Ultra Ray demands little in terms of power, 4kw single phase mains is considerably less than 3 phase mains required for traditional Iron lasers. The lamp is rated at 500 hours, and costs US\$195 to change.

The fibre optic delivery system works, our picture at right shows eight delivery heads fed by one Ultra Ray.

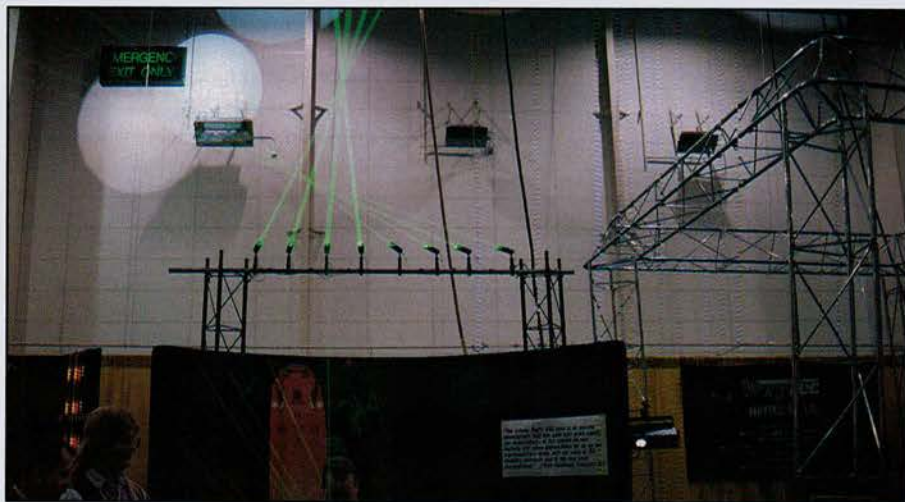
How does it work? I'll let the brochure writer tell you in his/her own words:-

The Ultra Ray is a frequency doubled Nd:YAG laser or a SHG Nd:YAG. (Got that?). Nd:YAG is an acronym for a man made synthetic crystal called Neodymium Yttrium Aluminium Garnet. SHG is an acronym for Second Harmonic Generation. When a YAG laser rod is optically pumped by a Krypton arc lamp and configured to produce lasing, the wavelength emitted is

at 1.06 microns. For SHG operation another crystal called KTP (Potassium Titanyl Phosphate) is placed in the cavity and when optically pumped by laser light it produces green laser light at 532 nm.

For US\$65,000 you too may have an Ultra Laser, contact them at 0011-1-214-466-2950.

•Right: laser head 32" x 16" x 8", 40kg.



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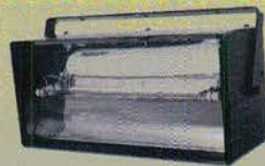
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BREAKER





MEET THE LD'S

At Entech '94 Catriona Forcer hosted a workshop called 'Meet The LD's'. She chose LD's from all walks of life. Here are some perspectives....

Each LD started by talking about their most recent gig and how typical it was of their career: Nick: "I did a show with the *Oils* in Coffs Harbour last night with quite a few par cans

and a lot of molefays with colour changers and that's very typical. You only need to light the band for the visuals, they do the work themselves onstage (At this point Nick was asked to speak louder to which he replied 'he wasn't used to being at this end of the multicore'). We've also just done some acoustic shows at the Metro which was a change. It was very theatrical and the band stood still so I could light them quite well!

Rohan: "The last thing I lit was last Saturdays edition of 'Hey Hey' which is very typical. I was a fairly flat show because Geelong lost the AFL Grand final and we were all very depressed about it."

Roger: "The last production I worked on was *Pirates* at Adelaide's Her Majesty's Theatre which is part of an on going tour of cities and is the fourth production of *Pirates* that I've worked on."

Steve: "Earlier in the week I lit a fashion parade for shoes, which isn't anything to write home about, but as a freelancer that is part and parcel of making a living. Sometimes you're out on something adventurous and creative and sometimes it's the bread and butter work. The last thing I seriously lit was *Stevie Nicks* on a three month tour of the American shed circuit."

The panel was then asked how they started

in lighting.

Nick: "I lost a bet!"

Rohan: "I started off as a sound guy and couldn't cut it and so went to lights!"

Roger: "I started as an electrician in theatre and then did some film including the second series of *Skippy*. Then I worked for the Australian Opera for ten years before going freelance and buying out a company called Zapco."

Steve: "What was the question? Oh, I used to unload trucks at concerts. I wanted to do sound too but was pushed towards lighting. I worked for bands for a couple of years and then went freelance prompted by the emergence of industrial theatre."

None of the panel considered themselves to be at the top of their career.

Steve said if he thought that he'd stop now and sell real estate. Roger said he'd keep going until he got old and everyone hated him. Rohan believed that the more he did, the more frustrated he became about his own inadequacies. Nick has been tempted to work abroad but likes living in Australia too much.

I asked the panel about the worst show they had done to date.

Nick: The worst show was the first show of the 1990 world tour. I was using a 50 lamp Vari*lite rig and everything was controlled through the Artisan. Our first night, somewhere in France, a French forklift driver ran over the multicore

just before doors opened. The desk seized up, dumped all my programs and then someone in the electrical department pulled the fuses taking out the sound power too. By the time the show ran I had no console at the front so I had to have a few cans on, call spots and cues to my Vari*lite operator."

Rohan: "The worst was a quiz show called *Strike It Luckily*, which thankfully no one watched. We did it for fourteen weeks and it still doesn't make sense."

Roger: "The worst was a musical called *Applause* twenty years ago at the Metro in Kings Cross. It did eight performances over fourteen days, they used to cancel pay day, and just dwindled. I think I was too young."

Steve: "The worst I ever did was an industrial for Ford Motor Company where thousands of dollars was invested. Come reveal time we had a power failure, one of the phases went and the whole show stopped. We were working under the terms and conditions of the venue staff who had no idea of the importance of power."

Time for pre-production was a big issue with Roger being the most fortunate having usually around five or six weeks planning and four to six weeks rehearsal for a show. Steve stated that pre-production time in rock'n'roll is incredibly short and there's no money for it until it's been earned by doing gigs. He found it wasn't unusual on a world tour to only

have a day and a night in a venue to program a new system. Rohan said that television can vary from a matter of days to weeks but he is



Rohan Thornton
Lighting Supervisor for Channel 9 Melbourne



Nick Elvin
LD for *Midnight Oil*

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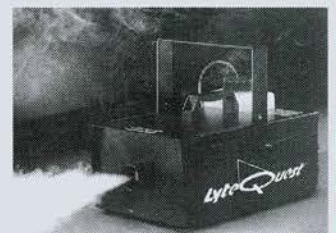
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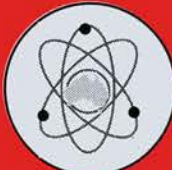
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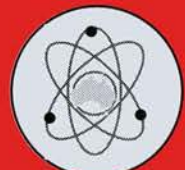
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finding that time is getting less and that there is a growing reliance on the lights to achieve looks that the sets can't achieve.

Nick said that the five acoustic shows at the Metro were something the band hadn't done before and there was a completely different lighting rig to usual:

"There was no pre-production, we went in at 8am the morning of the show, we had to have sound checks, band rehearsals and I had a very tense day. It's normally just get in there and do it, and then you have to fine tune the show over the coming nights. It usually comes together on the last night!"

All the panel agreed that getting decent budgets was like getting blood out of a stone. Roger said that his producer on *Pirates* thinks that he can focus the lights before the scenery arrives. Nick said that the band usually want to spend the money but the management want 'champagne at beer prices' and that it's an ongoing struggle. Rohan drew the line at begging to which Steve replied that Rohan was Kerry Packer's love child and got whatever he wanted anyway. Steve believes that band managers have a vision which they expect the LD to make happen on a shoestring. Sometimes it's better to walk away from the job. Steve believes that the technology is getting more and more expensive and the market is shrinking with live entertainment having to compete with videos and video games. Steve found that in Europe and the US, production companies will back an LD who is worth it because they are chasing business whereas in Australia there is a monopoly situation in rock'n'roll concert touring.



Roger Barratt
Theatre LD

Steve: "Jands don't have a need for lighting designers, we get in their way so we co-exist tentatively. I would like to see the situation change but I think it will take some time. Most of the acts I work for are actually scared of a very good lighting show. We need a small theatre circuit here in Australia. We, the LDs, were the cause of our own problems by putting lighting shows into pubs and clubs in the eighties. We gave ourselves nowhere else to go and now we don't even have the pub/club circuit either. Consequently we don't have any touring bands."

All the panel agreed that you didn't need fancy moving lights or other high tech equipment to produce a good light show. Roger said that on his recent production of *The Pearl Fishers* the starcloth is the best effect and that the audience wet themselves when it comes on. Steve pointed out that the most popular effect on the *Pink Floyd* show is the giant mirrorball despite the other amazing new technology on the tour.

Steve: "I think trying to impress people is a bit of a mistake. We are ultimately artists and coming to terms with that isn't easy because it is just a gig. Our primary motive is practical - there is something that needs lighting as people need to see that. But beyond that we are interpreters of mood, ambience and realism."

Steve then went on to describe the impor-

tance of lighting in the various fields and he described television lighting as bland, to which Rohan replied:

"I think that was the case in the beginning but the change in the technology of cameras now allows you to not light as brightly and flat as before. With dramas and music you can get away with anything now. I recently lit something with just a candle."

Steve: "I'm a little envious of you because I think *Hey Hey* is great. Every week you get something different to light and you get to experiment with all the new gear. We have to work with clients with bad money."

I did point out to Steve that Rohan, working at Channel 9, doesn't get the opportunity for all the sex, drugs and rock'n'roll that a touring guy does. Rohan agreed and said he found even the previous night's harbour cruise had left him feeling like shit.

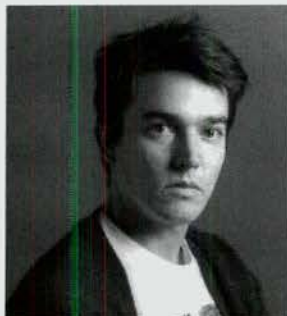
A member of the audience was curious as to what was the panels favourite lighting instrument:

Nick: "Molefays, infact I designed some for Jands that don't use Par 36 bulbs but Par 64s. With eight of those suckers, it's really happening."

Rohan: "The humble Par does everything."

Roger: "Being in theatre, I guess I have to say variations of the 23 like the Leko which are quick and easy to focus."

Steve: "I like some of the new stuff like the VL2c's, VLA's and VL5's. I've just worked with the VL6 but I was quite disappointed with that instrument. I like the Icon too."



Steve Swift
Freelance LD (Crowded House, Stevie Nicks)

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LIGHTING ROXETTE



Fresh from a large, sell-out tour of Europe, Swedish band Roxette arrived in Australia where they're not quite so popular. Playing only one night at the Sydney Entertainment Centre, there were still tickets for sale on the day.

Pontus Lergårbielle, more commonly known as Bullen, is their Swedish lighting designer who is fortunate to be working for the country's only major touring act. Like most of the crew, Bullen has been with the band since 1988 and he describes the tour entourage as a family.

Again here in Australia we are not seeing the full production but something more related to the shows planned for South East Asia.

"This show is totally different from the European one as it is much more scaled down," said Bullen. "The European system was much more high tech with 54 VL5's and 30 VL4's as well as 16 Super Scan Zooms. The Super Scan Zooms worked extremely well, the optics on them are very good for gobos and such. You can fade colours with them really well which is what I like. I think every instrument on that rig, except about thirty, had fading colours on them. There were almost no pars on that rig either as I had Profiles and Fresnels with Colour Faders on them. Even the follow spots, 2K Teatros with HTI bulbs, had Colour Faders on them and that was controlled from my desk so I only had to call positions."

In Europe Bullen was using an Avo Diamond 2 control desk and for Australia he bought an Avo TD500 desk with him.

"Now the truss is just three trusses with 100 pars, some groundrows and sixteen Intellabeams," said Bullen. "Jands supplied the equipment. The Avo TD500 is really a theatre desk but it's small and so easy to travel with. I tend to work more in a theatre way when I

build my show because I build sequences through the show. That gives me more time to call spots which will be useful in Asia."

The Intellabeams were run separately through the LED controller which was triggered from the TD500. Three different backdrops were used starting with a distorted chequered one which is drawn from the theme of the new album. For the acoustic numbers there is a red velvet theatre curtain and to finish a backdrop of a large sunflower. Two oil smoke machines were used as crackers were not available.

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Night Club and DJ News

with Natalie Apostolou



Doofus DJ's

This is the story of John and Diane, two American DJ's doing the best they can. The transcript you are about to read is real- there are some very scary beings out there and its a heinous experience to witness that amidst the vast sea of the Internet two such like-minded losers could find each other. Fate is a truly beautiful thing and John wherever you are, you studmuffin of style and taste- you can play your rendition of Mony Mony at my party anytime!

Diane:

I am nervous. We are playing New Year's Eve at a Sports Bar. Got the job almost by accident, anyways, I've never played a bar before, aside from Top 40's (what the owner requested) do you have any creative ways of getting people involved in the celebration? I'm scared to death no one will dance.

John:

Bars are tough since the clientele thinks you are on their turf. Most bar owners want you to interact with the people. Find out whose birthday, engagement, marriage etc it was or is and work from there. Above all, don't get intimidated and handle all requests. I always use Mony Mony and get everybody to chime in with "get laid, get f---d" - also, George Thorogood is a good ice breaker. The playoffs are tomorrow so know who won and say "How about those Dolphins" etc.

Diane: (the next day)

I told you I would come back and let you know how it went. It was

not a total flop, but close. The bar owner was mad because we couldn't give him the "noise" level he wanted. We finally ended up shutting down the equaliser and pumping the volume.

The crowd was more interested in watching the big screen television than dancing. I had a drunk telling me how to run my show, and I couldn't get people to dance to save my soul, no matter what I played. I know we played good music, the beat was hopping. But this bar is like a bowling alley. They have golf simulators going, and T.V's going...by 10p.m. I was ready to throw in the towel. The bar owners walked around and gave everyone hats except us. What do you think of that. No horns, no hats and when I tried to count down to the new year, I was corrected by the bar crowd who was watching it on T.V.

We had no control of the situation. I couldn't move them with Mony Mony even. Sinking fast in Illinois.

John:

I had an absolutely disastrous gig last nite, a 30th anniversary surprise party. The daughter who ran it was really obnoxious to the point of giving me a cd with the "hokey pokey" on it and other dances and trying to tell me when to play it.. I politely told her that my versions were better and I would use them. She booked amateur video people who had the room lit up like an operating theatre. To top things off, my wireless battery crapped out and my stylus went bad in the middle of "Hands Up". Lucky for me I carry spares ... at the end of the night (which was abruptly ended by her when she had to pay overtime for the hall) she tried to tell me she "forgot" my check.

• Stay tuned for the next 'Doofus DJ' instalment.....

TIM RITCHIE

The radio DJ is a seductively deceptive being. Always there when you need them, penetrating your aural cavities with their dulcet tones, a disembodied voice speaking only to you and always the lingering curiosity to see body housing the voice. Many a fantasy

has been constructed over the voices of radio celebs, and in the consistently auspicious history of JJJ, the King of the such obsessive fodder was Mr Tim Ritchie. After an unsavoury parting with the J's in progress in 1990, Tim continued to DJ in the most happening clubs around Sydney and re-joined the ABC in a radio national re-incarnation. The mystique continues with his brand new offering called Sound Quality, which showcases the wealth of music knowledge and experience that Mr Ritchie has amassed throughout his illustrious career.

Tim's main aim with Sound Quality is to 'stretch peoples ears', exemplifying innovations in contemporary music with tracks that are heralding a change or deviation in musical directions. He is determined to convey a healthy mix of cutting edge stuff as well

as magic rarities from the past that continue to impact on the present.

Mr Ritchie will not disappoint, educating as well as entertaining the listener with his impeccable style, taste and historicity of music. Drawing from fevered white noise to ambient tunes, Sound Quality will filter your airwaves with obscurities and classic moments in contemporary music. From 20th Jan- every Friday 10:05-11:00pm on Radio National.



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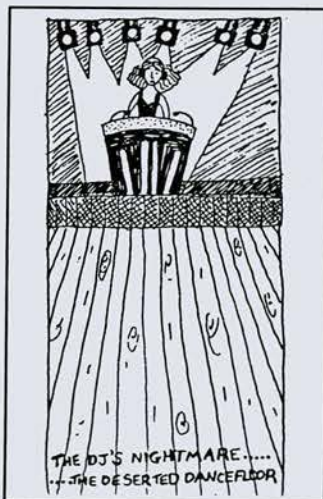
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LE GRANDE SHOT

Among the cavalcade of overseas DJ stars that have graced our shores through Summer was one Laurent Garnier; France's lushest export. He won over the multitudes that witnessed his performance skills around Australia throughout January including a huge, crowd pleasing, extravaganza at the Palace Complex with fellow DJ celeb Carl Cox from Britain.

This multi-talented, sex-symbol of dance started out at the Hacienda and getting the burgeoning house vibe he became driven by the passion to turn his homeland onto the sound of house. His enterprises include running his own record store and label, produc-

ing, writing for mags and of course gracing the worlds club circuit with his Parisian flavoured presence. This is the disc mixer that can slot Rhythm Is Rhythm next to Sid Vicious's rendering of My Way in his all time high five and start a club set with Donna Summer's I Feel Love.

His debut album "Shot in the Dark", exemplifies all this virtuosity and is working to escalate his massive underground and cult status. The album is out on F Communications (distributed though Shock here) which has ambitious plans to branch out into visuals, soundtracks, magazines and publishing.

Venues

How do you get your kicks?

Rocking inside of that temple of suburban culture- Parramatta Leagues Club is the revamped Kicks nightclub. The disco/live venue originally opened in 1990, but its immense popularity among Parramatta punters created a demand for improved and expanded facilities, including new decor, lighting and video equipment. Management prides itself in keeping ideas innovative and competitive.

The crowds have evidently lapped up the refurbishment's, particularly impressed by the video wall from **Image Design Technology**, a killer sound system specified by **Elecoustics** and the visual scintillation courtesy of the 100% **Martin** dominated light show. **Con Andrews**, from **Black Express Light and Sound** was chiefly responsible for the lighting design wizardry. "What we wanted to do was create a room where the attention wasn't just focused on the dancefloor."

The well thought out plot has Roboscans and Robocolours strategically placed to create dynamic moods and projections. Above each of the 'dynamic projection screens' 4 x Robocolour 2's emit a kaleidoscope of ever-changing coloured beams-oscillating from creating independent moods to working in union with the rest of the Martin fittings. Con's motivation was, "To engulf the area with colour and movement we designed the lightshow with a Centrepiece as our centrepiece. This one unit alone animates the entire area with dazzling

cont. over>

CLUB CHEVRON

Never again will you have to endure a night at home because your significant other has become an appendage to the couch, viewing a life and death footy/cricket/soccer/ etc match.

An eclectic group of experienced nightclub owners and sporting aficionado's are responsible for Melbourne's new concept entertainment complex- **The Club Chevron**, Nightclub, Diner, Sportsbar.

Opening from the 4th of Feb, the nouveau Chevron seems to be brimming over with facilities, featuring six separate areas with a total of eight bars. This is a sports junkies utopian playpen with 60 huge AV monitors screening international, national and local sport, throughout the Club.

For those wanting more than a vicarious piece of sports action there's a drivers seat with their name on it, in a "Daytona USA", live out an Ali fantasy with "Title Fight", or battle with the bad-asses in an "NBA Jam" or any other of the 70 interactive hi-tech electronic gizmos.

The complex is littered with an impressive collection of sporting memorabilia and is operating as a 24 hour, 7 day week bar and diner. **Located at:** 519 St Kilda Rd, Melbourne.

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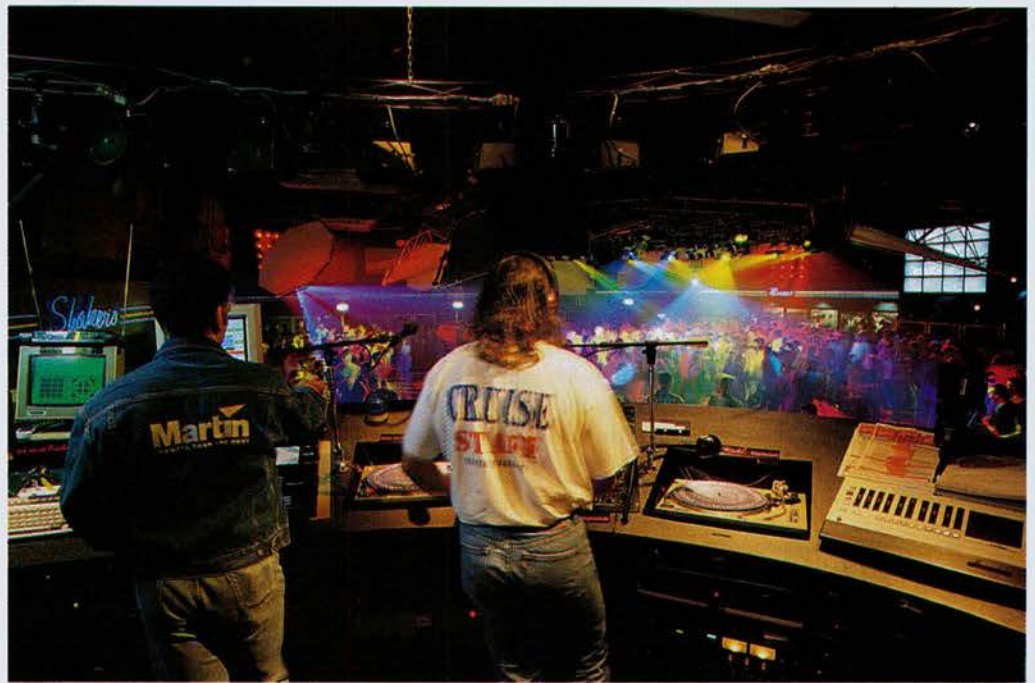
Kicks

colour and movement. Surrounding the Centrepiece are 8 x Roboscan 812's, 8 x PRO.218's and 8 x PRO518's. The different combinations allow us to perform a myriad of patterns, colour mixes, gobo projections and chases that keep everybody guessing as to what will happen next."

Con made maximum use of the Martin range throughout his design concept, with particular innovations being made with the Robocolour wall. "I've wanted to use a Robocolour wall in one of my designs and when the opportunity arose I made sure it made the utmost impact. The result is not 1 but 2 lots of 4 x 5 "count-down" walls of Robocolour 2s on either side of the dancefloor. And they provide a dramatic effect."

This equipment also creates numbers and letters, and has been used to do countdowns as well as letters and symbols.

The effect should illuminate the revellers mood to sufficiently enjoy the \$1 drinks at any one of the four expansive bars; 'Rumours', 'Shooters', 'Movers' and of course-'Shakers'. Kicks also doubles as a



perfect venue for major live acts, luminaries of the past include Farnham, Barnes, Clapton, Diesel and the Hoodoo Gurus.

Kicks is operational on Wednesday, Friday and Saturday nights with an average door price of \$12. **KICKS at Parramatta Leagues Club, 13-15 O'Connell st Parramatta.**

Kinselas.

The updated glammification of Sydney's staple pleasure zone Kinselas has occurred. The VIP's members bar has undergone a total refurbishment of style and substance; while the top floor's endorphin pumping emporium has been re-touched by the hands of arch illuminators- Geoffrey Rose and Victor Lee.

Basking in Renaissance decor and Anne Rice-esque sensibility, the VIP bar's decadent golds and deep greens create a vibe of lush opulence, offset by the patrons effortless elite glam style.

Richard Fotheringham tells me he's maintaining the heat - trend barometer by keeping it fresh. Rather than chasing the crowd de jour, Kinselas' innate tact of creating the next wave of style, means that the evolutionary trend is moving away from techno and opting for a mode of stylish sophistication, punctuated by the cool grooves of DJ Joe 90 (Friday) and the inimitable Tim Ritchie (Saturday). The members room has always operated as a filter for the strictly stylish and is inevitably following the European club trend of less dingily lit overtones but

opting for an open and light feel, rather than an oppressive grunge vibe. The grand unveiling of the Members bar is the 3rd of Feb- check it out soon.

Geoffrey Rose and Victor Lee are the 'guiding lights' behind Kinsela's lighting and design. During Christmas the top-floor was completely refit and by all accounts the effect is dazzling. Geoffrey and Victor have an impressive catalogue of achievements to draw on for inspiration and have managed to make unique experimentation with lighting design, their trademark. The objective here was to raise everything up and make optimum use of vertical structures. Geoff finds Kinsellas a fertile ground to develop and experiment with new ideas, and adores the fact that the club and building are steeped in history and relishes the actual art deco building which he feels has a great visual quality. His lighting work has a dynamic quality, filling the vast black space with experimental use of coloured rays and concentric circles of radiating light and featuring big mirrors which are Mr Rose's trademark tool.



Kicks (above), Kinselas (below).

Rose feels that although this is not one of the largest systems he has designed he believes the careful use and combination of various effects and fixtures has been successful in creating effect.

Elsewhere in the Kinsellas complex, February's live vibe includes; "Let The Vibes Continue" -Thurs-

day 2nd Feb Top Floor, \$10 cover charge. With the only non-vibes performance United Future Organisation from Japan with DJ Tom Thump from the Jazid Club San Francisco., and a host of local D.J 's.

Every Sunday-Lisa Maxwell with Dish.8-12 ground floor- it's free.




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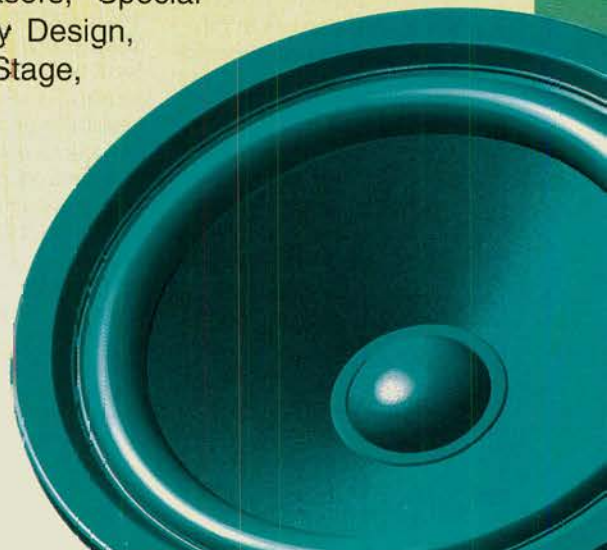
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THE PA PAGE

IT MUST BE GREAT, MATE!

A reality break, detailed by Michael Orland.

"Gee, it must be great being in the PA hire business! You must get to do sound for so many bands! " Guess again, bucko. Most bands who hire us these days have their own front of house engineers who work for them on a regular basis, thereby trying to maintain a thread of consistency between one production company and the next. So once your sound system attains level 2 of its development (the separate monitor console), then more often than not, you find yourself relegated to monitor operator position.

Monitors and Front of House are a little like Guitar and Bass Guitar. Despite some similarities in appearances and operation, people who use them tend to develop an affinity and aptitude for one over the other. Although many achieve competence at both, most sound people consider themselves either Front of House operators or Monitor operators, and will only do the other with an element of begrudgement.

Personally, I have always considered myself first and foremost a FOH engineer. But logistics being what they are, most bands on the level I work can only justify a regular FOH guy and rely on whoever comes with the hire system (me) to control monitors. Often folks will ask me what I think of a new desk or effect in one of the rigs, and think I'm kidding when I say "Hell, I don't know, I'm just the owner!" Real frustration finally kicks in when I take a break from monitors and wander our front to listen to what tonight's special guest operator is doing with the sound system I put so much blood, sweat and tears into acquiring. There is a kind of established protocol within the business within which it is considered uncool to physically grab the cloth-eared bint and see how far you can throw him from your gear. So instead you smile and nod like some lobotomised simpleton and go back to cringeing behind the monitor desk. And when he comes up to you after the gig and tells you how rotten it sounded, you smile and nod and ask who you see for payment. And when he comes up to you after the gig and tells you how great it sounded,

you smile and nod and ask who you see for payment. I'm not trying to discourage you new folk out there; just bracing you for what you will encounter in the hire business as I know it. If your only reason for running a sound system is you're wanting to mix bands, you may be more than occasionally disappointed.

There is a point at which diplomacy goes on hold and the grinning idiot act should be canned. The point at which your gear will be damaged; usually by excessive volumes. At this point, you need to display a firm and authoritative manner, at which I'm shithouse, but many of my system owner friends are very good at and need to be. There are many professional sound guys out there (well, professional insofar as they actually receive payment) who actually boast about the systems they've trashed. Only in rock and roll could someone take pride in being a liability.

When you set up your monitor desk, do it in such a way that you can keep an eye on your FOH amplifiers. I've said it before and I'll probably say it again: Clipping is bad news. It is not my intent to discuss square waves here when so many papers so freely available from speaker manufacturers already do it so well. Whenever you get an amp checked or repaired, ask the technician to check the accuracy of the clip indicators. Some amps are wildly out and are frankly best ignored. But many are spot on and should be taken very seriously. Chain reactions can be set up. Speakers overheat. Glues fail. Voice coils loosen and scrape. Amps start seeing shorts under load. Amps blow, taking what's left of the speakers with them. And you end up with a costly game of "What blew first? The chicken or the egg?" And all it takes to avoid the whole shebang is a firm word.

You know what I really hate? People who mark desks! The sheer bloody arrogance! I know almost every sound guy likes to mark knob positions after a sound check to be able to reset the desk after support acts have come and gone. And they all seem to think it's no big deal because "everybody" does it. Well I don't. I can think of fewer

things ruder than scribbling over someone else's property without asking. And I've yet to speak with anyone else who owns a desk who feels differently to me, from the smallest operator right up to the big dudes. Even chinagraphing makes the desk ugly and user unfriendly for the next people using the gear and consumes much time in removal.

Sometimes the CBE factor comes into play (Can't Be Every-where) and after all your efforts your desk will still be covered in chinagraph, crayon, texta, etc. at the end of the night. I'm indebted to Troy Music's Tosh for alerting me to a product that safely removes all this crap without disturbing the manufacturer's markings. "Zoff". Available at chemist at about \$4 a 50ml bottle, it's actually made for painless removal of adhesive bandages, but for our application it's a beaut. A few cotton buds and a few minutes and voila!

Other helpful hints pertaining to console care.....1: Carry an unused paintbrush in your toolbox for dusting off consoles between uses. 2: Protect the console against drink spills by covering it between sets. "Deerhide" vinyl, available from Clark Rubber stores is ideal. Have it cut oversized from front to back. Tuck about a third of it under the front of the desk to easily throw back the remainder over the desk. 3: If your effects rack is an ideal height for resting drinks on, try angling it back with a chock of wood under the front to discourage the practice. 4: Allow an area for the night's special guest operator to rest drink and ashtray, lest he consider using the desk for this offence, punishable by death.

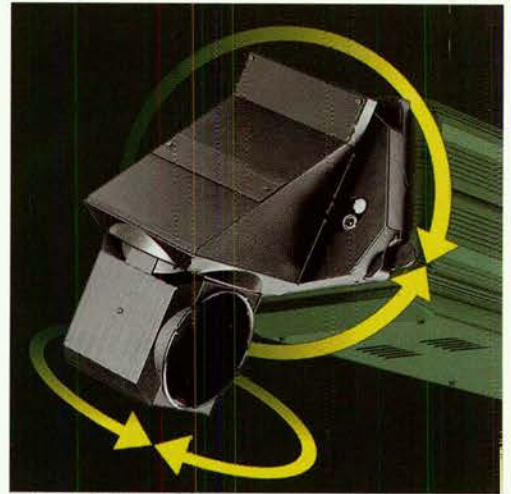
Let me just balance my earlier whingeing by saying that in the last few months I've actually enjoyed working with some damn fine engineers who were nice people to boot, which has more than made up for the thickheads. In this life, grasshopper, one often finds success hoping for the best while planning for the worst.

Michael runs The Public Address Co in Sydney, call (02) 799-7219.

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