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# Connections

Professional Audio and Visual Technology

April 2001 AS4.90 (inc GST)

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ISSN 1320-5595

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9 77 320 559004

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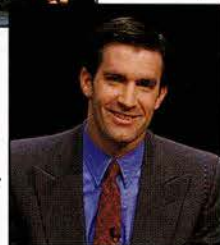
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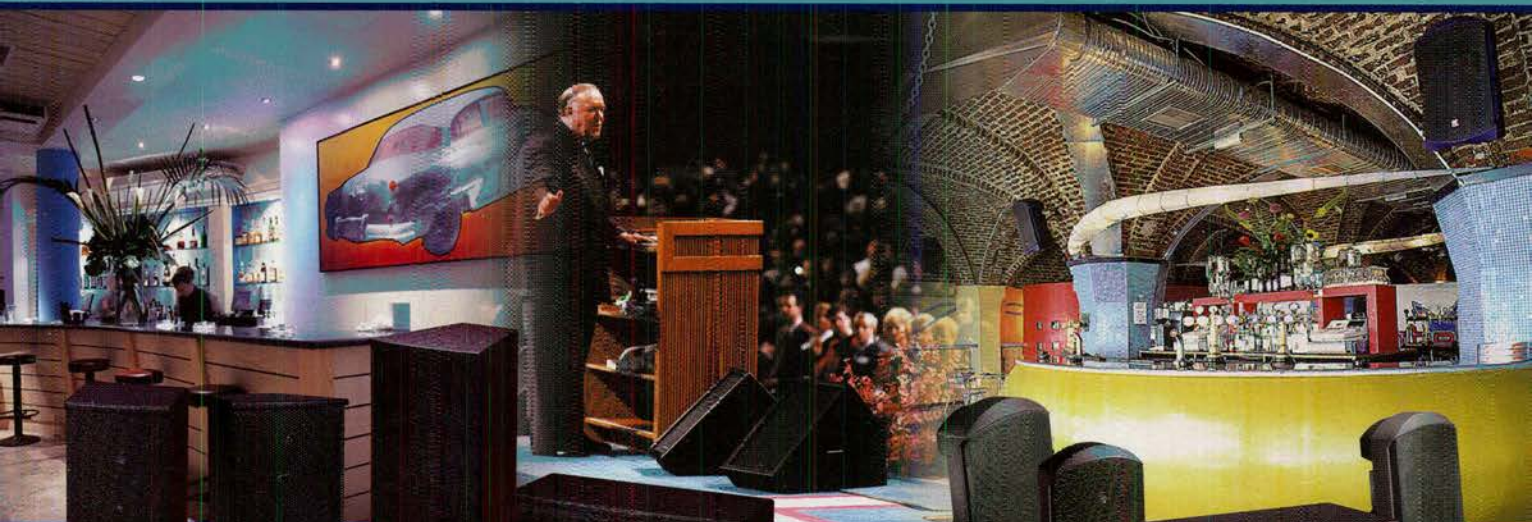
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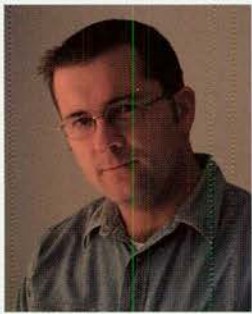
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The sweeping increases in the level of technology used in all facets of the entertainment industry have been pretty impressive over the last few years. Of course, this brings with it the inherent problem for the tech on the ground, having to keep up with whatever is the latest gadget or way of doing things.

For those of you that work in a specific field – like concert lighting, location audio, broadcast engineering, theatrical lighting, audio reinforcement etc – keeping up with technology is possible, but sometimes it does take a bit of extra work to keep abreast.

However, for the multitude of techs out there that have to keep on top of multiple fields, they will find that they are forever behind the technology 'eight ball'. You can find these people increasingly being employed by small venues, schools, product or companies, and even local councils. They are the resident 'Technical Manager'.

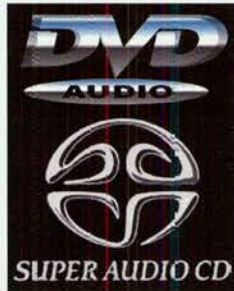
Speaking as a former Technical Manager, this kind of work is no small task as it could involve anything from recording and mixing down a CD for a client, to designing the lights for a show that has greater desires than the budget really allows.

When I was in the hot seat, there was not enough hours in the day to really work the job properly, so I set about learning new techniques to make the job easier. It took me some time to realise that the moment you do learn something new, your workload increases to include this new skill. I managed to blow out my time to 100hr weeks before I decided that enough was enough.

So, if you are in the position of having to keep on top of numerous skills, take pleasure in the fact that the technology race seems to now be focusing on making things easier rather than making things better – and make sure you get reimbursed for your overtime!

-John Grimshaw, Ed'tcr.  
email john@conpub.com.au  
or call +61 2 9876-3533.

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 May - Amplifiers, Luminaires.  
 June - Video Distribution, Small PA boxes.  
 July - Effectors, Small moving lights.

**NEXT ISSUE:**  
 Onsale 9th May, subscribers earlier.

**FORTHCOMING SHOWS:**  
 • AES 110th (Audio)  
 12 - 15 May, Amsterdam.  
[www.aes.org](http://www.aes.org)  
 • SMPTE (Broadcast)  
 July 10-13, Sydney.  
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# Connections

The Asia/Pacific Professional Audio and Visual Technology Monthly

APRIL 2001

## Gearhouse collapses, may be broken up

Gearhouse Group PLC, the UK parent of Gearhouse Group Australia went into receivership late last month. Inevitably, the Australian operations were then placed into receivership by the ANZ bank.

**Martin Madden** from Arthur Anderson was appointed as the receiver, he is now negotiating the sale of the operations. Offers closed March 26th.

In Australia Gearhouse grossed over \$23 million last year, and employed more than 140 staff.

Staff entitlements such as long

service and leave payments are frozen, pending the sale of the business.

Gearhouse Group PLC were forced to suspend their share trading in the UK after failing to report December half earnings.

Gearhouse's Australian operations were a wholly owned subsidiary of the UK group, but run by an Australian board of directors, who included **John Bond** and **Russell Bennett**.



*Psychedelic Sixties Theme, one of Gearhouse's corporate offerings*

## Strange days as Staging phoenix stirs

*Relative peace returns to Roden Street. Or does it? Connections snoops.....*

What is going on in Roden Street? The Melbourne arm of national market leading corporate presentation colossus Staging Connections was the scene of a recently concluded long, ugly and expensive court case. In court, the Melbourne founder Terry Davenport battled the Sydney HQ over future ownership of the lucrative firm.

The settlement saw Mr. Davenport walk away with several million dollars, and according to sources an agreement not to

compete with his former company.

But recent events caused Connections to have a lurk around at the back entrance of the edifice. The street is brim full of Staging Connections vans, so it is hard to park. Next door, in Stanley Street, is the soon to be vacated regional Jands Production Services warehouse.

It seems there is also a new tenant within the Jands premises. A small sign on the front

*(Continued on next page)*

## LATE NEWS

### Bytecraft buys Jands lighting systems and associated rigging

*Jands quit lighting production, but ramp up lighting manufacture*

Bytecraft Entertainment is to buy all lighting assets of Jands Production Services this month, creating a clear lighting production market leader in Australia. Bytecraft becomes the first production house in the world to combine Vari-Lite, Icon, Martin and High End moving lights.

The acquisition marks the end of an era for Jands, the company actually was founded as a psychedelic lightshow in the late 1960's, quickly branching into audio and manufacture of lighting. Today Jands is a market leader in lighting control systems, building and exporting consoles and dimmers, a business it plans to expand.

Jands Production Services will expand its audio production business, and is continually adding extra L'ACOUSTICS V-DOSC and dV-DOSC product following initial success with this new technology. The firm has just introduced a JBL Vertec line array system, and has a regional alliance with Clair Brothers who have positioned their new i4 line array here for some clients in recent times.

**Stephen Found**, CEO and owner of Bytecraft Entertainment, announced the deal at presstime. "Nothing excites me more than



*Please turn the page*

## CONNECTIONS

9th year of publication!

ISBN: 1320-5595

CONNECTIONS is published monthly - except January - by Connections Publishing Pty Ltd  
Australian Company number 058 443 182  
ABN 66 058 443 182

**Mail:** PO BOX 439, EPPING  
NSW 2121 AUSTRALIA.

**Deliveries:** 16 Willoughby street.

**Web:** www.conpub.com.au

**Email:** mail@conpub.com.au

**Phone:** +61 2 9876-3530

**Fax:** +61 2 9876-5715

**Hours:** 0900 - 1700 Sydney.  
After hours try any of the mobile numbers below, email, or fax.

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or +61 2 9876-3530.  
Mobile 0408 498-180

**Subscriptions:** call toll free  
1-800-635-514 or +61 2 9876-3530  
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**Bulk sales, dealer sales:** toll free  
1-800-635-514 or +61 2 9876-3530  
or email sarah@conpub.com.au

**Newsagent sales:** NDD code CNC.

**Publisher:** Julius Grafton  
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**Contributors:** Worldwide.

**Cover artist:** Ray Pittman

**Deadlines:** Tight, to bring you news faster. 15th of month prior OR BETTER. Call us as late as you like.

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**Lawyers:** No thank you.

**Printed in Sydney by:** Superfine

**Reprographics:** Omicron.

**IT consultant:** Brendan King

**Platform:** Apple Mac, the computer voice in the wilderness, a total pain in the butt having PC and Mac on the same desk, but necessary, through a Windows 2000 server. Works well!

**Advertising production & art:**  
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or email smiceli@one.net.au

## Who is doing what?

### Rodin Street

(continued from previous page)

door says simply, 'SHO'. Is this code?

Inside is an office, where we found **Amanda Davenport**, wife of Terry, former CEO of the Staging Connections branch next door. She wasn't terribly happy to see us.

Our journalist properly identified herself, (as we always do), and explained this was a courtesy call to check the details of the new company. After all, we didn't even know its name until we walked up to the building. So we couldn't exactly call them on the phone.

Ms Davenport said she didn't want any details about the company to be included in Connections, because the company wasn't up and running yet, but acknowledged that details would probably be included regardless.

We suggested that perhaps when the company is more established we could do a profile piece on the operation. That produced a "you're dreaming" expression.

It seems one **Bill Kneebone**, former Davenport lieutenant and ex general manager of Staging Connections Melbourne, is also sometimes based at the SHO premises.

It is understood that under the terms of the settlement paid to Mr. Davenport, he and his wife Amanda are both jointly prevented from competing with Staging Connections.

We need to stress that there is nothing illegal or untoward about starting a new business next door to an established one. We wish the SHO team well with whatever line of business they are pursuing. It is probably nothing even vaguely like the business Staging Connections are engaged in.

So what does SHO mean, anyway?

- Julius Grafton

### Which Concert Box leads?

Our recent comments about which PA brand is most prolific drew comment regarding the **Martin Wavefront 8**. There are 260 cabinets in touring rigs, plus 71 Cabinets installed, for a total in Australia of 331 cabinets. This *could* make Wavefront the market leader, ahead of X-Array and EAW - depending how you count the various EAW models. **-Julius**

### Blown Fuse at 3AK

Radio station 3AK's previous operating company Fusion Media went into administration last month. Creditors are owed more than \$4 million.

Amongst the claims: APRA \$17,312.07; Australian Taxation Office, \$160,709.44; British Broadcasting Corporation, \$465; Broadcast Solutions p/l, \$880; Bureau of

### Bytecraft and Jands

(continued from previous page)

lighting" he stated, adding that Bytecraft had been restructured into two separate companies last year. Bytecraft Automation remains a partnership with founder Ted Fregon, while Bytecraft Entertainment is owned by Stephen Found. "I'm my bank manager's best friend" he quipped, when asked how much he had paid for the extensive Jands inventory.

Stephen Found travelled to Vari-Lite HQ in Dallas to seek approval for the transfer of Vari-Lite inventory from Jands. Jands became the first company to buy Vari-Lite inventory several years ago, after quitting a co-rental deal. According to Stephen Found, Vari-Lite CEO Rusty Bruche has given the deal his approval.

The transaction will see lighting crew at Jands retrenched, and the inventory transferred out of the purpose built Jands facility at Mascot. Jands is structured as two companies, with Jands Electronics occupying the front of the Kent Road complex. This company builds and distributes products, including JBL, Shure, Crown and their own branded lighting control.

Jands Production Services occupies the rear of the complex.

Jands Production Services CEO Eric Robinson was unavailable, having not returned our calls since 1992. Jands Electronics CEO Paul Mulholland was more forthcoming, and upbeat about the firms audio production future. "More and more production firms are specialising, it's too hard to be all things to all people" he said.

Reaction around the industry was cautious. Leading lighting designer Trudy Dalgleish said she was still digesting the news and preferred not to comment just yet. Leading TV lighting designer Rohan Thornton simply said; "F— me!"

A leading promoter, who preferred to remain anonymous, said that any reduction in competition would inevitably push up rental charges.

Sources say that at least one current rental firm is pricing the acquisition of a theatre lighting rig, having reasoned that there will be additional business opportunities from such a ground shift in the industry.

The Bytecraft deal is thought to not interest the Australian Competition and Consumer Commission, as although Bytecraft becomes the largest firm, there is adequate competition.

Meteorology, \$259.80; Club Med Lindeman Island, \$1000; Coffee Break Services, \$179.11; Factory Sound, \$890; Federation of Aust. Radio. Broad., (claim: \$23,026.62); Murray Tregonning & Associates, \$5861.10; Production Audio Services p/l, \$25,827.20; Quantegy International inc, \$791.68; Soundcorp, \$1628.

The total admitted as owing is A\$4,024,151.22. Ouch!

Publisher's Comment on Aida

## Narrowminded promoters dig deep hole, while the AEIA do nothing to help themselves

The collapse last month of Australian Aida performances, a week before the curtain went up, is a shameful debacle that could have been avoided. Promoter Giuseppe Raffa had trouble getting suppliers onside without upfront payments, as his background was reasonably well known throughout the industry.

The big damage is to consumer confidence, as thousands of ticketholders - our entertainment customers - were shafted. Because ticketing was done via a call centre, monies were remitted to Raffa's company instead of being held in trust, as is customary practice of the established ticketing agencies.

Punters who paid by creditcard can demand a refund from their card supplier, who will then, in a delicious twist of irony, pursue the hapless call centre for the money. But people who paid in cash or by cheque have lost their money.

*This undermines our industry!*

So why was nothing done by our industry in the face of an obvious collapse? Let's start by blaming the Australian Entertainment Industry Association. Just before it failed, they denied, it is alleged in the Sydney Morning Herald, that Aida was in trouble. They suggested Aida was the victim of mischief making gossip, according to Kelly Bourke.

But Andrew Guild from Edgley International (they had nothing to do with the production) sure knew the show was wobbly. "Local producers were certainly wary of the reputation which preceded Raffa" he told the newspaper. "But no one in this business goes around tripping each other up".

So next time a promoter bemoans increased consumer resistance to their next show, perhaps they may regret not picking up the phone to the state Department of Fair Trading and making an obvious complaint about Aida.

The day Aida went on sale, with tickets being sold outside the system by a call centre, was the day that the promoters and their association, the AEIA, all did the old fashioned, typical Australian thing.

They buried their heads in the sand.

-Julius Grafton



*Our spy was at the EAW NSCA party in Orlando last month where lo and behold, the new and hitherto secret KF 760 line array had it's first public gig. News on this system next month.*

## Chubb under fire

Former Sontec management regroup

Two years ago Chubb purchased the highly successful Sontec Group of commercial audio contractors in a deal thought to be worth more than \$10 million. Sontec turned over \$27m and employed 120 nationally.

Now a new Commercial Contracting group has been formed, known as Tecsound Australia. Initially operating in major capital cities, the group is targeting dealer affiliates in major country towns. It is focussing on the fast food, retail, shopping centre and general low voltage installation sectors, which Chubb now dominates. This is a low profile but lucrative niche business that includes fast food driveway audio and comm systems.

Tecsound founding director Hilary Evans anticipates a phenomenal growth period over the next two years. He heads up the Victorian operation, while Sontec NSW founder Ian McLean is in charge of NSW. Other ex Sontec staff include Michael Burton (SA), Mark Carton (WA), and Geoff Hewitt (Qld).

Chubb contracted the former owners of Sontec to avoid competition, but cannot restrict former managers or staff. Ian McLean had previously sold his large Sontec NSW operation to his former Sontec partners, and so is understood to be not constrained from competition.

"We've got proven formulas, and the know how, so it has all come together quickly", says Hilary. "This is run under the same (Sontec) philosophy, but with a smarter, more intelligent direction."

The group is already established and operating in five states, with major retail customers in place and more to follow.

Tecsound Australia: +61 3 9876-2333

## BOSE REMADE

• Bose Australia has been remodelled by new Asia-Pacific General Manager Harold Isberg, who is based in Queensland. "We restructured the Asia Pacific region" he told Connections. "Asia and parts of the Pacific both reported to US Sales. With Australia in the middle of the region, it made sense to bring it all under one umbrella. It brings Dealers and the organisation closer to the company, there is more contact."

Changes at Bose Au HQ in Sydney have seen former General Manager, Matthew Offord, and Special Projects Coordinator, Shane Spinx leave the organisation. The new Business Manager is Andrew Cronin, and Dominic Waters is now National Sales Manager.

## MOVES, NEWS

• CC's Light & Sound have moved to 486 City Rd, South Melbourne VIC 3205. The new phone number is +61 3 9695 3999.

• TAG (TECHNICAL AUDIO GROUP) has formed a joint venture company in New Zealand to rationalise the distribution of brands across the Australia/New Zealand market. The new company, Technical Audio Group New Zealand, is an equal joint venture between TAG (Australia) and, on the New Zealand side, Robert Judd and Andrew Milne.

TAG NZ will be based in Auckland and will initially represent Allen & Heath, Martin Audio, Marantz Professional, Klotz Cables, LA Audio, ATC, CINDE and Superscope.

TAG New Zealand call +64 9 416 0190. [www.tagnz.co.nz](http://www.tagnz.co.nz)

P.O.Box 81-065, Whenuapai, Waitakere City, AUCKLAND.

• Neumann have launched their new website, claiming it is a 'true gold mine for every audio professional'.

The site includes a large portion of the Neumann archives, product information and operation manuals, and numerous articles drawn from the last five decades of presentations and seminars. [www.neumann.com](http://www.neumann.com)

## Who is doing what?

### TRAINING

Coemar De Sisti Australia will be conducting two Technical Training Day in April. The hands on seminar will cover the Coemar CF 1200 & 700 series, Futurelight MH660, MH640 & MH860 moving yokes. The day is intended for technicians and other staff that would like to further understand servicing, maintaining and using these fixtures.

• April 24 & 25 at Bundoora.  
Contact Richie Mickan +61 3  
9467 8666 for further details

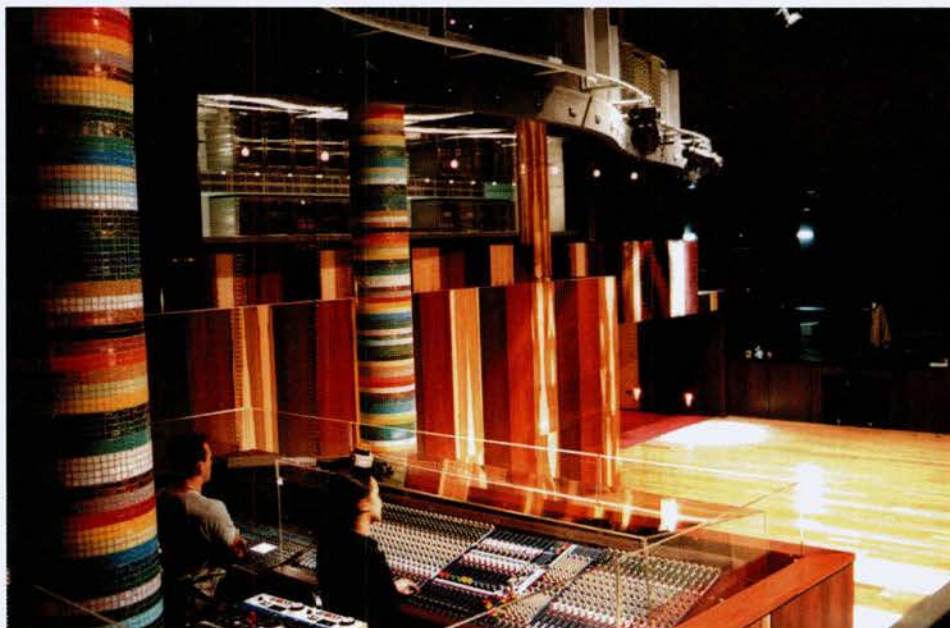
### AUDIO FORUM TUNES INTO INDUSTRY ISSUES

AAV Australia and the Screen Services Association of Victoria (SSAV) recently convened an Audio Forum to discuss analogue and digital audio alignment levels and suitable audio transmission standards for Digital TV.

Over 75 people attended the Forum from a variety of industries including sound and post production as well as engineers and operations staff from TV networks.

Discussions throughout the Forum included issues ranging from FACTS OP recommendations, AAV's audio policy and TV practices in the transmission of audio to the requirements and future transmission of Dolby 5.1 including the Dolby E and AC3 (Dolby Digital) encoding processes.

The Audio Forum successfully gained a commitment from FACTS to consider the inclusion of post production aspects in FACTS Operational Practices. The Forum was organised by AAV's **Peter Barry** (Operations) and **Henny van Teylingen** (Technical Services).



## City Live: will it live?

*Sydney's hot new mega venue almost has it all. Except for one important thing....*

The industry buzz is that City Live is a great venue. Sydney loves a well designed club that can handle large acts, and a sellout 1,400 people per night were there for the recent Ted Mulry benefits.

But the club is in deep trouble, as are many tenants of the new Fox studios precinct at the former Sydney Showgrounds. Due to politics, the expected 3am license has not arrived. Except for specific events like Mardi Gras, the whole Fox studios precinct shuts at midnight. City Live is a multi level venue, fitted out for AV by Colin Baldwin's Showcorp Group - a sound, lighting and vision installation contract worth more than A\$600,000.

The original designers of the club were Bazmark, the company headed by film director Baz Luhrmann, with Noel Staunton acting as the Executive Producer. separate from the dance floor lighting."

For the fit-out stage of the job Showcorp engaged the services of two of Australia's most respected technicians - Mark Lang of Leading Edge Entertainment and Roger Hind

of Theatrics.

"I came into the project fairly late in the scene," said Mark. He points out that the building game is structured so that the lighting and audio installers are always the last people with access to the site.

The live performance stage is approx. 40' wide and 20' deep (12m x 6m). There is a large void opening in the shape of a 'peanut' that opens both levels of the room.

Colin had to decide how to light the stage and dance floor area with no rigging points or mountable structures. "There was no real brief as to what the lighting was to end up achieving. I always envisaged the lighting as being two separate systems - the room and dance floor area being separate to the stage lighting however, both systems are able to join forces when required" he says.

The club also has a complete sound system including a Midas Heritage console, EV X-Array loudspeakers, mics, fx and monitors.

Restricted hours have bombed the bottom line at City Live. Hopefully it'll survive. -Julius



## GEAR TO MOVE?

IF YOU'VE GOT GEAR TO MOVE,  
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# Looking for a quality CD RECORDER?



With the  
**PROFESSIONAL**  
Bits you need?

CDR-W33  
CDR-W66

The new CDR-W33 has three DSP functions to fine-tune your analog sources. A 3-band parametric equaliser, a digital limiter with adjustable ratio and Super Bit Mapping® capturing near 20-bit quality on industry-standard 16-bit compact discs via 24-bit AD/DA converters.

Add that finishing touch with CD TEXT™ data, you can record via a PC keyboard input terminal conveniently placed on the front panel.

And, for professionals needing to convert from 48kHz digital sources, the CDR-W33 has a built-in sample-rate-converter.

A quality CD player/recorder that's budget-priced, so you can

afford to stack rack 'em up using the fully featured, wired/wireless remote that comes supplied.

With the new CDR-W33 you get every last bit of performance.

And with the imminent release of our CDR-W66, you will be able to copy your recordings at double speed via AES/EBU digital interfacing.

Call 1800 017 669 for more info or visit [www.sony.com.au](http://www.sony.com.au) and check-out the latest range of Sony pro-audio.

**SONY**

Sony Australia Limited A.B.N. 59 001 215 354

Head office: 33 Talavera Road, North Ryde NSW 2113 Web: [www.sony.com.au](http://www.sony.com.au)

Sydney (02) 9887 6666 Melbourne (03) 9264 0200 Brisbane (07) 3334 4000

Ferth (08) 9202 2555 Adelaide (08) 8234 3777 New Zealand +64 9 488 6130

What will you be using soon?

## MARTIN EXPANDS BLACKLINE

Martin Audio has added a double 15 and horn cabinet to their popular BlackLine range. The new speaker is targeted at a wide cross section of the market and can be used for FOH, side or drum fill in portable as well as fixed installation applications.

Although the F215 is a two-way passive, its twin 15" drivers play different roles in the frequency band. While both drivers have the same low frequency characteristics and operate together up to 250Hz, only the upper driver, a specially designed, low distortion bass-mid device, is used up to the 1.3kHz crossover point. This technique avoids the uneven response that occurs when both drivers operate together over the mid-band.

High frequencies are reproduced by a 1.4" exit titanium diaphragm compression driver loaded by a proprietary rotatable 80 x 50° constant directivity horn. The F215's rotatable horn, trapezoidal cabinet design and very compact 561x1066x496mm (WxHxD) dimensions combine to make it ideal for horizontally mounted nightclub dance floor speaker.

The speaker enclosure is constructed of multi-laminate birch ply incorporating a tough punched steel grille. Two large ports permit uncompressed low frequency output at high input levels. Handles are fitted top and bottom along with four 4" rear mounted casters for ease of transportation and twelve M10 flying inserts are provided for cabinet rigging.

The F215 can be used with or without the Martin M3 controller. The controller enhances the low frequency performance of the system and provides high quality limiters to protect the F215 from being overdriven. The M3 can also be used to control the F215 with the BlackLine S218 subwoofer for more ambitious nightclub installations and live sound reinforcement requiring extreme low frequency output. Retail price of the F215 is \$4,995 and the M3 \$1,195.

Martin Audio is distributed in Australia by Technical Audio Group (TAG) +61 2 9810 5300 [www.tag.au.com](http://www.tag.au.com)

## M150 - Now In Production



### Neumann release their latest high performance tube microphone

Taking advantage of modern materials and technology, Neumann have taken the cuter casing of the vintage M 50, and created the M 150 Tube condenser microphone. Neumann tell us that since its birth some fifty years ago, the M 50 has enjoyed a reputation for "capturing unparalleled realism in the demanding field of orchestral and string recording".

The all-new M 150 Tube improves on its elder's perform-

ance with lower self noise (15 dB-A) and a titanium membrane and capsule (providing exceptionally good transient response). The mic also uses a transformerless tube amplifier (based on the M 149), and a sophisticated power supply.

Much lauded for its desirable acoustical characteristics, titanium was, until recently, difficult to machine as well as to obtain the quality necessary for use in microphones. Neumann overcame this problem and used titanium for the M 150 Tube's thin 12mm capsule and some other components. The intended result was to deliver low self-noise, a smooth, extended frequency response, and excellent transient response.

As per audio engineer's requests, the head-grill is formed just like the original M 50, and the complete capsule mounting employs the same 40 mm sphere that rendered the M 50's pick-up pattern: circular at low frequencies and increasingly narrow up the spectrum. The M

150 Tube has 119dB of dynamic range, 20 mV/Pa sensitivity, and 134 dB maximum SPL.

The Neumann M 150 Tube is ideal for DECCA tree recording, surround miking, or stereo recording techniques. Mono and Stereo sets are available. The single mic, complete in carry case with elastic suspension, mic cable and power supply will set you back \$7,300. The stereo set will cost \$13,990.

• For more information, contact the distributor Amber Technology Pty Ltd on +61 2 9975 1211.



## YAMAHA MS400 GUNNING FOR MACKIE



YAMAHA have launched a worthy contender in the power speaker box universe. The MS 400 is loaded with a 15" woofer, high frequency compression driver, and gutsy amp module (pictured right). The line input connectors allow male and female (loop) XLR's, plus a 6.5mm jack. It boasts soft turn on and off, plenty of power, and separate mic input. A\$1,995.

• Yamaha +61 2 9693-5111



**SONY**

They're used in broadcasting for everything from network news, to talk shows, to soap operas. They're used when rock'n'roll headlines hit the stadium circuit, and for Broadway musicals. Sony's 800 Series UHF Wireless Microphone Systems are the stuff of pro audio legend. But until now this high performance has only been available to musicians and producers with deep pockets. Now Sony changes all that with the latest additions to the 800MHz UHF Wireless Microphone family - The Freedom series.



**Freedom**

With Sony "Freedom" UHF wireless, you're free from the interference, distortion and assorted hash of the crowded VHF band.

You're free to mix and match mics, body packs and receivers. And you're free to step up to the UHF world, even if your budget is firmly rooted in the real world.



**Sony Australia Limited** A.B.N. 59 001 215 354

Head office: 33 Talavera Road, North Ryde NSW 2113 Web: [www.sony.com.au](http://www.sony.com.au)

Sydney (02) 9887 6666 Melbourne (03) 9264 0200 Brisbane (07) 3334 4000

Adelaide (08) 8234 3777 Perth (08) 9202 2555 New Zealand +64 9 488 6130

What will you be using soon?

## TWO NEW CDR'S FROM MARANTZ

Marantz Professional have released two new CD Recorders - the CDR500, a combination CD Player/CD Recorder, and the CDR631, a new version of the

popular CDR630 with added features.

Both units are fully compatible with pro and consumer CD-R and CD-RW discs and can record from virtually any audio source including CDs, LPs, cassettes, DAT or sound

card output from a computer. Track titles can be

saved and edited in CD-TEXT format, which can subsequently be read by CD-TEXT compatible CD players (such as the Marantz Professional PMD330/331/340). The CDR500 offers the unique Automaster feature for 'Disk At Once' (DAO) copying from a CDR disk that has been recorded track by track. DAO disks can be used directly for Red Book Glass Mastering and duplication, eliminating additional steps such as Exabyte tape or hard disk editing.

The DSP platform for the new CDR's manages incoming audio data and subcode data entirely separately. A 1MB memory buffer ensures frame accurate writing of track IDs based on the various conditions of the incoming signal. If an incoming signal includes track IDs, as with CD, MD and DAT

SPDIF sources, the IDs are translated into CD track increments without delay. If the source signal does not include IDs, such as AES/EBU or analogue signals, the recorder will generate Track IDs automatically by measuring level changes in the audio signal.

A brand new CDR/RW mechanism was designed for these units. It is a die-cast construction with rubber shock-mounts locating a dual axis laser suspension for extremely accurate tracking performance and low jitter figures. The mechanism sets the writing power of the laser according to the quality of each individual CD blank and continuously assesses the CD blank during the writing process to ensure the best recording result even if the blank varies over its surface.

Other features include menu selectable SCMS copy protection to provide each disc with the level of protection the user wishes, auto finalising, 11-56 and 96kHz Sample Rate Converter with bypass, large back-lit transport keys, an IR remote and precision 20/24-bit AD/DA converters (CDR631 only).

Specifications also extend to the rear panels where the complement of inputs includes balanced (XLR) and unbalanced (RCA) analog and coaxial and optical digital. The CDR631 offers the addition of AES/EBU (XLR) input. Outputs are via unbalanced (RCA) analog and coaxial digital along with a coaxial loop-out for unprocessed connection to other digital equipment.

Retail price (Incl GST) of the CDR631 is \$1,995 and the CDR500 \$2,295.

Marantz Professional is distributed in Australia by Technical Audio Group +61 2 9810 5300 [www.tag.au.com](http://www.tag.au.com)



## PEAK Audio Electronics



Peak Audio have announced the launch of Peak Audio Electronics; a range of low cost amplifiers, mic/line mixers, DJ mixers and stereo system equalizers.

With the ST-3 stereo amp priced at \$499 (140W + 140W @ 4 ohms) and the ST-5 priced at \$699 (250W + 250W @ 4 ohms), Peak have certainly aimed their products at a low price point. For details and pricing on the rest of their amps, mixers and equalizers contact Peak Audio's distributor, **Central Musical Instruments** on +61 3 9315 2244

## SPL increased at ARX

ARX's range of SPL Powered Integrated Loudspeakers has been expanded with the release of the new SPL 20 Powered Arrayable Trapezoid Sub Woofer. Featuring a single 18" / 460mm long throw driver, the SPL 20 provides extended low frequency output in the 35-100Hz range. Designed for use in flown or ground stacked multi-cabinet loudspeaker systems.

The SPL 20's fully integrated amplifier/speaker combination offers ARX's proprietary ISC system protection and CoolPort technology, designed for high power output whilst retaining low distortion and providing true sonic accuracy.

Intended as a complementary sub bass cabinet for SPL12 and SPL 10 arrays, the SPL 20 can easily be used with other speaker systems. The unit is priced at \$3199 inc GST.

For more information, contact ARX Systems +61 3 9555 7859 [www.arx.com.au](http://www.arx.com.au)



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## CDR631 & CDR500

The new Marantz CDR631 and dual deck CDR500 take CD Recording another huge leap forward.

An all-new CDR/RW mechanism reduces error rates to an all time low by adjusting laser-writing power to the quality of each CD blank sector.

The CDR500 with the unique Automaster™ produces CD's ready for Red Book Glass Master CD pressing.

The leap forward also includes a 1MB memory buffer, menu selectable SCMS copy protection, CD-TEXT read and write, IR remote, comprehensive ins and outs and recording from virtually any audio source: CDs, LPs, cassettes, DAT or computer sound card output.

Surprisingly this huge leap forward is accompanied by a step backwards in price! Just \$1,995 for the CDR631 and \$2,295 for the CDR500.

TECHNICAL AUDIO GROUP

Technical Audio Group, 558 Darling Street, Balmain NSW, AUSTRALIA 2041. Phone (02) 9810 5300. Email: info@tag.au.com  
www.tag.au.com. Technical Audio Group New Zealand, P.O. Box 81-065 Whenuapai, Waitakere City, Auckland, NEW ZEALAND. Phone  
(09) 416 0190 Email: rob@tagnz.co.nz www.tag.co.nz

What will you be using soon?

## TDK to release second generation high-speed CD Burner...



### ... the VeloCD 16X10X40X

TDK Australia described the launch of its first piece of hardware - the VeloCD (pronounced Velocity) CD Burner 12X10X24X - late last year as a runaway success with all units sold-out within the first weeks of 2001. In response, the company is attempting to up the ante with the March 2001 release of its updated version - VeloCD 16X10X40X - offering the fastest writing speeds currently available - write once (16x), rewrite (1Cx) and read (40x). Consistent with the previous model, VeloCD features BURN-Proof write assurance technology eliminating buffer underrun errors.

"Superior performance and speed as well as the incorporation of BURN-Proof technology have made VeloCD the product of choice for music-passionate PC users," said Brett Campbell, TDK's national business manager for commercial products.

The drive will be available from all leading computer retailers from March 2001 for the price of \$699rrp

## New CDR from Sony

Sony updated its presence in the CDR market with the replacement to the CDR-W33... the CDR-W66.



This new device extends the capabilities of the original CDR-W33 to include AES/EBU, 12 and 8 cm discs, balanced analogue, assignable parallel remote as well as the ability to copy using 2 CDR-W66s.

The CDR-W66 has been designed specifically for professional production applications. In addition to its advanced DSP re-mastering capabilities, the CDR-W66 features a unique 32kHz - 96kHz range sample rate converter making the CDR-W66 suitable for recording from higher sample rate sources which are becoming increasingly common with the advent of higher-resolution music recording formats.

Through the use of Super Bit Mapping recording technology and 24-bit A to D and D to A conversion, the CDR-W66 is able to achieve high sound quality approaching that of 20-bit recording quality. Operational functions include a limiter and equalizer both operating in the digital domain, CD Text entry and control from an optional PC keyboard.

The CDR-W66 also combines the use of 24-bit high resolution AD and DA converters with its SBM noise shaping technology. SBM is used in the mastering to CD of high bit recordings and re-masters of classic recordings

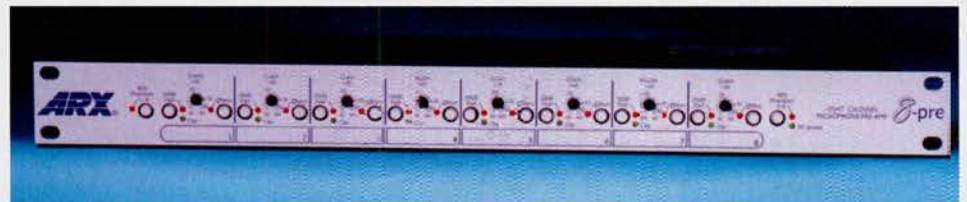
by Sony Music, as well as on the Sony range of DAT recorders. 24-bit encoding of the analogue input signal provides a considerable higher signal-to-noise and dynamic range, well beyond the maximum capability of 16-bit digital audio. SBM noise shaping of the high bit input signal enables a significant portion of that improvement to be encoded within the 16-bit signal recorded to the CDR disc. This provides a replay signal perceptively closer to the high-bit A to D encoded signal. The CDR-W66 is further equipped with 24-bit D to A conversion at its output stage, to ensure that the benefits of the SBM processed signal can be monitored on replay.

The CDR-W66 also incorporates powerful on-board DSF pre-mastering capabilities, enabling the pre-EQ'ing, levelling and limiting of program material mastered to CDR, as it would be in a CD mastering suite. These DSP functions are accessed from either the front panel or the supplied wired and infra red remote controls.

Both coaxial and optical S/PDIF digital I/O are provided in addition to the analogue connectors. The recommended list price (inc GST) for CDR-W66 is \$2,420.

• Sony Professional +61 2 9887 6570.

## "8 Pre" Microphone Preamp from ARX



ARX have announced the release of the 8 Pre, a new Eight Channel Microphone Preamp. The unit features variable gain, 20dB Pad, Phase Reverse and switchable 48 V Phantom Power in a compact 1RU package.

With balanced XLR inputs and balanced 1/4" jack outputs, ARX tell us that "the newly developed hybrid circuitry used in the 8 Pre offers state of the art noise and distortion

performance".

The 8 Pre is designed to be used in multiple situations - as a console extender, for ADAT, Hard Disk recording and as multiple input preamps for Acoustic Measurement and Data acquisition.

The 8pre is priced at \$849inc GST.

• For more information, contact ARX Systems +61 3 9555 7859 [www.arx.com.au](http://www.arx.com.au)



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# Design and Integration

*There is a maxim that price is everything.*

Many audio visual installations are chosen on price alone. **We don't disagree with that approach.**

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We aim to answer our clients needs. Small or large. Tender or design-and-construct. **Whatever it is, if it's visual or entertainment based, we live it, breath it, and work with it.**

*Since 1984.*



What will you be using soon?

## Vacuum Tube Condenser Mic from DB Technologies



CMI have announced the release of the DB-560N - a dual diaphragm microphone with a low proximity effect lending itself to close and intimate vocal recordings.

With nine selectable polar patterns, (selectable from the tube pre-amp via 7 pin connector) this microphone is designed to be used singly or in pairs.

Incorporated into the design is a 10dB pad. Some of the specifications include: a sensitivity of 10mv/Pa = -40dB (0dB = 1V/Pa), a frequency Range: 20Hz to 20KHz, low Cut: 120Hz and max SPL (for 1% THD @ 1kHz) is 125dB.

- \$1,249
- CMI ([www.cmi.com.au](http://www.cmi.com.au))
- +61 3 9315 2244

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## Studio Quality Field Mixer



Shure has expanded their portable field range with the addition of the FP24, a portable two-channel mixer. Ideal for high-resolution digital recording, the FP24 features: a dynamic range exceeding 110 dB; a bandwidth extending from 10 Hz to 50 kHz; and low distortion characteristics.

The unit has up to 66 dB of gain, transformer-balanced inputs (assignable to the L-C-R outputs), a built-in slate mic, 1kHz tone oscillator, and a headphone monitoring amplifier. Premium input transformers provide both exceptionally quiet operation and freedom from RF interference, while high-current, balanced output drivers maintain signal integrity even over long cable runs.

The unit's high-pass filters function at 6 dB per octave with either 80 or 160 Hz corner frequencies, and are inserted prior to any active element of the circuitry to maximise

headroom. "Unclippable" peak limiters with adjustable thresholds have also been provided. The FP24 receives power internally from a pair of AA batteries, or externally from a DC power supply (5-14Vdc), and is under 1kg.

An extruded aluminium chassis with protective metal end panels effectively protects the FP24 from rough handling in the field. On the front panel, sealed potentiometers ensure longer life and consistent gain adjustments. Display functions include dual-colour LEDs that indicate clipping and limiter activity for each channel, and seven-segment LED output meters with three selectable levels of brightness, one of which can even be seen in direct sunlight.

In addition, the FP24 links with Shure's FP33 mixer using the new A33LK cable accessory kit. A cost-effective solution for creating a 5x2 field production setup, this compact combination can be utilised to simultaneously accept a stereo microphone, hard-wired shotgun, and a pair of wireless lavalier mics, with all five microphone inputs receiving 48 volts of phantom power. The FP24 carries a recommended retail price of \$2595. • For more information, contact Jands Electronics +61 2 9582 0909.

## NS10 DISCONTINUED

Yamaha have announced that production of the NS10MS and NS10MC studio monitors will be discontinued. The decision was made by Yamaha, citing that the source of the wood pulp used in the woofer cone is no longer available. Despite a worldwide search for a replacement material, none was found that provided an acceptable sonic substitute. Spare parts are expected to be available for at least 5 years.

Released in 1987, the NS10MS and NS10MC were hailed for their consistent sound quality.

Yamaha recognize that the NS10s have been very popular for recording professionals, but are certain that the recently introduced successor, the MSP10, will more than meet the needs of the most discerning engineer.

The MSP10 bi-amped monitor has been designed for the professional recording, post production, broadcast, and project studio markets. Featuring an 8-inch long-throw woofer housed in a bass reflex design cabinet and a 1-inch pure titanium dome tweeter with wide dispersion waveguide horn, the internal power provides 120 watts for low frequencies and 65 watts for high frequencies. Full magnetic shielding eliminates virtually all stray radiation.

- Yamaha Australia 1800 331 130



The dbx 376 Tube Channel Processor is billed as a complete channel strip in a box, with a palette of processing tools feeding the processed result into dbx's Type IV Analogue to Digital conversion system. Included is a tube preamp section, with a 3-band parametric EQ, dynamics control with Compression and De-essing capabilities.

The 376's tube mic pre boasts the same features as its cousin, the 386, such as +48v phantom power, a phase invert switch and low cut filtering whilst also providing digital output capabilities in AES/EBU and S/PDIF formats with independent output controls. You can also select your sample rate (44.1kHz, 48kHz, 88.2kHz, or 96kHz) as well as dithering and noise shaping options for complete control of the digital output. The rear panel accommodates both mic and line inputs and outputs, word clock sync input and output, insertion jack and digital outputs. A\$1,695.

dbx is distributed by Jands Electronics Pty Ltd. For more information, please contact Jands on +61 2 9582 0909.

# Alone, the SRM450 Active SR speaker kicks serious butt. With our new SRS1500 Active Subwoofer, it violates strategic arms limitation treaties.

SRM450. Activus Accuratus

SPM100 Pole not included, but then you probably knew that already

SRS1500. Stampus YoRumpus Activus

Our SRM450 has redefined compact active speaker sound quality. Now the first 2-way system accurate enough to be called a monitor is joined by the bone-shaking SRS1500 Active Subwoofer.

Thanks to 600 watts of internal amplification, electronic equalisation and weapons-grade 15" LF transducer, it has the most low bass output of any "small" SR subwoofer. You get tight, baseball-bat-to-the-gut response down to 35Hz at -10dB, at up to 127dB SPL! A special 3" surround-wound voice coil dissipates heat and lets the SRS1500 crank all night at max volume.

Plus it has a built-in electronic crossover system so you can sure up passive systems' low end, too.

Hear the SRS1500/SRM450 combo at a Mackie dealer today. And then start showing your audience aound.

**SRS1500 Active Subwoofer** Takes up less than 3 sq. ft of stage space

- 600 watts of high-current! FR Series amp power built-in
- 15" LF transducer with 3" inside-outside-wound high temp voice coil
- Electronic phase and time correction circuitry
- Built-in electronic crossover for active or passive systems
- Level and phase controls
- Built-in pole socket and carry handles

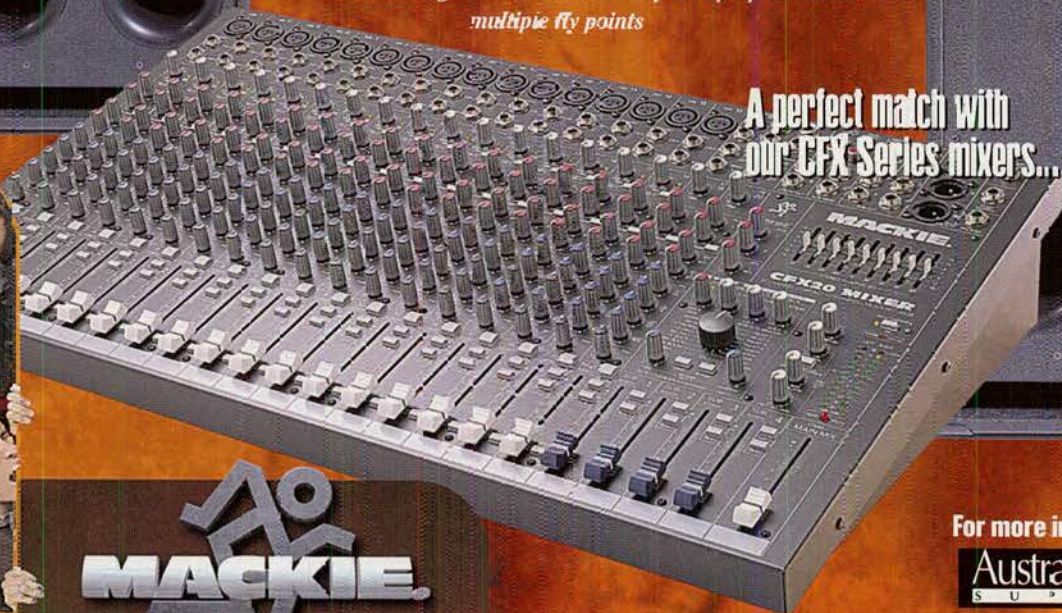
**SRM450 Active 2-Way SR Speaker** 400 watts of bi-amped FR Series amp power, 300 watts for lows/mids, 100 watts for highs • Ultra-wide audience coverage via multi-cell high-dispersion horn

- Damped titanium HF transducer
- Easy to carry - three balanced ergonomic handles
- Easy set up - pole mount + multiple fly points



The new SRS1500. Think of it as portable most fit in a 14.7 cubic foot enclosure with balanced carrying handles

A perfect match with our CFX Series mixers...



[www.mackie.com](http://www.mackie.com)

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Some of the gentle, sensitive Mackoids who make our active SR speakers in scenic Woodinville, USA and Reggio Emilia, Italy

What will you be using soon?

## ROSCO COOKIES

Rosco Cookies are the modern version of the familiar cucoloris, a large-format, wooden cutout used to cast shadows and textures in film light.

The Rosco Cookie is a 120cm x 120cm (4' x 4') plastic cucoloris designed to be mounted in a standard 4' x 4' frame and placed in front of a light source to create shadow shapes. The images are printed onto a tough clear film using heat resistant inks. They have an indefinite life and can be used individually or layered for more complex lighting effects or attach them from the top edge only and gently wave the cookie to create moving dappled animations for fire or water effects.

In theatre, create shadow lighting effects using the Rosco Cookies in front of a fresnel or open-faced light.

Currently available in 6 different designs, the Rosco Cookie is lightweight and easy to use, and can be rolled for convenient storage. RRP for a pack including one each of the six Cookies is \$396. A four-pack of any specific pattern costs \$275.

• **For more information, contact Rosco Australia for your nearest outlet +61 2 9906 6262.**



Water Reflections  
44664 4848



Flames  
44960 4848



Open Breakup  
44806 4848



Bare Branches  
44735 4848



Tree Breakup  
44774 4848



Breakup  
44805 4848

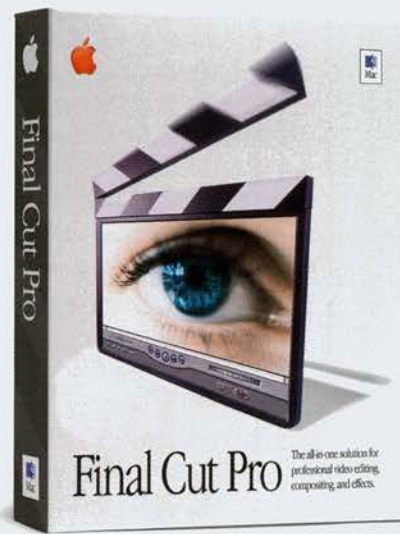
## Apple Introduces Final Cut Pro 2

### Real-Time Video Editing

Apple have introduced Final Cut Pro 2, the next generation of its award-winning video editing, compositing and special effects software. Final Cut Pro 2 is a powerful, all-in-one editing solution, featuring real-time editing, improved Power Mac G4 performance and a scalable architecture which allows users to output content into any video format.

With Final Cut Pro 2, real-time editing and compositing functions are seamlessly integrated into the video production workflow. By simply adding an optional, supported real-time processing card, video editors can instantly perform wipes, dissolves, and 2D motion graphics effects, dramatically increasing their creative freedom and efficiency.

With Final Cut Pro 2, video editors can work with all popular video formats, from Digital Video, to Beta SP, to High Definition (HD). Tools include a professional three-point editing model, drag and drop functionality, and trim-on-the-fly video for fast synching of video and audio; simultaneously output to a computer monitor, an NTSC or PAL monitor; work efficiently between online and offline systems using Final Cut Pro's Edit Decision List (EDL) import/export function; combine up to 99 layers of video, audio, text and graphics; and create special effects using Final Cut Pro's built-



in FX scripting language, or hundreds of supported Adobe After Effects plug-ins.

Final Cut Pro works with Apple's new DVD Studio Pro to form a complete system for professional digital content creation and delivery. From within Final Cut Pro, users can invoke DVD Studio Pro's compression engine to encode edited video sequences into MPEG2.

Using DVD Studio Pro, they can author sophisticated navigation menus, preview disk operation in real time, and burn DVDs using the

Power Mac G4's new SuperDrive for playback on consumer DVD players.

Final Cut Pro 2 pricing and availability is yet to be announced for the Australian market. Final Cut Pro 2 requires Mac OS 9.1, a Macintosh computer with a 300-MHz or faster PowerPC G3 or G4 processor, QuickTime 5, 192MB of RAM (256MB of RAM for real-time processing), and 20MB of disk space for installation. More information on Final Cut Pro, including a

list of certified, compatible hardware and software can be found at [www.apple.com/finalcutpro](http://www.apple.com/finalcutpro).

**For more information on Apple Products, the Apple website is [www.apple.com](http://www.apple.com) (Apple Australia's website is: [www.apple.com.au](http://www.apple.com.au))**

## Martin Professional to launch Exterior 200

The Exterior 200 is a conveniently compact and powerful 150 W, short throw, CMY colour changer in a specially designed weatherproof housing. Designed for outdoor use, its asymmetrical wide throw flood beam makes it ideal for applications where projection distance is limited.

A built-in light sensor, memory presets and DMX controllability add to its independent functionality. With an IP 65 rating, the Exterior 200 can withstand even the toughest outdoor conditions.

Asymmetrical beam characteristics of the Exterior 200 allow it to be placed close to architectural projection surfaces. The field angle is 70° and optional beam angles are easily interchangeable, making for an

extremely versatile color changer. The 150W source has a 6000hr lamp life. Colour temp is stable throughout the lamp's life.

The beam shaping function dynamically changes the round light beam into a rotating elliptical beam for easier coverage of architectural forms, illumination of hard-to-get-at corners or subtle illumination of architectural details with pinpoint accuracy. The adjusted beam provides precise building illumination with minimal loss of beam intensity.

Production has begun on the units, and they are expected to be available locally in about a month. Pricing was not available at time of printing.

• **Show Technology Australia, +61 2 9898 1111.**

# TRIPLE•C

## COMPRESSION MEANS EXPRESSION



### THE ONLY INSERT COMPRESSOR YOU WILL EVER NEED!

TRIPLE•C can deal with virtually any given source material. The three Compression techniques combined with an analog style user interface, presets and full MIDI automation make TRIPLE•C the most versatile and ergonomic Compressor on the market. Insert TRIPLE•C on a single channel or on a Sub group and achieve comprehensive results.

### MULTI BAND COMPRESSION

Multi band Compression allows TRIPLE•C to spectrally Compress your source material in three bands independently. The finesse and expression applied using TC's multi-award winning Compression algorithm ensures that Low, Mid and High bands processing avoid typical artifacts like "pumping" and "breathing" and reacts more intelligently avoiding overshoots and unwanted distortion. Consequently Compression becomes more transparent, yet more effective.

### ENVELOPE COMPRESSION

A brand new type of TC Electronic Compression allows you to alter the dynamic envelope of the incoming source by changing the Attack and Release gain. Applying this to percussive source material will allow you to change the original expression and thereby create an entire new sound. You have never heard anything like it!

### FULL BAND COMPRESSION

The most common form of Compression, TRIPLE•C simulates the best analog Compressors with the added luxury of user presets to achieve that "in your face" full band sound instantly.

### PRESETS

50 factory presets optimized for Vocals, Guitar, Bass, Breakbeats and more + 100 User presets.

### 24-BIT DIGITAL IN/OUT

24-bit Digital I/O's combined with balanced analog I/O's allow TRIPLE•C to be used in both digital and analog applications.

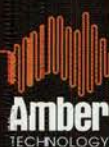
TRIPLE•C is available in both single and stereo channel versions.

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What will you be using soon?

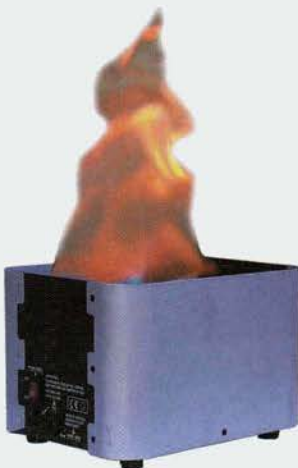
## Diablo Flame Light



Diablo is a flame effect using silk, light and a fan to produce the very realistic result. Ideal for a wide range of applications, including restaurants, night clubs, theatre, retail stores, and events, the Diablo is available in either a free standing or hanging bowl versions.

The replaceable flame silks last for an average 3 months of continuous use. For best effect, the Diablo should be placed above eye level. Designed for indoor use, the unit has a flame height of about 350mm.

For more information, contact ULA Pty Ltd phone 1800 648 111 [www.ula.com.au](http://www.ula.com.au)



## High Efficiency Fluorescents

The Desi-Lux fixtures provide very high output in a controllable fluorescent fixture. These fixtures are available in either manual or pole operated. The pole operated ones come in four versions: On-Off, Analog, DMX or Phase Control.

They use the 55-watt blax lamps (compact fluorescents) with a lamp hour life rating of 10,000 hours (which are also available in daylight or 32K), making a very strong and effective source.

The optical system in the Desi-lux fixtures is based on an optimised design of the reflector



system, which utilizes a big portion of the full lamp emission, boosting the total optical efficiency in such a way that the unit photo metrics are equivalent to the other brands of fluorescent lights of the same power that use

intensifiers. This enables the user to benefit of a smaller space occupied in the studio ceilings, lower total cost and lighter weight loading the supporting structure.

• Desisti lights are distributed by Coemar Desisti, call +61 3 9467 8666

## MARTIN SHOWDESIGNER – Software Design

Martin ShowDesigner (MSD) is a unique software tool that allows lighting designers to develop their lighting designs, using tools like 3-D computer graphics for advanced lighting simulation.

Realistic set and lighting design renderings using reflection, transparency, lighting, shadow and smoke are all possible. MSD also gives the ability to save drawings as a BMP or JPEG file, print your drawings or save them as an AVI or MOV to view a preprogrammed show using any standard windows video viewer.

The ShowDesigner contains photometric, size, weight, gobos, positioning, colours, zoom settings, intensity data on most fixtures available from numerous manufacturers. There

are generic fixtures, and the user can customize their own libraries. The MSD can also be connected to any DMX controller or DMX fixture using a DMX interface. Other features include an import function of 3D AutoCad files, and the ability to use any bitmap/JPEG as a texture.

Martin Show Designer (Software only) Code: MARROB983 Price: \$3635.45 ex tax  
MSD - DMX card 1 input/1 output (card only) Code: MARROB981 Price: \$908.18 ex tax  
MSD DMX PCMCIA (card only) Code: MARROB982 Price: \$2180.91 ex tax

For more information on the Martin ShowDesigner, contact Show Technology on 1 800 646 666

## Digital Video Distribution



The Pure Digital Fiberlink Serial Digital Video Transmission System utilises high-speed digital modulation techniques to transmit wideband, digitally encoded video signals in accordance with SMPTE 259M, 294M and 305M digital video standards at data rates of 143, 177, 270 and 360 Mb/s. The system simply transmits and receives the signal as is, including any imbedded audio and/or control signals. The transmitter

equalizes the input signal and is designed to operate with input coaxial cable lengths of up to 300 meters and provides an active loop-through output for monitoring purposes. The receiver contains a re-clocking circuit which produces an output with extremely low jitter and will drive up to 300 meters of coax.

Integral LEDs are provided on both the transmitter and receiver to continuously monitor the presence of the digital pulse stream as well as to indicate the proper operation of the units. In addition, built-in regulators allow both units to operate from low voltage unregulated DC power sources. The product is one of the new range of Pure Digital Fiber Optics transmission systems for video, audio and data. Further detail can be found at:

[www.vgav.com.au/3120sdi.htm](http://www.vgav.com.au/3120sdi.htm)

Current recommended sell price for Pure Digital Fiberlink SDI Video is \$1,875 per end (transmit and receive) for multimode; and \$2,425 per end for single mode. For more information, contact the local distributor: VGAV Pty Ltd +61 7 3353 8988.



## Tube Preamp Channel Strip w/ Digital Out

# It's Time to Change the Channel...

In the digital world, you're only as good as your weakest link or channel. So, why settle for any less than the warmth and integrity offered by the new dbx® 376 Tube Preamp Channel Strip with 96k Digital Outs? For more than 25 years dbx has been setting the standard, and the 376 is the culmination of these years of innovative success.

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- Selectable sampling rates (96, 88.2, 48, 44.1kHz)
- 24, 20 and 16 bit wordlengths
- Word clock sync input and output
- Selectable mic/line switch
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What will you be using soon?

**HAMDON STUDIOS LOOK TO THE FUTURE WITH FAME**

Hamdon Sound Studios, a well-respected and in-demand full service studio in Perth, Australia, has chosen a Fairlight FAME as the main workhorse of its new studio.

Doug Hampton, Managing Engineer, describes his facility this way: "We currently have two studios that both feature Fairlight equipment as the centerpiece of their operations. The original studio in West Perth is centered around a 16 output MFX3plus, while our new studio, in Northbridge, features the 32-fader FAME system."

According to Hampton, "The FAME had a demanding initiation on a series of television shows called "Animal X", produced locally by Storyteller Productions for Discovery Channel International.

- Fairlight, +61 2 8977 9923  
www.fairlightesp.com

**Futurelight Release the Intelligent 575**

The MH-840 and MH-860 are Futurelight's latest additions to their moving head range.



The new features for the MH-860 include 2 colour wheels, combinations of which can produce over 81 different colours and semi colours.

Two gobo wheels, one of which comes with 9 static metal

gobos and open, and the other has 6 rotating gobos - 4 metal and 2 glass. The unit also has prism and focus control. The MH-840 wash

light uses a CMY-colour system.

Both units have a pan movement of 530 degrees and a tilt of 285 degrees. The speed of the ventilation-fan can be reduced for theatre work etc, where minimal background sound is required.

The combined Shutter/Dimmer unit enables smooth dimming and a fast strobe effect of up to 10 flashes per second.

A\$8,899 each, inc gst.

- Coemar Desisti, +61 3 9467 8666



**Analog Way Smart Fade**



The new Smart Fade is the latest offering from Analog Way, manufacturer of video switching technology. With a total of seven inputs (five video and two computer), the Smart Fade is capable of seamless fades between all available inputs.

Incorporating a video scaler, the Smart Fade scales all video inputs to the same resolution as the selected computer input.

The Smart Fade then essentially 'genlocks' these two signals together, so when fades or cuts are performed, the projector is always receiving a constant sync signal, thus creating a seamless transition. This eliminates the unsightly on-screen glitches that would normally occur when changing input sources on the projector or external switcher. Each of the seven video inputs have a stereo audio input - balanced ones for video inputs and unbalanced for the computer ones.

These audio lines have input attenuation and master volume control. Smart fade has adjustments for sharpness, brightness, contrast, colour, aspect ratio and gamma, it also has freeze control.

All front panel controls and adjustments can be made via RS232, or with an optional keypad. With all of its control features and number of AV inputs, Smart Fade performs the function of a vision switcher with good versatility. \$9,500 (plus GST)

- Contact AXIS Audio Visual, on +61 3 9761 2688.

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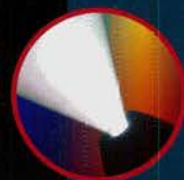
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 Germany, Toronto, Orlando

\*features vary by model

What will you be using soon?

## LCD from NEC



### New Flat Panel Monitor offers users one of the largest 'Pivot Enabled' displays available on the market

NEC Australia have announced the release of the NEC MultiSync LCD2110, 21-inch LCD monitor. With a 21.3-inch viewable image area, native 1600 x 1200 UXGA resolution and an ultra wide viewing angle of 170 degrees, the NEC MultiSync LCD2110 is suited to professionals who are looking to increase productivity by displaying more information.

The introduction of the LCD2110 also sets a new standard as the largest Pivot Enabled display. Measuring just 246mm deep and weighing 10.5kg, the LCD2110 has a RRP of \$16,175, and includes a three-year limited warranty on parts, labour and backlight.

• Manufactured and distributed by NEC Aust Pty Ltd phone 131 632 or visit [www.nec.com.au](http://www.nec.com.au) or [www.necmitsubishi.com](http://www.necmitsubishi.com)

## New AV Technology from Inline and Kramer



AV Technology, importer and distributor for a few manufacturers including Inline and Kramer, announce some new products.

From Kramer are four vision switchers in their XLM range. The VS-1001xlm, 801xlm, 601xlm, 401xlm switchers each control 10, 8, 6 and 4 inputs to 1 output. The output on these switchers is split to provide three identical outputs of the selected input. Vertical interval switching, stereo unbalanced audio, RS-232, RS-422 and RS-485 ports as well as contact closure control make these switchers very flexible for many applications. Switchers can be stacked for Y/C, RGBS etc. configurations.

Kramer have also released the VS-88V - a 200MHz video bandwidth 8x8 Composite Video Matrix. It is a true matrix, allowing the user to route any input to any or all outputs simultaneously. It switches during the



vertical interval and transitions are glitch-free when sources share a common reference sync. Both the front-panel touch switches and the built-in RS-232 and RS-485 interfaces may be used to control the machine. The companion device - the VS-88A - is an Audio Matrix for balanced stereo audio signals. It is identical in control to the video matrix.

From Inline comes the CIA114 a wall mounted interface featuring VGA type video connections in and out as well as balanced audio as standard. Auto Power On/Off at connection of input cable and buttons for horizontal position and monitor emulation control. Available in black or white.

Inline also have released a new high-resolution video and stereo audio transmission and receiving devices using Cat 5 cable. The TPT101 Transmitter and TPRI01 Receiver can send signals up to 150 metres using unshielded Cat 5. The system supports all resolutions from VGA to UXGA as well as Mac, Sun and SGI signals. A single cable installation allows users to run video and remote power, or video and mono, audio (local power supply required). A dual CAT5 cable installation accommodates RGBHV video, stereo audio and remote power.

• New product catalogues for Inline and Kramer products can be obtained through AV Technology at [www.avtechnology.com.au](http://www.avtechnology.com.au) or by phoning +61 7 5531 3103.



★ PHILIPS ★ PROXIMA ★ SANYO ★ SHARP ★ SONY ★ TELEX ★ 3M ★ AMPRO ★ BOXLIGHT ★ CANON ★ EIKI ★ ELECTROHOME ★ EPSON ★ FAROUDJA ★ HITACHI ★ INFOCUS ★ MITSUBISHI ★

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# DIGITAL VIDEO

Recording and playing back video from a digital source is becoming more and more common in large-scale presentations and numerous permanent installations. This market report looks at the options currently available for people looking to make use of the numerous digital formats available - and there are a few paths to choose from. Manufacturers were asked to submit a representative sample of products for this category, and quite a diverse range arrived. John Grimshaw compiled this report.....



### Alcorn Mc Bride Digital Video Machine 2 **HOT SELLER**

This device replaces laser disc and VTR machines in permanent video playback installations. Storing over one hour of quality MPEG2 Video and Audio on its internal hard drive, the DVM2 offers the advantage of near instant access times and zero maintenance. Video is downloaded using Ethernet or direct file transfer and can be updated over the Internet should the application require this. Outputs available include S- Video, Composite Video, RGB. The unit can be controlled via Serial or Parallel and programmed to play selected playlists or individual tracks at pre-determined times.

- DVM2L-5GB \$3843
- EAV Technology Pty Ltd +61 3 9417 1835

### Apple Power Mac G4 733Mhz **HOT SELLER**

Up until recently, Mac users could save their digital movies as Quicktime files, export back to digital video tape, or transfer over to Betacam or VHS. However, the introduction of Apple's new Power Mac G4 733Mhz model in January this year - which features the industry's first combination CD-rewritable and DVD writeable drive - means DVD authoring is now available on desktop computers for the first time.

Now digital movies and images can be stored on a DVD which can be viewed in commercial DVD players. The combination CD-RW/DVD-R drive, dubbed the 'SuperDrive', is the hardware part of the equation, but is backed by Apple's own DVD-authoring software, iDVD and DVD Studio Pro.

For professionals, DVD Studio Pro provides additional functionality and powerful authoring tools to multimedia creators. The comprehensive software allows the use of motion and still menus, up to 99 tracks, multiple angles, multiple stories, slide shows,

multiple languages, scripting and more.

Working in tandem with Final Cut Pro, DVD Studio Pro handles all aspects of DVD authoring from the MPEG encoding through to writing the finished disc. It also offer support to write the project to DLT digital tape which can then be handed over to a DVD replication facility for mass quantities.

- PM G4 733MHz with 256MB RAM, 60Gb HD, DVD-R,CD-RW \$7,495.00
- Includes iDVD and iMovie 2. Additional software Final Cut Pro - \$1,741 and DVD Studio Pro - \$1,749

### DoReMi Labs - V1D **HOT SELLER**

Video Formats Inputs & Outputs - PAL/NTSC Composite, SVHS; Video Sync input. Time Code in/out - VITC & LTC; Audio-2(4Max) Audio Channels; Video Compression



- 2:1 to 34:1; Other- Wide SCSI, 2 RS-422 ports, Biphase, 10Base-T

- \$18,830 plus storage and options
- Syncrotech Systems Design  
+61 2 9879 0800

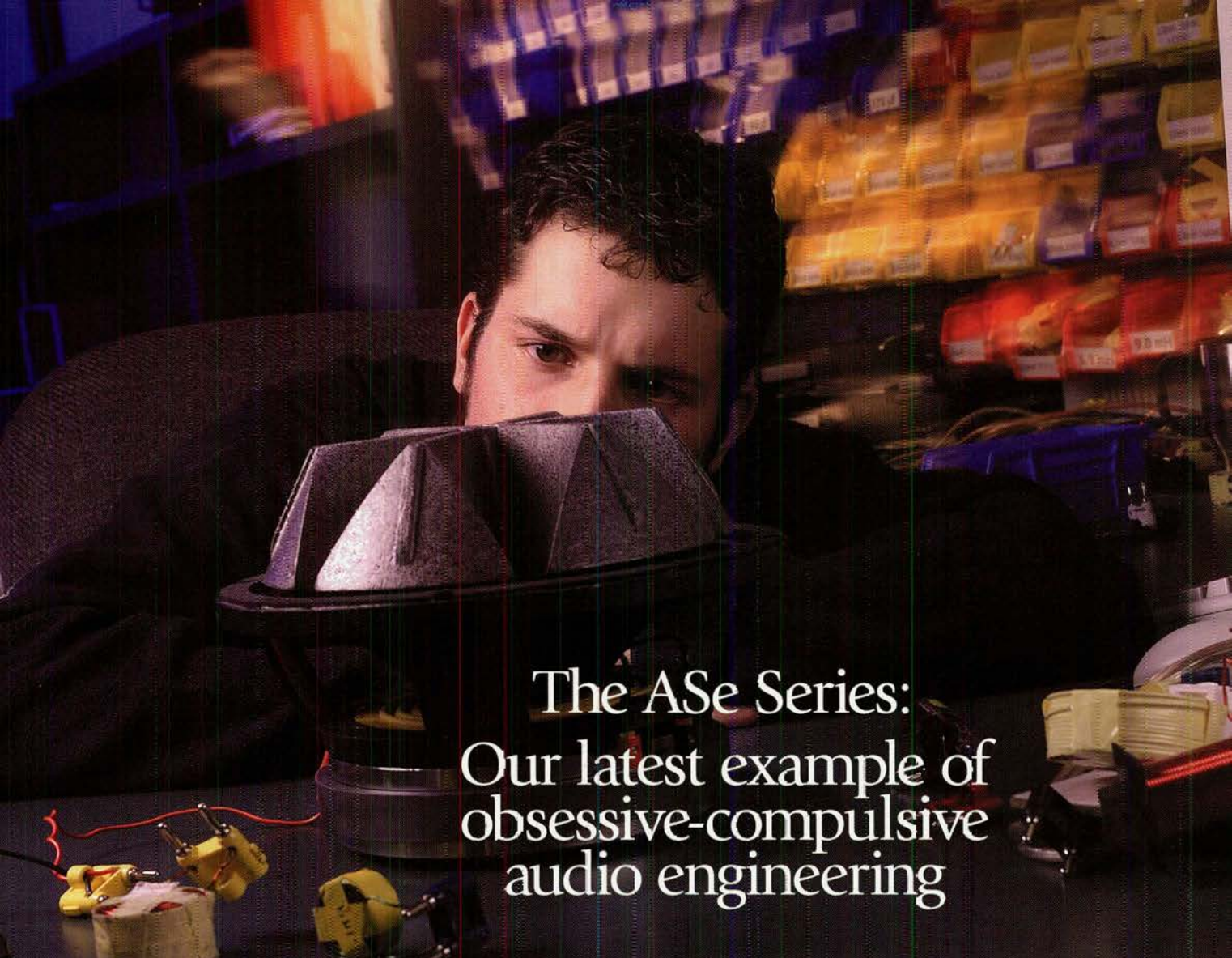
*"The V1D has been designed for high-end video production and broadcast applications, the V1D has all the features of the V1 plus a serial digital component interface "SDI" (SMPTE259M, 270Mbits/sec) as well as 4 tracks of analog/digital audio. It is fully compatible with the V1."*

### DoReMi Labs - V1

Video Formats Inputs & Outputs - PAL/NTSC Composite, SVHS; Video Sync input; Time Code in/out - VITC & LTC; Audio-2(4Max) Audio Channels; Video Compression- 2:1 to 34:1; Other- Wide SCSI, 2 RS-422 ports, Biphase, 10Base-T

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JVC HR-DVS1EA

### DoReMi Labs - V1UHD

Video Formats Inputs & Outputs- HD-SDI - YPbPr in/out 720p, 1080i, 1080 24p and 24sf; Sync- Tri Level sync input, DVITC. Audio- 2(8Max) Audio Channels, embedded audio; Other- Dual Loop Fibre Channel2 RS-422 ports, Biphase, 100Base-T, 8 or 10bit recording.

- \$81,650 plus storage and options
- Syncrotech Systems Design  
+61 2 9879 0800



JVC HR-DM10000E

### JVC HR-DM10000E HOT SELLER

Digital VHS Recorder- High quality uncompressed picture and sound with pure digital recording. 14.1 Mbps data transfer rate (compared to average of 4.7Mbps of DVD) to record the full quality of digital broadcasting (via a set top box). 21 hour recording per cassette. Video navigation system for pinpoint access. Digital-to-Digital dubbing from DV. Analogue Super VHS and VHS compatibility. Synchro Edit with LANC control. Gold plated front AV inputs and S-video input. Audio level indicator, auto wide mode, NTSC playback on PAL TV with Hi-Fi audio.

- \$3749.00
- JVC 1800 225 044

Pioneer DVD-V7300D



### JVC HR-DVS1EA

MiniDV/Super VHS Hi-Fi Nicam Stereo VCR. Mini DV format (500 lines horizontal resolution) with PCM digital audio (2 channel or 4 channel). Super VHS with DigiPure Technology and Hi-Fi VHS stereo. DV input/output (i.Link, IEEE 1394 compliant). "EasyEdit" with Random

Assemble Editing including Digital Special Effects, one touch dubbing, DV Insert Editing and Stereo Audio dubbing. S-VHS/VHS Insert editing with Flying Erase Head. nExpress programming, Jog/shuttle remote control.

- \$3259.00
- JVC 1800 225 044

### Panasonic DV10000

The DV10000 provides top-quality video editing and sound mixing using the digital video (DV) format, as well as featuring picture and sound quality comparable to that of professional-use VCRs. It is ideal for editing enthusiasts who want to create professional-looking videos.

Features include detachable wireless controller, a range of versatile editing terminals, extensive video editing features, 'Super linear slow' technology for smooth frame-by-frame accuracy in playback mode and a sophisticated audio mixing feature makes use of the DV10000's dual-stereo 12-bit mode to allow an external audio signal to be layered onto a recorded tape.

- \$6,031
- Panasonic Australia Pty Ltd 13 2600

### Pioneer DVD-V7300D

PAL/NTSC Industrial DVD Player. This is a true heavy-duty DVD player designed for constant use and bears little resemblance to a home DVD player. It is fitted with a high performance brushless spindle motor combined with a heat and dust resistant enclosure within which the disc is played. It is only 210mm wide (for side-by-side rack

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The DVD-V7300D is ideal for a variety of professional and industrial applications including in-store sales promotions; education; corporate training; museums and exhibitions; videowalls; trade shows and public presentations.

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mounting) and weighs 4.5kg.

RS-232C control, heavy duty mechanism, external sync playback, seamless frame search, weekly timer, mouse & keyboard control, graphic overlay with video blackboard, non-volatile flash RAM for storing user data, optional bar code reader.

- \$2,350
- Pioneer Australia +61 3 9586 6310

**Sony DSR-11 HOT SELLER**

Low-cost compact DVCAM VTR Features include i.LINK in and out (DV In/Out), LANC control & Control-S interfaces, Dual size cassette mechanism, DV & DVCAM recording and playback, PAL / NTSC playback and record (multi region) , Horizontal or vertical operation, Half Rack design, S-Video/ Composite analogue inputs and outputs, Auto repeat function, DC power operation, Supplied with wireless remote control.

- \$5,570
  - Sony (Professional Sales) +61 2 9887 6670
- "The DSR-11 is the latest edition to the DVCAM range, and is designed for the entry level non-linear world, where customers using the i.LINK connection will never use many of the traditional analogue outputs or controls. The unique design allows either horizontal or upright operation with the supplied stand, making it very space efficient and giving the unit a very modern appearance. As with all DVCAM products, the DSR-11 uses a track pitch of 15 microns, compared to 10 microns used in consumer DV. This provides a more stable and robust recording signal in extreme conditions. Sony's DVCAM range has just eclipsed the 200,000 mark in worldwide sales, making it one of the most popular professional video formats of all time."*

**Sony DSR-50P**

DVCAM Porta-pack with LCD monitor, Built-in 2.5" LCD monitor, i.LINK in and out (DV in/Out), Analogue component output, 26 pin camera interface for porta-pack use, Lightweight & compact, DV or DVCAM recording/playback, Dual cassette mechanism, Four-channel independent digital audio recording, Duplication functions, Timecode input / output, Battery or AC power

The DSR-50P is the ideal product for migration to digital recording for anyone who invested money in S-VHS and Hi-8 cameras, and cannot afford to upgrade to a new Camcorder and Lens. The LCD screen also provides field monitoring, which is particularly useful if the unit is being used to back-up critical footage from a camcorder.

- \$12,661
- Sony (Professional Sales) +61 2 9887 6670

**Sony DSR-1500P**

Master Series DVCAM Half rack editor VTR, Compact 1/2 rack design, DV, DVCAM,

DVCPRO25 playback, Triple size cassette mechanism.

Versatile digital interface options - SDI, SDTI (QSDI), i.LINK. With standard analogue inputs and outputs (Component, Composite, S-Video, XLR Audio, RS-422A 9 pin control interface), wide digital slow range from -0.5 to +0.5 times, Excellent jog audio capability, Built-in SMPTE/EBU time code and VITC generator. Sony's DSR-1500P is part of Sony's "Master Series", the flagships of the DVCAM VTR range. With robust construction and compact design, the DSR-1500P is perfect for use in confined spaces such as OB Vans and edit-suites.

- \$13,310
- Sony (Professional Sales) +61 2 9887 6670

**Sony DSR-1800P**

Master Series DVCAM Editing VTR , DVCAM Studio Player, DV, DVCAM, DVCPRO25 playback, Triple size cassette mechanism, Jog Dial on front panel.

Versatile digital interface options - SDI, SDTI (QSDI), i.LINK. With standard analogue inputs and outputs (Component, Composite, S-Video, XLR Audio, RS-422A 9 pin control interface), Digital slow from -0.5 to +0.5 times, Jog audio capability, Built-in SMPTE/EBU time code and VITC generator The DSR-1800P is a "traditional" style VTR, with features such as jog/shuttle and a wide range of digital vary speed The DSR-1800P will replay DV/DVCAM and DVCPRO25, making it perfect for applications such as news edit suites and post production.

- \$20,570.
- Sony (Professional Sales) +61 2 9887 6670

Sony DSR-11



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# Taking the Spirit Digital 328 on the Road

Location sound recordist, Guntis Sics, sought a new Spirit Digital 328 mixing console for work on 'Moulin Rouge'. He writes:



When I landed the job of location sound on Baz Luhrmann's new film, 'Moulin Rouge', it was time to get a new mixer. I chose Spirit's Digital 328 - what appealed to me was that it's more like a standard mixer than a computer, but with the new age technology I needed.

Baz likes to have all options open to him on set and he creates a truly dynamic environment where anything can happen and often does. This was not at all the traditional musical, which is all shot to playback. Some of the singing was live, some of this to pre-recorded music, some to live keyboards, some through the PA and some through in-ear monitors. We also set up a booth to record new vocals on set. Oh, and of course, there was the performance dialogue too.

The Digital 328 became the centre of the world for this enterprise. The basic idea of the system was Protocols for playback (and some recording), a DA98 for the main recording, and another smaller digital mixer for the monitor mix. The pre-recorded music came split into vocals, music and timecode and on the day I would use up to twelve microphones as well.

The Digital 328 was able to control all these connections in a very intuitive way. I could even have full bi-directional of functions in Protocols with the Spirit's Midi bank, and you've got to love that. The TDIF connections were used for the DA98 and the other digital mixer, AES/EBU went to a DAT safety copy and the SPDIF ran back into a Digidesign 882/20. The four auxiliaries were used for comms, as were the four on the other mixer via the TDIF connection. The whole system was easily clocked together from a dbx 386 tube preamp.

One of the complications of this job was sending discrete mixes to various key people. For example, the vocal continuity person checking for lip sync needed a mix tipped towards more vox and less music. Directors have specific requirements as did the music producer, Marius DeVries, who

quite often ended up on the keyboards accompanying the actors during scenes. His mix could change several times during a single shot and I made full use of the snapshot facility every day.

The snapshots are one of the true wonders of working with a digital desk, being able to set up for any situation and recall it instantly. Let me tell you, it's a terrifying sight to see a director rushing towards the booth with an actor wanting to record a new line in Protocols for playback in 30 seconds flat. Aaah... the recall button. What a dream!

It's also handy to be able to put a mic on an actor, find good EQ settings for it and stamp it into the memory bank. Of course, setting the EC is easy with the E-Strip and in fact adjusting any parameter is a piece of cake because the Spirit is a mixer, not a computer. Another truly fantastic feature is Query Mode, the ability to hold down a button and see assignments to it - a real time saver.

I've since used the Spirit on a remake of 'South Pacific' in Port Douglas (another musical, aaarrggghh!!!), and if I had any doubts about the worth of this mixer they were quickly doused. I gave it the full film location treatment - by that I mean extreme heat, dust, sand, rain (tropical of course), condensation, sun, rough transport, Bundy and coke (only kidding)... In short, everything film sound equipment was famous for being able to handle, and it survived intact when much of my other equipment didn't.

You can just picture me, mixer under one arm, barefoot and trudging through crocodile infested swampland in 40 degree heat, confident that the 328 will put in another solid sixteen hour day without missing a beat. And I'm not kidding about the crocodiles.

Spirit is distributed by Jands Electronics Pty Ltd +61 2 9582 0909



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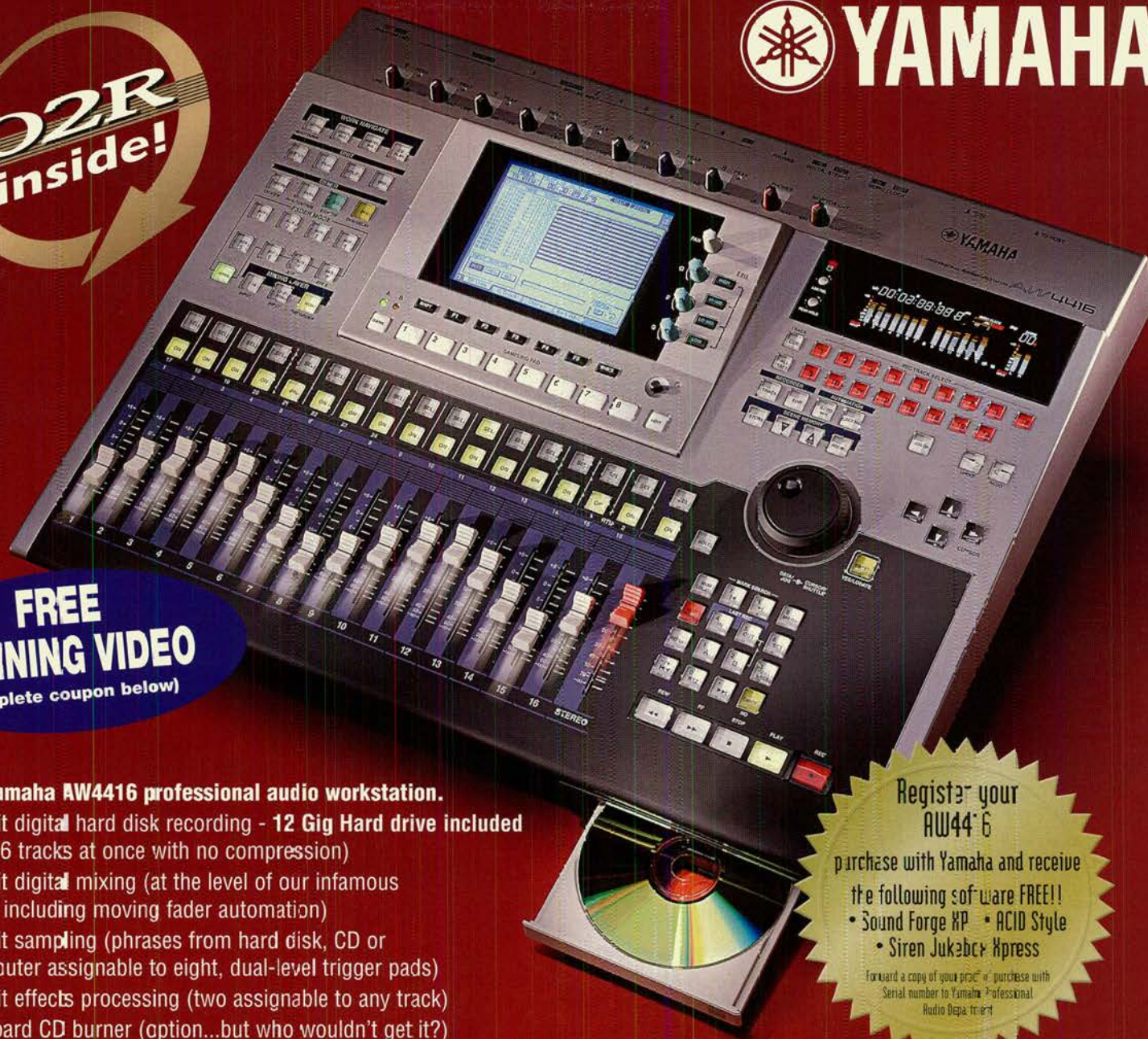
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Return to: **Yamaha Professional Audio, Yamaha Music Australia, PO Box 268, South Melbourne VIC 3205.**

# DJ Gear



## New, funky, or legendary. We detail it!

Numark's Phat Trak DJ cartridge (above) has a self-powered headlight, with a switch on the underside of the arm lift that turns the light on for 30 seconds.

Never miscue a record again!

• A\$189, from Show Technology, 1-800-646 666

### P & G Pro Faders are a hit in DJ consoles

Penny & Giles Controls make the fader of choice for top end live and studio pro mixing consoles. Their X3000 DJ crossfader feature conductive plastic track technology, with multi-finger precious metal contacts and hard-wearing bearings. The plastic track can even be washed to maximise its useful life, and all components are available separately for future replacement.

Allen & Heath's new Xone family of DJ mixers feature the X3000 crossfader.

• AH Mixers from TAG, +61 2 9810-5300

It's a culture. With only a little relationship to the mobile DJ at your cousin's wedding. Every event seems to feature a DJ, some of whom travel the world first class with just a box of vinyl as their tool of trade. Smart new promoters can fill the Tennis Centre, or sell out a venue like Metro, where scalpers then get \$800 for an \$80 ticket. And big money builds big clubs, one opening every month this season in Sydney. Kids are spinning music, and the wedding DJ is still working every Saturday night for \$300. As fashion melds with music, there seems no stopping DJ culture. Connections looks at a cross section of DJ tools and devices, from amateur to serious professional.

### The turntable that started it all

This is the legend, the device that no one will ever deny is An Industry Standard. This is what the Shure SM 58 is to microphones, and what the Par Can is to lighting rigs. Yep, the Technics SL1200 Turntable (right) has been there since as long as we remember, and now it lives on as the Mark II.

Priced at A\$1351, it boasts total quartz locked continuous pitch adjustment up to *plus* or *minus* 8%. It's the durability and the accuracy of this thing that has made it as popular as it is. Wow & flutter are almost unreadable at 0.01% WRMS, and rumble is a quiet -78db (DINB). Very high torque (1.5kg/cm) helps quick startups, and the high sensitivity low mass tonearm has gimble suspension, and helicoid adjustment.

Legendary! • From ULA, call 1800-648-111



### Denon's new breed digital turntable

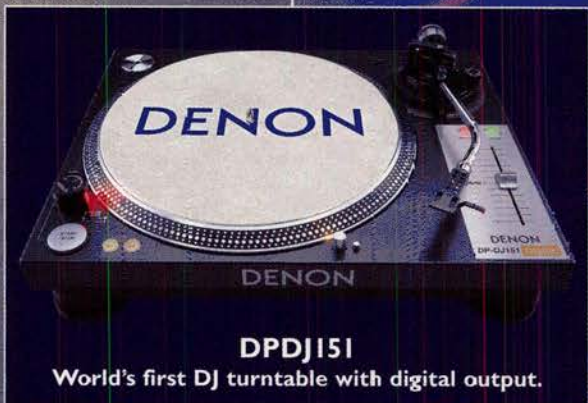
Boasting digital output for direct CDR, DAT, ME, PC recording and mixing, Denon's DP DJ 151 (bottom) also has high specifications. It boasts a pitch range of  $\pm 12\%$ , switchable line level or phono output, S-shaped Tone Arm, 3-way electronic brake effect; a Pop-up Target Light, and it doesn't need a ground wire. Sells for A\$999.

Distributed by Audio Products Australia, 1-800-642-922





**DPDJ101**  
Professional direct drive DJ turntable.



**DPDJ151**  
World's first DJ turntable with digital output.

# COMPARE DENON!



**DNI800F**  
Professional standard dual CD player for the "bedroom" or "mobile" DJ.



**DN2100F**  
Dual CD player with seamless loop, break effect, key adjust and program playback.



**DN2600F**  
Dual CD player with sampler, sound effects and digi-scratch.

DENON DJ turntables have stormed the DJ market with two new models, the DPDJ101 and the DPDJ151. These two turntables have the build quality, features and performance to rival any turntables currently available.

DENON Dual CD players are legendary as market leaders for many years. The latest models, the DNI800F, DN2100F and DN2600F offer performance and quality at a competitive price for all levels of DJ.

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DJ Gear



**Citronic Total DJ Starter Pack**

Citronic's Total DJ is the ultimate beginner or home user DJ Pack. It comes complete with 2 Citronic PD-1 Direct Drive Turntables, 2 Stanton 502AL cartridges, 2 slip mats, a CDM1 Mixer, Citronic Headphone and Microphone. Plus, there's even a Citronic t-shirt.

- A\$1,439 from ULA, call 1800-648-111

**Pioneer claim DJ market leadership**

Pioneer's DJM-600 mixer is the most requested product of its type in the world, they say. Who are we to argue? It features full EFX panel, BPM counter, fader for stop/start control, enhanced input-output channels, 4 to 8 switchable channels, send/return and cross fader curve. Well known DJs such as Oakenfold, Sanchez, Seaman and Phil K use this desk. RRP A\$2,200.

- Pioneer, +61 3 9586 6300



**VINYL RECORDER**

Vestax's VRX 2000 is a real time acetate cutting machine, allowing any audio source to be duplicated on to vinyl.

Any audio source such as CD, MP3, tape or mini disc can be easily duplicated. The most stunning feature of the VRX 2000 is the durability of the records. Unlike traditional acetates that have a very limited lifespan, the 'blanks' used with the machine will last 90% of the time as standard vinyl. This is due to the fact that the VRX 2000 utilises a new plastic for the blanks called 'Harmodisk', which offers excellent reproduction quality and durability previously unheard of. Blanks will be avail-



able for around the price of an import record. 15 minutes can be recorded on each side at 33 RPM, however the machine will also cut at 45RPM. Price will be around 17 grand or so.

- Vestax from Music Link +61 3 9765-6565.

**Turntablist fraternity grows**

Stanton is the new major league player on the DJ gear front, their range of mixers includes the SK-2F (pictured at right) 2 channel scratch mixer with their 'Focus Fader' - said to give almost zero resistance and the quickest cut-in time of any crossfader on the market. A\$972

Stanton proffer a range of mixers, from A\$499, and the Trackmaster II RS turntable sells for A\$259.

Finally, their DJF-1 is a dedicated resonance filter designed to give additional movement and depth to any DJ's performance, at A\$695. • Stanton is distributed by Jands, +61 2 9562-0909



**'Worlds First' Digital DJ Mixer**

Denon's DNX800 takes full control of advanced mixing capabilities and performance features found on Denon's DN1800F, DN2100F and DN2600F CD players. X-Effects such as Denon's Hot Start, Fader Start, Brake and Sampler functions can be controlled.

The DNX800 also offers a wide range of input and output options. Fourteen different accessible inputs are provided. Four digital SPDIF inputs, 8 line, 3 phono and 2 mic inputs are included,

plus 2 digital SPDIF outputs. A\$1,399

- Denon is Distributed by Audio Products Australia, 1-800-642-922



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Finally, in the tradition of saving the best until last, our favourite Vortex Series feature is one that counts most – it's price! With more watts than dollar cost, you'll not find another amplifier that compares with Vortex quality. That's a fact. Vortex has the ability to transform your good audio system into an extraordinary one at a realistic price. You owe it to yourself to take a listen and hear the difference.

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CAMCO's DX-Series (left) sets new standards: high performance power amplifiers based on the worldwide industrial standard – rugged and reliable engineering, accurate and neutral acoustic properties. Quality made in Germany on the basis of CAMCO's many years of experience as a worldwide exporting company. The DX-Series meets the requirements of sound reinforcement systems head on, then raises the standard so others can only try to keep up.

DJ Gear



**Gemini UMX 5 MIXER**

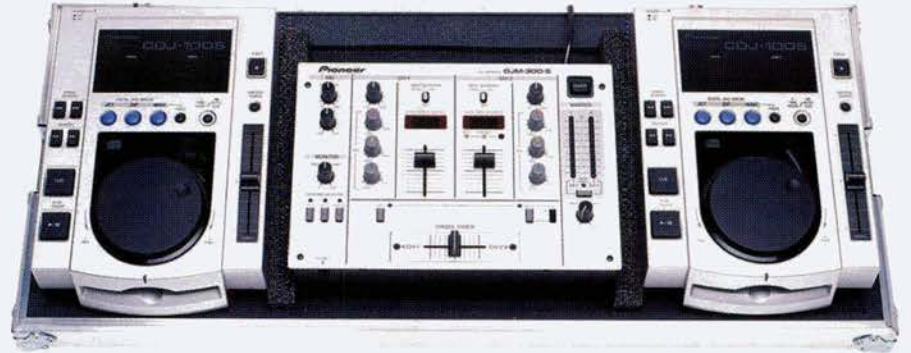
The UMX 5 is a two channel battle mixer which offers a 12 month, no questions asked crossover warranty, they say. So, Hulk Hogan can work as your DJ, and Gemini will replace the fader each time he tears it out of the chassis!

Each channel features three band EQ, gain, per, 3 way curve selection, metering dual inputs.

The UMX 5 also features a crossfader reverse switch with LED indicator and a crossover curve control. A\$999.

• Vestax is now distributed by Music Link +61 3 9765-6565. Note that former distributor Moore Music is *No More*.

- ROLAND offer exotic devices for the DJ market. Call +61 2 9982-3266.
- Electrix make very cool DJ processing, call Major Music, +61 2 9545-3540.
- Omnitronics offer a large range of mixers, decks and DJ pro tools. Call +61 2 9666-1935.
- Lightsounds also have a VERY large range, call + 61 2 9568-2100.
- Peak Audio (from CMI) have some value for money DJ mixers too. +61 3 9315-2244



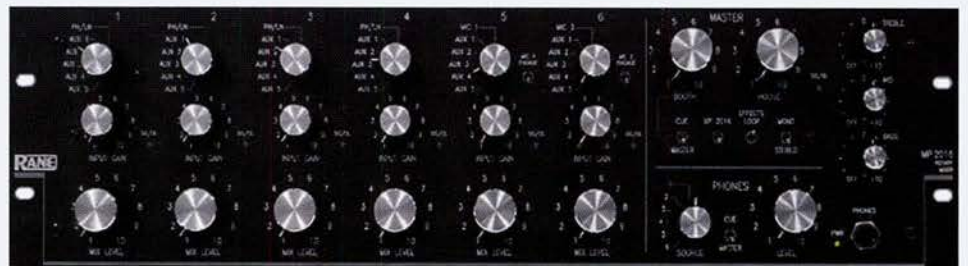
**3 Pack from Pioneer**

Pioneer's CDJ100S 3 pack is the most popular selling package for aspiring DJs and mobile professionals. It features three built in EFX slot load CDs, large jog dial and pitch control. The two channel DJM300S mixer is the perfect match, with fader start and auto BPM. Clean and punchy, it is the battle mixer for this century. RRP \$2899.

• Pioneer, +61 3 9586 6300

**Dare to be different?**

This is Rane's top of the line club mixer. Featuring 6 channels of rotary control offering a total of 9 inputs, the MP2016 (below) gives DJ's the ultimate in audio quality and control. With a switchable effects loop, 2 mic inputs, separate house and booth outputs and five auxiliary inputs, the MP2016 will cater for the needs of small



**Numark's TT 100 Turntable**

Numark's Pro TT-100 direct drive turntable includes + 20% pitch control, and 33, 45 or 78 RPM speeds. Also it has forward and reverse platter direction, a pop up target light, quartz lock, adjustable feet, a 45 RPM adapter and holder, a removable plastic lid and an extra stylus holder. Sells for A\$869.

• Show Technology, 1-800-646 666



venues to superclubs such as London's Ministry of Sound who have just installed an MP2016 in their main DJ booth. RRP: \$4545

• Rane from Jands, +61 2 9562-0909



**The EXF500 DJ Effector**

(left) from Pioneer has 25 effects. This sexy device has top panel operation and a working system well suited to live performance. This all

new Effector has a DJ perspective and instrument feel, with further evolved beat effects. The Jog Dial actualizes realtime effect performance, allowing 25 different effects in a 5x5 combination. Users' digital sound world can be expanded by connecting this machine to a mixer, player and electric instruments. A\$899.

• Pioneer, +61 3 9586 6300

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*Applications:* Toms, snare, timbales



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*Applications:* Overheads, instruments



**KBM 412**  
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\$349 RRP

The TSM 411 provides crisp, detailed reproduction of high ballistic sound sources. Built tough with a new internal shock mount, it can take the knocks.  
*Applications:* Kick, acoustic guitar



**PMP SERIES MIC PACKS**



The PMP-Series Packs feature the new CAD TSM411, ICM417 and KBM412. With their sturdy road-case, these mic packs offer professional quality at affordable prices.

**PMP-32** \$695 RRP  
1xKBM412, 2xTSM411

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1xKBM412, 4xTSM411

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# Contractor Audio Devices

## WHERE DOES THIS ONE GO?

By Rod Pascoe

An Adelaide based software developer has come up with a program to make the job of tracing cables around studios and auditoriums less of a hit-and-miss affair.

"Dr. Cable is a way of recording information about cable location and destination so, instead of scribbling details on bits of paper, you just type the information into a laptop in a very systematic way," says Michael Rowan, software developer and managing director of Networker Corporation.

"It records the types of cables and connectors and the various ways they are connected. And having done so, you can use it for project management and raising work instructions whereby for example, it tells a technician to go and get a piece of 10 pair audio cable and place it from A to B and hook it up like this.

"Dr. Cable tells him/her the colour-coding on the cables and the pin numbers on the connectors, and so on. After the installation work is done and some modification or maintenance is required, you can call up all the connector names and pins which carry this signal, for example, Studio C - Output Left, and it will give you a list or a schematic diagram of everywhere it goes."

Rowan has been working on the idea since he was approached by the ABC to come up with a solution for tracing the multitude of cables running through the radio studios in Adelaide.

"The studios have lots of trunked cables running between different rooms. In each room there is a Krone (terminal) frame and they put jumpers in the Krones to steer the signals around the building. The ABC kept records of only the jumpers - so they had the name of the pin on one side of

(continued next page)

It's hardly sexy or glamorous. But the world of contracting audio is often a major challenge, to design and integrate solutions into buildings and public spaces. This month we look at a diverse grab bag of products and solutions.

## SHURE EXPAND SMART PRODUCT LINE



Shure Brothers at one time made the first automated mix mixer in the world to our knowledge. Now their range starts with the SCM 410 - a 4 input mono automatic mixer with EQ on all channels. It has Shures Intellimix auto mixer circuitry, allowing automatic gating from any microphone or line source. Full access to all logic functions makes this unit very flexible in many differing applications. A\$2,795.

The SCM 810 is an 8 input version, priced at \$ 4,795. Traditional non automated mixers from Shure include the SCM 262, a 5 channel Mixer at \$ 845.

Shure offer a 10 filter intelligent feedback reducer (we are unsure what intelligent feedback sounds like, it all sounds the same to us!) called the DFR11EQ. It comes with equaliser, delay and a limiter, and can be used as a stand-alone suppressor or in conjunction with supplied Windows software. A\$ 2,095

Finally, the Shure DP11EQ is a PC Controlled, digital dynamics processor with up to 9 bands of parametric EQ, Compressor, Limiter, AGC, and up to 1.3 seconds of delay. A\$ 2,295

• Jands +61 2 9582-0909

## Peavey Architectural Acoustics Automixers

The new Peavey Automix 4 is a four channel unit with internal gain management computers, channel inserts, phantom power, priority, balanced and un-balanced outputs and a unique link bus that allows for expansion.

It's perfect for those jobs that require a number of open microphones such as churches and boardrooms. A\$1,690.

Possibly with a confusing model number, the Automix 2 has 8 channels of auto mic mixing, with 2 channels of priority, a three band notch filter, phantom power on all inputs, low pass filters, direct outputs and switch closures.



Automix 2 (below) is ideal for any multi-microphone sound installation as it reduces feedback, increases intelligibility, producing a louder, cleaner sound, they say. It utilises a unique 'gain management system' which combines gain sharing with downward expansion using the latest VCA technology. A \$3,599.

• Audio Telex +61 2 9647-1411

## REDBACK PHASE 4 PA AMP MIXERS

These smart looking Australian made public address amplifiers come in mixer amp versions of 125 watt or 250 watts, and power amp versions available in 125 watt, dual 125 watt, 250 watt and 500 watt.

They boast current limiting that protects

the amplifier from overload and overdrive conditions, and can deliver full rated power output from 24V DC. Starting from A\$680, they also have a generous 5 year warranty.

• Altronic Distributors, +61 8 9328 2199.

www.altronics.com.au



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**DX8**



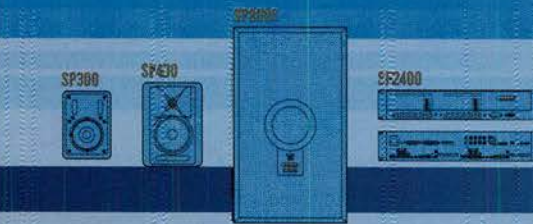
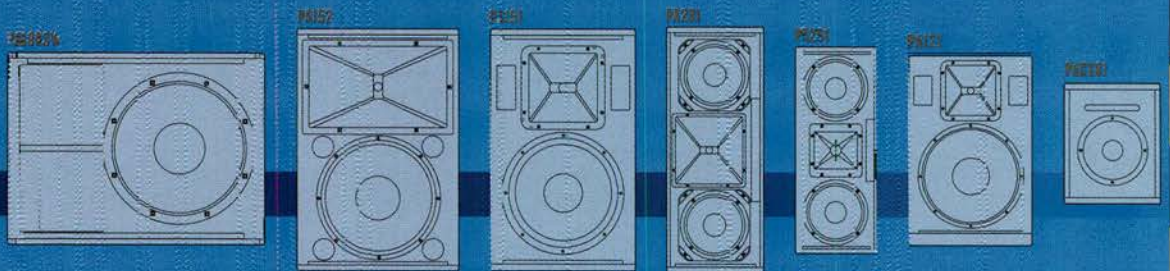
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**Contractor Audio**

**Cable Manager (continued)**

the Krone and the name of the pin on the other side of the jumper. On an Excel spreadsheet they would record the jumpers and they discovered it could make mistakes. It was very easy to have a jumper that didn't go anywhere or a jumper that jumped to itself. They also found it difficult to get a complete record of what jumpers there are. So they asked me if I could come up with something better and the result was Cable Manager," Rowan explained. It is now renamed Dr. Cable.

The wiring for the ABC Southbank Centre in Melbourne was designed using Dr. Cable and it is now used for signal tracing, maintenance work and modifications. "The people at Southbank helped enormously with the design of Dr. Cable and as a result, we are continually updating the program with new features," Rowan said.

"Another useful feature is that it will look for unused wires. For example, do you need to lay a new cable from Studio A to Studio B or is there an existing wire that goes in the right direction that isn't utilised? Also having planned an installation you can ask Dr. Cable how much of what type of cable is required, how many XLR connectors, and what will it cost.

"And if you're trying to figure out how to hook up a Fairlight to a DA-88, (devices which use a variety of connector types in different configurations) you can get the connector on the Fairlight and the connector for the DA-88 on the computer screen and immediately see how they should be connected. You can then label the pins in the connector pair one pair two, pair three etc. instead of using the actual pin numbers. You tell it to connect pair one of the Fairlight connector to pair one of the DA-88. When you print the work instructions it will tell you which pins in the connector to use."

Rowan believes that TV and radio stations must have filing cabinets full of diagrams and notes relating to installations going back years. "With Dr. Cable they can

*(continued next page)*



**Inter-M enter third decade**

In the 1980's Inter-M made its debut in Australia and the region, changing name to INTER-M a few years back. Typical of their latest product approach is the SYSTEM - 2240 (top), a multi PA combination unit with 240 Watt RMS output, 6 mic and 2 auxiliary inputs, a 10 speaker selector switch, cassette recorder, 3-CD changer, 7 band equalizer and inbuilt monitor speaker. A\$2,100.

Their amplifier/mixer range includes the PAM 120 (120w, pictured below) with 6 XLR inputs, EQ on each channel, and switchable VOX priority over the channels 1 & 2. Optional modules available are Tuner / Cassette / CD Player. A\$880.



• Inter M have a large range of similar devices, contact Magna Systems, +61 2 9417 1111

• Also: TOA, from Audio Products Australia 1-800-642-922.



**Hacousto Accent 88 matrix controller**

This 8 input, 8 output digital matrix switcher can be set up via the front panel or software (supplied). Each input is mic/line selectable and any input can be assigned to any combination of outputs. The remote paging mics and the remote volume/source selectors

**Unique ceiling speaker solution**

Sound Advance CT 10 Speaker Series produce a very wide and true 140-degree dispersion. They reproduce frequencies from 80Hz to 15 Khz in both vertical and horizontal planes. Due to the dispersion characteristics they are ideal for ceiling installations as they cut down on the number of speakers required. They can be washed or painted, making them perfect for any Sound Reinforcement project. A\$220.

The CT 8 series provides the same performance of the CT 10 at a slightly reduced purchase price. The only visual differences are the four mounting screws. 20 watts power, cost A\$180.

The SA 2 Invisible Speaker system is a two-way unit that can be made virtually invisible. They too can be painted over and will handle wallpaper or acoustic carpet applications being applied over them. You will never see them.

Go to the Sydney Stock exchange or Melbourne Museum and have a listen. The SA 2 is rated at 60 Watts and offers a response of 70Hz - 20 Khz. Priced at A\$2,455 per pair.

• Call Designer Sound on +61 3 9876-2333.

**Immediate installation**

Snap! Redback announce a 100mm speaker and grille combo that can be installed in about the time it takes to muster a stray thought. 2 durable nylon sprung clip devices on the back of the combo do the job. Altonic's can sell you the 140mm hole saw too, along with various kinds of speakers to fit behind the grille. +61 8 9328-2199.

• Audio Telex +61 2 9647-1411

Yamaha's MV300 is a 2FU Rack mount 2 zone installation mixer with lots of features. It has 8

mono inputs, 2 band EQ and gate, a stereo input with ducker linked from channels 1 & 2 and a global compressor. A\$1,695.



• Yamaha Music Australia, +61 3 9693-5111

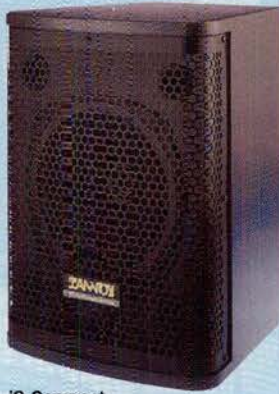
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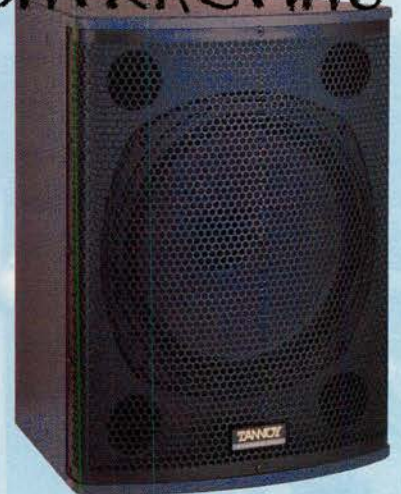
**i5 All weather installation loudspeakers**  
Dual concentric point source 5" 60° speaker



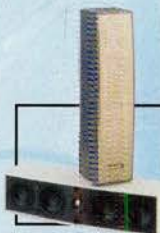
**i8 Compact club and AV install speaker**  
8" dual concentric drive unit, 60°, 260w programme



**i12 Exceptional quality 12" dual concentric drive unit**  
400w programme, also comes in wedge version (T12).



**i15 High efficiency 15" dual concentric driver**  
Compact cabinet, 60° source, 500w programme



**i17 Contour vertical or horizontal speaker**  
4x4" bass and one cone HF driver, 70x110° dispersion for high quality speech and music.



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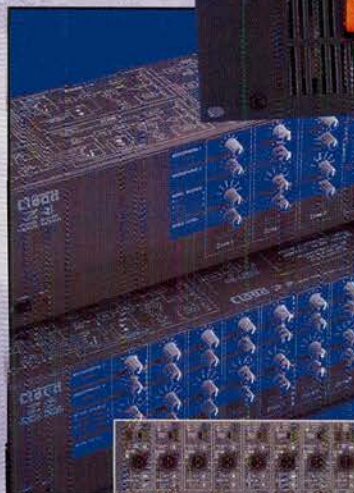
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**Contractor Audio**

**Cable Manager (continued)**

give a technician a laptop and send him up a cable duct and he can find anything in the building."

The software has a simplified layer that enables a circuit to be documented entirely by point and click. This layer is intended for straightforward wiring such as computer and telephone networks, power distribution etc. It is also useful as a gentle introduction to the much more powerful Dr. Cable Pro.

In a recent project, the ABC reorganised the Southbank Centre to take on board Radio Australia operations. "So they've been shifting studios, building new ones and re-running cables. And all the wiring changes, which have been enormous, have been planned and executed with Dr. Cable," Rowan said.

Rowan plans to market Dr. Cable to commercial radio stations and any other users of cabled networks. "The system is not limited to radio although it has been designed with audio in mind. It can also be used for power wiring, optical fibre, video or any medium which takes a signal from point A to point B."

Rowan also plans to provide a service whereby his organisation comes to an established radio or TV stations using old "hard copy" records and rewrite the cable network into Dr. Cable.

It's available for Macintosh, Windows, and Linux.

To find out more, contact Michael Rowan at Networker Corporation +61 8 8240 3993 info@ntw.com.au

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**DME32**

Yamaha's new digital mixing engine that allows for user programming of the signal path via EQ, dynamics, effects, mixers, filters and more. It boasts stand-alone operation once programmed (via a standard PC) with multiple levels of security available.

Up to 32 inputs and outputs via 4 digital I/O slots and dedicated AD and DA converter boxes (AD824 and DA824) allow small to large system designs. Up to 4 DME32's can be cascaded for 128 I/O systems.

Prices: DME32 A\$7,495; AD824 A\$3,995; DA824 A\$2,995; DIO cards A\$485 - A\$645 rrp.

• **Yamaha Music Australia, +61 3 9693-5111**



**Crown Amps offer smart modules**

Crown CH series (from A\$2,395), and CE Series (from A\$1,795) amplifiers accept optional SST modules and crossovers for an all in one solution to loudspeaker drive. Their Comtech range of amplifiers feature the ability to handle both low impedance and constant voltage applications (switchable per channel) within the one amplifier, without the need for step up transformers. The CT range is also fully PIP-2 compatible and comes in a number of power sizes. From A\$2,595

• **Jands +61 2 9582-0909**

**More Australian 100v line amps**

EBONY are an Australian brand of 100v line amplifiers, built by Audio Assemblers. Their range includes the BMA30 (A\$179) with 2 inputs and 30 watts RMS output. At the other end of the range is the CR500V24 (A\$1159) with 500 watts of output to 4 ohm, 50v, 70v, or 100v line, plus 24 volt DC backup capability.

Ebony also offer a Transconductance Loop Driver (CR2003LD, A\$755) with 3 balanced inputs, inbuilt signal limiting, effects loop and 10 amps RMS output.

• **Audio Assemblers +61 3 9357-8595**

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• **More from Jands, +61 2 9582-0909**



**Symetrix debut smart mixers**

Symetrix's 460 Presentation Mixer (A\$2,626, pictured above) provides separate speech and program eq, dynamics processing, routing and level control. It interfaces easily with control systems such as AMX or Crestron. It's a true audio mixer and not just a router/switcher.

Typical of their range, Symetrix also offer the 450 Slimline Stereo Mixer (A\$2,099) - a single rack height, 6 channel mixer.

The 440E Foreground Music Selector/Mixer is a hot seller, it provides a simple, user-friendly interface for venues such as clubs and hotels where multiple sources and remote control are required. A\$1,779.

• **Audio Telex +61 2 9647-1411**

**Audio Telex expand amp line**

The new Audio Telex ACM120XL is an extension of their very successful ACM120 mixer amplifier. It boasts more inputs (8), and some clever extra features such as an insert point and a VCA control. A\$849.

Their ACM604 features four separate 60 watt amplifiers, each with three dual mic/line inputs, priority and muting, for A\$1,365.

Made in Sydney, the Audio Telex range includes the ACM1202P dual ch. power amp (2 x 120 watts), the TX8201 stereo mixer (1RU, 8 channel stereo mixer and line driver, and the Enviro 5 weatherproof speaker; at A\$320 each. • **Audio Telex +61 2 9647-1411**



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- 12 months warranty

The **Redback C 8870** utilises the latest PLL synthesized technology, delivering crisp, clear, interference free reproduction. Don't be concerned about frequency congestion again, the **Redback C 8870** offers 16 different channels at the flick of a switch.

The unique modular design allows two receivers to be ganged together to fit into a standard 1RU rack space. The belt pack transmitters are very versatile, with the ability to be coupled with a lightweight lecture mic, robust aerobics head worn mic or with the traditional lavalier (tie clip) mic for guest speaking. A guitar transmitter (fitted with a 6.5mm jack) is also available.

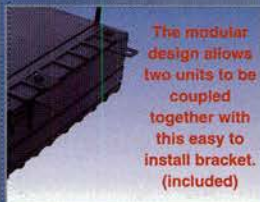
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Contractor Audio

Syntec to enter contractor market

After successfully repositioning themselves in the M. I. market with new products from Sennheiser and Fostex, Syntec International plan to expand into the contractor market in Australia.

Recent new product releases from Tannoy include the i7 Contour speaker system, and additional dual concentric models in the i line of full range speaker cabinets. Tannoy also have announced a unique self powered ceiling subwoofer which fits into an airconditioning grille sized space.

Cloud have a good reputation for unique matrix mixers and amplifier products, and like Tannoy are UK sourced.

- Syntec International, +61 2 9417-4700.

Mackie Industrial promises market shakeup

Mackie Industrial is much more than a re-badging of RCF components, as originally rumoured. The Seattle firm have introduced some innovative new digital products, most notably the DX 8 digital processor (bottom). This mixer/controller hybrid appears



to create a new market sector, priced at A\$3,795. It boasts a 8 x 2 mixer with very extensive processing - like a 31 band EQ on every channel.

Their new 4000 Series 100v Line Amps and Mixer amps (right) range in price

from A\$1,095 to A\$1,695.

More innovation comes with the Sound Palette range of digitally controlled mixer amps (left), with prices ranging from A\$3,995 (SP1200) to A\$6,995 (SP2400).

Capping the new range is the Monitor line of installation speakers (left), ranging in price from A\$395 to A\$995.

- Australian Audio Supplies, +61 2 4388-4666



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# Stand Back...



With the recent release of DVD Audio titles by Warner in the US, and playback hardware either release or very close from Denon, JVC, Onkyo, Panasonic, Pioneer, Technics and Toshiba, it can now finally be said the DVD Audio is finally here.

Its immediate rival, SACD, has had more than a year's head start, but it remains to be seen who will still be standing after the latest "VHS vs Beta" showdown hits the consumer market.

by John Grimshaw

## Stereo DVD-A

In DVD-A, a stereo signal can be actually downmixed from the six channel surround using SMART (System Managed Audio Resource Technique) to record a control track with all of the mixing information. This data track tells the player to mix and pan the six channels to form the stereo mix in real time as the disc plays.

## The fight is on for the right to dominate the next evolution of the humble Audio CD

**D**elayed by almost a year due to a complete overhaul of the security encryption system to be used, DVD-A (as it is becoming known) has taken its first tentative steps in the consumer market. While there is going to be many months before a wide selection of titles becomes available, is it inconceivable for there to be local titles available by the end of this year?

Richard Lush, a veteran of numerous sound productions (including the soundtrack for the Olympics) and Chief Engineer at 301 Studios said that as the format becomes more widely adopted overseas, more of the bigger local artists may start to ask for it. It is the perception that regardless of the ultimate format chosen, 96kHz mastering is bound to become the defacto standard eventually.

The costs involved in making studios capable of mastering in six channel, 24bit 96kHz are formidable, and it is likely that only the biggest studios will make this step before the end of the year. Being quick off the mark, 301 Studios have recently taken delivery of a Genex GX8500 8 track, multi-format recorder. It was chosen for numerous reasons, which includes its ability to cope with 24bit/96kHz recording.

Even as the studios begin to prepare for this next evolution in the market, there is little doubt that working in a surround format will incur additional costs in studio and engineers time. This is because of the need for mastering two distinct audio tracks – one stereo and one surround – would blow out the traditional cost of producing an album.

Ross Fraser of Gotham Records has recently finished putting together the new John Farnham DVD-Video, which was mixed at the same time as his recent album. He explained to Connections that the big distributors like BMG are not yet focused on DVD as a medium. Ross's final post-mix of the DVD-V was done in 44.1kHz.

Ross indicated that there is more concern in the industry about the fact that MP3 is taking a significant market share away from current sales. Supporting an entirely new format will take a considerable re-think on the part of the companies whose success or failure depends on the end user paying for their music – particularly in Australia. The question is, is there any justification in the format itself for making this happen?

## Introducing DVD-Audio

It took the CD audio format many years to make the world wide volume of sales that DVD-V managed in its first year. The volume of DVD-V sales quickly increased as more titles became available. After the initial capital outlay for equipment to produce and package DVD-V, the cost of producing additional titles gradually reduced. These new titles encouraged more consumers to buy the players, thus raising the number of sales of discs, which in turn caused more titles to be produced - and so on. Based on this, there is possibility for DVD-A to become very quickly adopted by consumers.

With DVD-A, much of the DVD-V authoring infrastructure will also serve DVD-  
(continued over)

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Digital Audio

DVD-A Specifications

There has been a misconception that 24bit/96kHz is the only format that audio can be record in for DVD-A, but this is not the case. DVD-A can handle the standard bit-rates of 16, 20 and 24bit and sampling freq (in kHz) of 44.1, 48, 88.2, 96, 176.4 and 192. Playing time is dependant on many factors, but it expected that producers will be able to create 74min discs that have 6ch 24bit/96kHz audio, a SMART down-mix data track, and a Dolby Digital version.

A, with the notable exception of mastering. Creating the master for the information to be recorded onto a surround DVD-A disc is currently a complex process of mixing two versions of any album. One version is a full six channel version and the second is the stereo one. For many studios, this upgrade will entail a major overhaul of their control rooms - adding surround speakers, 96kHz capable editing, mixing and recording equipment, and whatever the device is that records the SMART track (see sidebox pg 48).

So while the DVD-V revolution only really required minor changes to the pre-existing production studios, upgrading audio studios

for DVD-A will be a costly process for any studio choosing to go down that path.

If DVD-A does take off, this is likely result in an increase in artists doing the final mixdown of an album in the US until more local studios can 'tool-up'.

Internationally, the major studios that have promised DVD-A titles are BMB, EMI, Universal and Warner. To date, the only titles so far have been 34 or so from Warner (source Amazon.com). All of these titles include a third audio track, encoded into Dolby Digital and placed on the disc as if it were the soundtrack to a movie, making these discs compatible with the current range of DVD-Video players.

This is good news for users that have already purchased DVD players, allowing them purchase these audio titles safe in the knowledge that they can be played immediately, as well as on their yet to be purchased upgrade. It also eliminates the 'stupid' factor where a consumer buys something because it says 'DVD'.

There is no standard requiring the Dolby Digital track for DVD-A discs to make them backwards compatible. In fact, there is some debate from audiophiles as to whether it should be included at all as having it may slow down the take up rate of the new medium. However there seems to be a prevailing opinion from Australian and overseas industry professionals that the backwards compatibility works for the long term good of the format. It will encourage music publishers to produce titles as there will be an immediate market for the product.

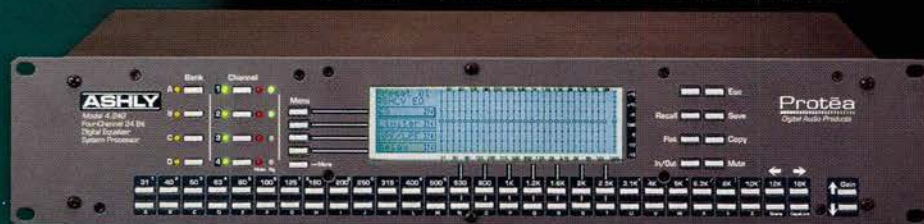
According to production volumes, it is already looking like DVD-A is duplicating very closely the take up rate of DVD-V (see table on pg 52).

SACD Standing Its Ground

Like the original CD format, SACD is the result of a joint development between Sony and Philips. SACD is generally considered by a wide variety of "Golden Ears" as a quantum leap in audio recording quality, even above that of DVD-A. This is achieved due to the way it converts analogue audio signals into digital data.

(continued over)

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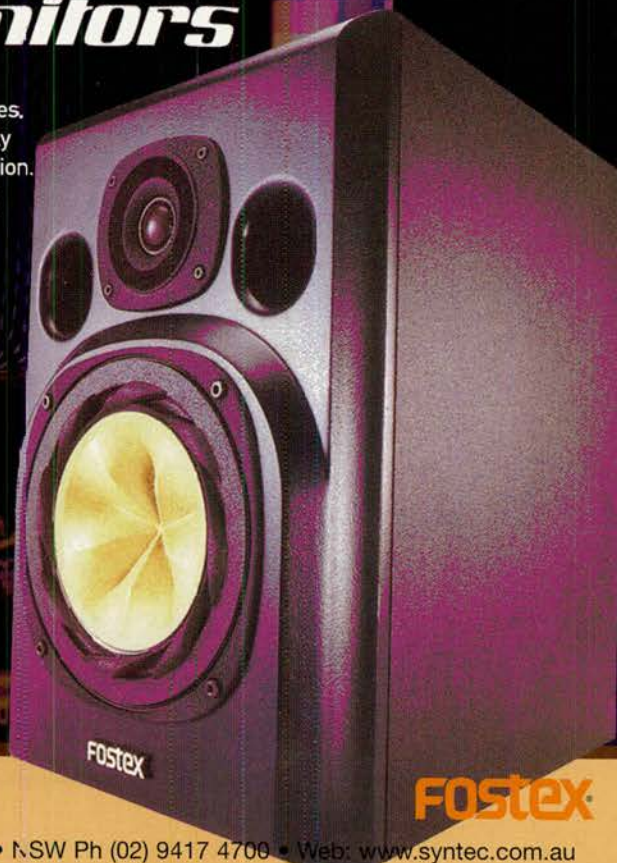
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Digital Audio

How Many Discs?

The following statistics from IRMA (International Recording Media Association) shows millions of units produced for numerous formats, and the forecast for 2001:

	1999	2000	2001
CD-Audio	4,654	4,885	5,110
CD-ROM	3,591	4,050	4,360
CD-Video	774	827	861
DVD-Video	194	474	905
DVD-ROM	12	41	104
DVD-Audio	2	12	40

Known as Direct Stream Digital (DSD), the signal is sampled at an extremely high rate (2822.4kHz) and at a very low resolution (1 bit). Despite being sampled at 64 times the rate of a standard CD, the data throughput is kept down as only one bit resolution is used.

In other words, CDs reach a data throughput of 0.7056 Mega-bits per second (Mbps) for one channel of 44.1kHz at 16bit resolution (44100 x 16), whereas SACD data has 2.8224 Mbps for each channel of audio (2,822,400 x 1). The big advantage of this is that there is no need for decimation and interpolation filtering, which is important for conventional Pulse Code Modulation (PCM) recording used on CDs and DVDs. According to Sony SACD website, the "one-bit encoding strips away entire classes of distortion that have always characterized PCM"

There are certainly plenty of web articles extolling the virtues of DSD, but perhaps the most telling information is from the website - www.superaudio-cd.com. It shows examples of what happens to a 10kHz square wave recorded using DSD and PCM - the DSD wave closely matched the square wave while the PCM result turned the wave very 'sine'

looking. Because DSD can more accurately reproduce the original waveform produced by the instruments, there is a significant increase in the quality of the playback audio. Something that also helps increase in quality is the very wide frequency response (from DC to 100kHz) and a dynamic range of at least 120dB - CD is only 98dB.

At the moment, much of the recorded material available on SACD is sourced from analogue master tapes, as there is very little in the way of DSD capable digital recorders on the market.

The release and promotion of SACD here has certainly been very lack-lustre. While many audiophiles will swear by the format, there has been a sad lack of local marketing to try and push SACD. However, according to Mark Lawson who is the Product Manager for SACD and other HiFi Sony products, this year Sony is intending to intensively raise general awareness of the product.

SACD began its development in 1991, and was launched in May 1999. It is unclear as to whether the pending development of DVD-A sped up the creation of SACD, but it is certain that one of the main reasons why it

(continued over)

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**The Watermark Debate**

Another area of contention for DVD-A is its use of the Verance watermark system. Some purists claim that this system corrupts the quality of the audio content on a DVD-A, because it places the audio watermark into the actual audio stream. Tests by Verance suggest that the watermark cannot be discerned by even the best 'golden ear' in the most ideal studio. Interestingly, the watermark data remains detectable even after the audio has been broadcast or compressed by compression algorithms like MP3.

SACD uses a digital watermark that is encoded into the data stream. Called Pit Signal Processing (PSP) this system is designed to stop immediate copying of the source disc and provide a visible watermark on the playing surface of the disc. The system is not as sophisticated as Verance's, but the audio output from this system is pristine.

came into being was to prevent the loss of rights revenue that Sony/Philips currently enjoy from every commercial CD produced around the world. With DVD-A rights revenue going to a different consortium, Sony/Philips decided that it should bring its alternative to the market as soon as possible.

Profession equipment manufactures including Genex, Mytek Digital, and Tascam have all released, or plan to release Direct Stream Digital capable recorders. DSD A/D and D/A converters have been produced by dCS and EMM Labs. Augan Instruments and Merging Technologies have released DSD workstations.

Sony has plans for an 8ch DSD Audio Workstation, bringing together recording, editing, mixing, mastering, & authoring in the one package. According to Sony, it will include high-capacity hard drives and support for high-performance Advanced Intelligent Tape (AIT) technology. The project is being overseen by a new engineering section of Sony called Sony Studio Technology (SST), at its facility in Walnut Creek, California. The workstation is expected to be released towards the end of 2001.

**DVD-A vs SACD**

Comparing the specs of the two systems gives an indication of where the fight is going to boil down to. SACD has a definite head start, but marketing will always decide the winner. To take a leaf out of the 'VHS vs Beta' book, just because SACD is better quality doesn't mean it will win. This may be because the vast majority of the population think that CDs are 'good enough'. Of those that want more, many think that DVD-A is 'good enough' because they cannot hear any significant difference between it and SACD. But it is still very early days for both formats. There are only 34 DVD-A titles and 106 SACD titles listed at Amazon.com – hardly numbers to sustain the industry. The next twelve months will decide the winner.

Even in the UK, the studios are waiting and biding their time to see which format ultimately comes out on top. Don Dowling, of Neo Tech recently had a chance to tour a number of the major studios in the UK, and his overall impression was that music surround sound and high-resolution recording was definitely the path these studios were taking. However, the industry as a whole was poised and waiting to see which format everyone else was going to adopt.

	SACD	DVD-A
Coding	Direct Stream Digital (DSD)	Linear Pulse Code Modulation (LPCM) or Packed (lossless) PCM
Bandwidth	DC-100kHz	DC-96kHz
Dynamic range	120 dB	144dB
Watermark	Pit Signal Processing (Digital)	Secure Digital Music Initiative (Analogue)
Bits per sample	1	16/20/24
Samp Freq (kHz)	2822.4 kHz	44.1/48/88.2/96/176.4/192

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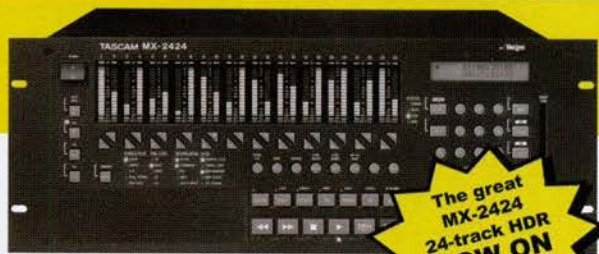
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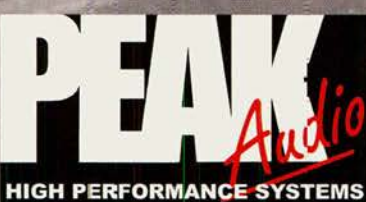
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# Cirque du Soleil's Alegria



by Mandy Jones

**F**ollowing their successful tour of Australia two years ago with *Saltimbanco*, Cirque du Soleil are back in the country with their new big-top show *Alegria*. The two year Asia-Pacific tour began its Australian season in Melbourne last month following a sell-out run in Auckland.

Cirque du Soleil is famous for its internationality. The company was formed by street performers in Quebec in 1982 and quickly developed into the renowned cultural organisation that it is today. With four touring shows & three permanent theatre shows playing around the world simultaneously, the demand for new and talented artists and technicians from all around the world to join the company is always high. Applications to join to the company are made through their web site and applicants are encouraged to send a resume by email.

Stacey Stamoudis, an Audio engineer for Sydney, is one of the newest Cirque recruits.

"I saw *Saltimbanco* and I was pretty impressed with the whole set-up and the professionalism so I sent my resume through the Cirque web-site and about three weeks later I got a telephone call from the States and the contract arrived in the mail two weeks later."

Stacey left her full-time job as head of Audio for CES no Operations in Sydney and headed off to New Zealand

without ever seeing or hearing *Alegria* or having met anyone from Cirque. Her first real contact with the company was the first day she turned up at the site in New Zealand late November 2000. She describes her first weeks as a short and steep learning curve.

Even though Stacey has 20 years of audio experience, working on musicals such as *42nd Street*, *A Chorus Line*, and doing her time with Jands and on the rock 'n roll scene, she said nothing could have prepared her for working with Cirque.

"It's an amazing environment, but it's over-whelming when you first come across it because of their set-up. You have to forget everything you know about installing systems in theatre, & you have to start from the beginning which is great because it's a huge challenge."

Stacey explained a lot of new technicians started with *Alegria* in New Zealand so they had a slightly longer set-up time, but when they hit Melbourne the set-up was according to the proper schedule.

"We get five days to get it up and running into a working system. And because it all has to be so precise, everything is measured down to the last inch. Everything we do has to be exact because there are no windows of time for fixing errors. Every speaker-box is measured to the exact angle, down to the last inch of where it goes on the mast, the same with the subs under the stage. We're all clambering

## PRODUCTIONS

for space, especially on the masts, because it is the nature of the show, we need cables and lighting everywhere so we need to share the space.

"It's all incredibly precise and it has to be because we can't come back to it and fix it because the bleachers are in or the stage covers are on, so it was quite manic the first few days in Auckland because we were a new group of technicians never having done this before."

As one of the new technicians, Stacey is full of praise for Cirque du Soleil Sound Designer Guy Desrochers whom she describes as "an excellent designer and an incredibly nice person to work with" and her Canadian sound assistant Jean-Michel.

"Jean-Michel has been great and he's also an excellent rigger which is fantastic because we've got about 30 speakers up in the air, so it's a bigger sound system than *Saltimbanco*."

The audio system for *Alegria* comprises 26 x JBL 4892 90° - 40° speakers flown or suspended from the huge tent masts, 10 x JBL 4893 sub bass boxes, and 12 x JBL MS26 surrounds which are pointed towards the canvas walls and used for effects. Stacey operates the system on a 48 channel Midas Heritage console which she describes as "amazing".

"We run the whole system with XTA software which talks to all the XTA's in the amp racks so we can do our time alignment, delays and EQ. We break the system into what we call six points so that the system is run as a true 180° stereo system. Because it is 180° we have to ensure that the audience gets the stereo regardless of where they are sitting in the big top, so each mast is treated as two points so that it runs 180° as a stereo system."

Other than the XTA software there is no automation in the system or on the console - an issue Stacey and Cirque's sound designer were in complete agreement over.

The Effects racks include Lexicon reverbs, BSS Dynamic EQs, Klark Teknik compressors and gates. Also at FOH is a Macintosh with ProTools and a CD burner which is used on a regular basis for recordings for rehearsal or media purposes.

The monitor system for the six piece band is equally well-equipped as FOH. Each musician uses Shure in-ear monitors, mixed from a dedicated Yamaha 01V console pre-programmed with each song or act, around 50 in all. Monitor Engineer Jean-Michel Caron uses an SM12 48 channel console.

"Because we haven't got that much time for soundchecks what we do is we measure exactly where every mic is placed, angle and

distance from the instruments, the band gear goes in exactly the same spot so basically what we do when we turn the system on when we go into a new set up, the sound is duplicated exactly as how it was in the previous set up because everything is in exactly the same place, so they turn on their monitor system and then they spend about 10 minutes doing their own sound check, it's identical at FOH so it gives us a really good starting point for our first rehearsal."

Microphones are a mixture of Sennheiser 1046 radio mics, plus some Countryman mics as well.

Stacey describes the Cirque lifestyle as "exhausting but amazing". Apart from the tiring aspects of touring, she says the show itself can be quite draining.

"It's quite a busy because of the dynamics of the music and the combination of instruments it's certainly not a set and forget type of show. We've got an accordion player who has four different types of accordion, the keyboards have their own sampler, the drummer has electronic percussion pads so they set their levels as comfort levels for on-stage, they're not necessarily suitable levels for FOH so in one particular act it can be quite busy."

Stacey explains that due to the highly reflective nature of the canvas tent, humidity is the main factor in the big top.

"I do humidity readings throughout the shows and it can change by 10% in the second half which can really throw the EQ out so I work out different settings to switch to depending on the humidity. And the big top has its own distinct sound. You get used to the sound of the empty big top. The first time I went into it I thought 'oh my god, is this going to settle?', but working with the sound designer I realised that it does. It has its own sound, apart from the internal ambient sound or the external ambient sound."

Stacey is currently on a one year contract with the show.

"The *Alegria* tour is going for at least three years so after Australia it's on to Singapore, Hong Kong, Shanghai. So who knows whether

(continued over)



Stacey Stamboulidis surrounded by the show's audio control equipment

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"Despite the hard work it really is a dream come true because we're so well equipped and the team of people are great, and it really is like a big family. I feel very fortunate to be working for Cirque - it has presented me with a whole lot of challenges and different concepts that I wouldn't have come across."

**Lighting**

The lighting design for *Alegria* was originally designed by Cirque du Soleil's resident lighting designer Luc Lafortune around seven years ago and according to American Lighting Operator Clint Allen, not much has changed since. Clint has been with Cirque for around five months coming from a background as a lighting director on the Arizona theatre circuit. When asked how long he has been working as a LD Clint answers: "Some days too long, other days not long enough!". Translation: about eight years.

Clint explains the design is quite complex due to the safety considerations of lamp positioning so as not to affect the performers. He uses the example of the 'Fast Track' sequence, involving high-speed trampoline routines executed as the performers run towards the audience.

"Most of the light for 'Fast Track' is coming from high or underneath because any light coming from the front would blind the performers as they run down the track. So sometimes the positioning of the lights has to change based upon where it's safest for the artists."

Clint says Luc Lafortune's approach is to create an atmosphere and a mood for the performance to occur within rather than lighting the performers.

"This design is all about texture and creating something that the artists are moving through to

make it more interesting. To create an 'old' feel the show is dimly lit and the colour choices are based around it being a broken down old ballroom so there's this really nice contrast with all the young performers on stage.

"Luc is pretty much all over the place with colour groupings. I'm pretty much unable to guess what colour he's going to use when he's plotting. This show has a lot of amber in it because it helps to create the right broken-down atmosphere. There's some green used on the set to make it look like copper, and lots of red, but there's not a lot of blue in the design."

Clint describes it as a "dainty rig" - around 300 units comprising 250 Source Four profiles, 40 Source Four pars, 32 Chroma Q scrollers, a few 2k fresnels, par 64 Flambeaux silk flame effects, six Clay Paky Stage Scan Zooms, 10 twin-spin gobo rotators, and three Lycian followspots. The rig is powered by 144 ETC dimmers and operated from a Compulite Micron 4D console.

With around 250 cues, Clint describes the show as "not too busy".

"The main cues are the transitions between the acts. Once we're in the act the lights stay relatively the same. Luc creates a mood but never draws attention away from the performers because he doesn't want to distract the audience."

The only sequence where Luc does distract the audience with lighting effects is the 'Storm' sequence taken from *Slava's Snowshow* where the audience is blinded by white light as tiny pieces of paper are fired at them by a wind machine. In the original show, six banks of Molefay 8-lites were used to blind the audience, but in *Alegria* the effect is simplified to 3 Source Four pars to achieve a similarly blinding effect.

Clint at the Compulite control desk



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**T**he Queensland Conservatorium of Music, on the Gold Coast campus, is blurring the distinction between 'musician' and 'engineer'. Based at Griffith University, the Batchelor of Popular Music is a course that, amongst other things, carefully teaches musicians every step in the process in making an album - their complex of recording studios and equipment would put the majority of professional studios to shame. Part of a more than \$11million redevelopment, the new building housing the studios (as well as other multimedia courses including television production) was custom designed for the purpose. Considerable time and care was taken with the shapes of each

room, and how the acoustics would perform. At the end of the three-year degree course, these musicians using these rooms will be outstanding and very skilled engineers. Studio engineers have long been aware that their craft requires as much artist choice as knowledge of technology. Engineers each build up their own 'repertoire' of effects and processes, and when they apply them to making an album, their indelible stamp is made on the final result. So it should come as no surprise that musicians are keen to take control of the one aspect of production that they traditionally have had no control. This course would be the ultimate head start for anyone wanting to become an

by Simon Grimshaw

*Musician Engineers – another signpost towards the end of record companies?*

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- Studio Two: Pro-Tools Mix Plus system, Pro Controller, Mac G4, Presonus Preamps x 2, Yamaha A5000 sampler, Kurzweil 2500, Genelec 2 way monitors, Yamaha 2 way (msp10) monitors, Yamaha CS6x synthesiser, assortment of Audio-Technica Microphones.
- Studio Three: Yamaha O2R digital mixing desk, 2 x Sony PCM-800 digital multitrack recorders, PC with Sonorus Studi/o lightpipe soundcard and Cubase, Digidesign 001 with Pro-tools LE, Kawai 88 note (weighted) mother keyboard/synth, Tascam Dual DAT, Yamaha A5000 sampler, Yamaha MSP10 Monitors, Yamaha CS6x Synthesiser
- Studio Four: Yamaha AW-4416 Recorder/Mixer, Yamaha CS6x Synth, Akai S5000 Sampler, Roland TD-10 Virtual Drum Kit, Digidesign 001 with Pro-Tools LE, Yamaha Preamps x 2, Yamaha MSP10 monitors, Roland JV-2080 Synth Module, Cubase, assorted Audio-Technica Microphones.
- Project Studios Five and Six: AW-4416 HDD Recorder/ mixers. PC with Cubase, Yamaha MSP5 near field monitors.



engineer, but there is a very big catch – you have to be a damn good musician to get there. Of the 176 applicants to their course this year, 3% of them passed the audition with an A+ result. There were 26 positions offered to this final group, and all were accepted, leaving 8 applicants that passed the audition with no place in the school. Most of their students are local to the area or from overseas. Not surprisingly, they do not advertise the course – there is hardly any need to.

Grant Houston, one of the lecturers at the facility, was very keen to show their facilities and course. "The primary reason that I enjoy my participation in this program is because I believe in it. That is after 35 years in the industry, and I think that this program covers all the areas that would assure our graduates of being able to follow whatever career path they choose. We have students who have already set up their own Production houses, Internet services, recording services etc.

The staff are also quite keen to see how their new students are going to fare in the world at large. "We are about to setup a research centre, and a part of that will be dedicated to tracking our graduates after they leave us for the world at large. It is obviously very important to our program that we ensure that the graduates who leave us are the best equipped candidates for the career paths they choose."

With the upsurge in technology and the simplification of recording and signal processing equipment, the last few years have seen a significant increase in the number of project and home studios. While this does not necessarily mean the people building the studios know how to get the best result out of their equipment, the impact to income of traditional studios has been significant.

Courses like this, coupled with the trend of technology to 'simplify' will continue the growth in the

number of home studios. To the industry as a whole, this may not be such a bad thing. More people producing music should mean more punters consuming music – & that is what drives the music production engine. More consumers consuming mean more live concerts, more recording & more consuming.

The music industry would need a good shake up for it to reach the heady heights of the late eighties and early nineties, where there was more live music than you could poke a stick at. You may have noticed that 'shaking up the music industry' is not the easiest thing in the world to achieve. However, the worldwide adoption of MP3 music has cut into their bottom line, and that has record companies quaking in their boots. Putting the studios in the hands of the musicians leaves those musicians only one more step to conquer. Once they work out how to make money from their music – say over the internet – then the big record companies suddenly become redundant.

Had the record companies understood the implications of MP3, they could have established early on a legal way to distribute music. Imagine if they did this & were receiving 10 cents for every Napster-like transaction.

Will the record companies see the implications of the musician/engineer and the simplification of recording technology? Unlikely.

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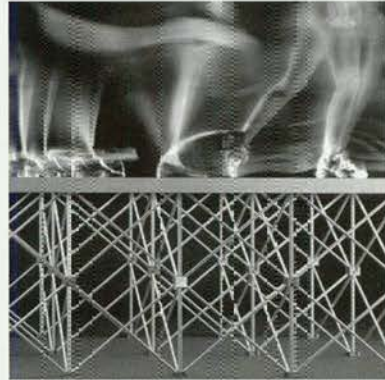
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# Cash Bonanza – Design On A Grand Scale



For at least 22 weeks, one of the main attractions at Movie World is being taken over by Channel Nine to shoot the new Grundies game show, Cash Bonanza.

Those that have seen the show would know that this is not a small event – with two thousand studio audience members watching contestants go through series of games to reach the end goal of playing for \$100,000. The last game show even vaguely on this scale (It's a Knockout) is from more than fifteen years ago – so putting this one together has been quite an exercise for the team involved.

Connections had the chance to meet the show's lighting designer Dale Martin, with Steve "Pineapple" Alberts and Simon "Norom" Land from lighting contractor Schusters on the set before a rehearsal...

by John Grimshaw

Designing the lighting for Cash Bonanza is Channe. Nine's Dale Martin, a veteran of numerous shows, including most recently the Footy Show. His approach to this large-scale job is more like that required for a stage show rather than a large studio shoot. After product.cn meetings with the design team and a survey of the room, Dale sat down to design and plot the show using the lighting design program Stardraw. The rig was bumped in and after a week's rehearsal in the venue, the first two test episodes were ready to tape.

Unlike a stage show, there were no pre-rig rehearsals Dale could attend - only the product.cn meetings. So, the period after the taping of the two test episodes was the only real chance to finesse the design before the first 'for broadcast' episode was shot.

The rig was carefully installed around the Movie World's 'Maverick Show' lights as that show has to be able to run in the venue for the other six days of the week. To achieve this, Dale designed several trusses that would be flown between the existing show trusses. Only some of the existing lights are used for Cash Bonanza, and these are mostly fixed set lighting effects around the Maveric stage.

Movie World wanted to be very careful about not interrupting the existing show, which is why Schusters got the contract for supplying and installing the lights. Being the preferred contractor for Movie World and the adjacent Warner Bros studios, Schusters were able to assure Movie World that their venue would be looked after. In fact, Schusters had now supplied lights for a number of shows in the room.

## LAMP SCHEDULE

In addition to the maveric show lighting rig, the design consists of: 12 x Comar CF7HE, 12 x Comar CF7WZ, 6 x Giffen Kolorado, 12 x 5k Fresnels, 3 x 10 degree Source Fours, 12 x 19 degree Source Fours, 6 x 26 degree Source Fours, 7 x Source Four Parnels, 1 x Multipar, 28 x Par 64 NSP, 8 x MoleFay Quets MFL, 12 x 500w Q1's

The first time this occurred was for 9's Footy Show (which Dale also designed). This required providing an engineer's report stating that the ceiling could safely support an additional 3 ton to the permanent rig, an important step as the building was originally purpose built only for the Movie World show.

Dale has chosen to rely heavily on the Coemar CF7HE & CF7WZ as the main workhorse for the show. With 12 of each rigged for the show, Dale has had a good chance to really put the fitting's through their paces, and he likes what he sees.

According to Dale, the lamp has almost all of the features he needs in a moving head fitting. CMY colour mixing, punchy output, all the standard gobo effects etc. One of the primary considerations for a moving light in television is the noise these devices tend to make – particularly when they are located so close to ambient microphones placed to capture the audience reactions.

According to Dale, "You have to stand next to the thing to hear it."

While we were in the studio, Dale put all of the CF7's into a programmed bally-hoo, and while the distinctive motor noise of a moving head light was present, the overall noise was certainly less than this writer expected.

Another reason why the CF7 was chosen over other lights was its Zoom capacity. "I have a lot of area to cover including 2,000 audience, the huge Maveric set as well as the Cash Bonanza Set," says Dale. "I haven't seen such an impressive zoom range with such little intensity loss from any other light!"

Another big plus was the fact that they could simply get more of them in the air with

the available budget when comparing the price to some other moving lights.

When asked about any improvements he would like on the lamp, Dale said a shutter system would be great, as well as a greater selection of colour correction filters and a brighter output. Of these three items, Coemar have already addressed two of them – one by offering to provide Dale with whichever correction filter he designates and a new model in the range solves the second problem - the CF7HEX which gives a staggering additional 40% extra light output by modifying numerous optical components. Something else that is not from the typical range of effects, Dale has used the outdoor Given Kolorado (CMY floodlight) as audience lighting. He can cover the whole 2000 audience members using only six of these fittings, and being CMY he can put any colour he likes across the entire room. Typically, he has to use the lamps at a small percentage of their capable output, even the Darker Colours can be blasted out at high output to make them show up surprisingly well for the cameras.

The show is controlled by a Whole Hog II, being used side by side with the same show loaded into Hog Edit on Dale's laptop. This is so he can edit the show from his home base, Sydney.

"I also used Hog Edit to set up & patch the console & pre program some of the show

before any lights had been hung - saving valuable time on site to get everything else right first go. Schusters was sent the Hog Edit file & the Stardraw plot so prepping the gear (assigning intelilight light addresses & dimmer addresses) was made a lot easier." The venue's DMX line is used to control the permanent venue lighting, which allowed Dale to 'pick and choose' what he would use of the venue's lighting system while at the same time leaving it entirely intact. The other two DMX lines control the moving lights and additional conventional lamps brought in to light the stage area for T.V.

The big difference between working with a show on this scale and normal studio one is that, in a standard studio he would be able to make small changes to positions of lights relatively easily. Getting into the ceiling and making minor adjustments in the Maverick venue (as in all large venues) is a much more arduous process, something that was in the forefront of his mind when designing the show.

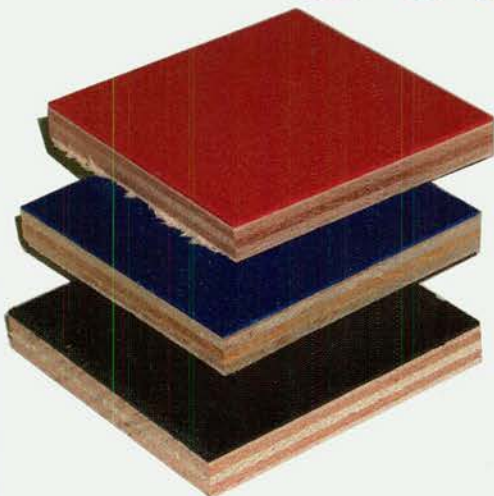
"I haven't forgotten what it's like to be sent climbing AGAIN!!!"

Dale working the Whole Hog in the 'Maverick' studio control room. The Echelon desk is used for the Movie World show.



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## Taking a closer look...



The Coemar CF7 HE (Hard Edge) is a moving light that looks like it comes from the set of the latest Star Trek movie. The sleek, grey, carbon fibre cover shrouds what is a very interesting device. With thanks to Channel Nine (Sydney), John Grimshaw had the opportunity to take a closer look at the fitting...

Specifications wise, the CF7 HE is a CMY moving head profile that uses a 700W MSR lamp as its light source. This fitting does a number of things that make life easier for the designer/operator. The unit has the extreme zoom capabilities of 7 to 69 degrees, and an additional feature of 'autofocus' zoom which can automatically maintain the same focus within the 14 to 36.5 degree range.

The CMY system provides possibly the smoothest and fastest colour changes of any fixture in this class. How it works is that two glass shutters progressively pass into the central light path. Each piece of glass is clear near the leading edge, with a 'sharks tooth' pattern of colour in the middle, so that as more glass moves in front of the beam, more colour is introduced to the beam.

This looks actually to be a hybrid of the way the Martin Mac 2000 and the Clay Paky Stage Zoom 1200 do their CMY mixing - combining the precision of the progressive colour wheel used by Mac2000 with the speed of the twin shutter system used by Stage Zoom 1200. Another additional benefit to this system is that it allows the pure colours to be far more saturated than has previously been the case. Because the two glass shutters actually cross over in the middle of the unit, very saturated cyan, magenta and yellow colours are achieved. That results in quite impressive reds, blues and greens. (See March 2001 pg67 for an explanation of CMY colour mixing)

At first, the use of the Phillips MSR/SA lamp source seemed an unusual choice to this

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**Inside the CF7 HE..**

Pictured left is the rotating gobos section of the fitting. These mounts do require tools to remove and change the gobo, but access is quite easy in this area.

The picture below of the CMY/Douser area shows the jagged 'shark's tooth' design used for these controls.



writer with the trend definitely heading towards the use of the new, small, 1200W HMI by Osram. However, as 'Pineapple' explained to me, this

feature tends to make this device much more attractive to film and television users. This is because the MSR lamp type typically stays very even in colour temperature over the life of the lamp. While MSRs usually maintain colour temp, the output slowly diminishes, while a HMI lamp maintains its output, and colour temp slowly changes over its life. Colour control is one of the most important aspects of film and TV production.

Another good idea incorporated into this lamp is with the dimming system. Like the CMY mixing, dimming is achieved by two shutters that interrupt the light path. The aluminium shutters also have the fine 'sharks tooth' pattern to provide an even dimming effects, but someone had the brilliant idea of spinning down the fans to a much slower rate and reducing the voltage to the lamp while the shutters are closing the light. The result is a significant reduction in fan noise, and presumably an extended lamp life.

On the subject of fan noise, this is one of the main reasons why moving lights are taking their time to penetrate traditional theatre - where any noise will be heard in quiet moments of the show. The CF7 does not completely overcome the problem, but it does go a long way to achieve this.

Other effects on the unit include iris, six rotatable/indexable gobos, six fixed gobos, two rotatable/indexable prisms, and strobe. (continued pg67)

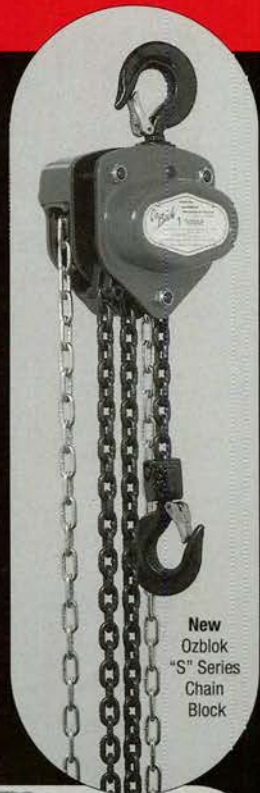


Steve 'Pineapple' Alberts of Schusters with Andrew Veitch of Channel Nine (Sydney)

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# SHOUT!

The life of Johnny O'Keefe is the latest big-budget Aussie musical to hit the boards.

So, how does it shape up? John Burfitt\* went to see...



It was just three years ago that *The Boy From Oz* smashed through the long-held belief that a big-budget Australian musical could not find a popular audience among theatregoers. The acclaimed slick production, and the multi-million dollar profit, put paid to that belief once and for all.

And so, in its wake, *Shout!* is the next big-budget Aussie musical to hit the boards. And, because of this standing, comparisons are already being drawn between the two shows - and it is true, the two shows do share similarities. Like the Peter Allen show, *Shout!* follows the story of a legendary Australian entertainer and the music score consists of old music the entertainer made famous. And that's where comparison's end. But in answer to the question, "Is *Shout!* as good as *The Boy From Oz?*", the honest reply must be "O no, it's not".

That is not to say *Shout!* is without its merits. It has many things going for it, is eminently watchable and ultimately entertaining. It also features an outstanding cast, who are the reason why this show works as well as it does. The music score is also tremendous fun. *Shout!* is a crowd pleaser in which the audience leaves the theatre feeling like they have had a good time.

*Shout!* tackles the life of Johnny O'Keefe, the man known as "The King of Australian rock'n'roll". He had more ambition than talent, but he did pave the way for other Australian rock artists to follow his success.

O'Keefe led an extraordinary life - a Catholic upbringing, loving parents, stage and chart success, his own TV variety shows, marriage and family, infidelity, American and UK tours, drug and alcohol abuse, manic depression, mental institutions and an early death at the age of 43 in 1978.

And *Shout!* covers all these bases. But it does so with a variety of success. One of the main problems with the show is its lack of warmth. While the cast do their best with a soggy script, the cavernous space of the Capitol Theatre stage is not used well to create an intimate feeling with the story.

The walls of the set resemble the old corrugated iron sheets that made up the famous old Sydney Stadium and the walls are lit in a steel blue colour. While this looks appropriate for the scenes actually set in the Stadium, it detracts from other scenes set in places like the O'Keefe's home dining room, a hospital ward, a Kings Cross apartment and a Canberra Hotel. The lighting does the best it can to focus the attention back on the action, but it doesn't help when it looks like it is happening in the middle of a barn - which, in actual fact, it is.

Overall, the lighting of the show by Trudy Dagleish is functional, rather than inspired

or particularly clever. There are many scenes and eras covered in the show and the lighting utilised does the job, rather than adds to it significantly. There are, however, a couple of exceptions, like the scene at a wild 1960s cocktail party is appropriately dark and seedy, while the backseat of the cars parked at lovers lane, with the action lit by the car's rooftop light, is also effective. The all-in finale explodes with energy and the lighting also sets the stage ablaze. But these scenes are the exception rather than the rule. The car accident which closed the action of the first act, which relied heavily on lighting effect, was more near-miss than spectacular crash.

The quality of sound on opening night had its problems, with a few snap, crackles and pops throughout the night which jangled the action and the actors. These seemed to be just a couple of bugs in the operating system, however things soon settled themselves out.

The mix of vocals and music was well-balanced from where I was in the centre seats of the first few rows of the dress circle. The use of Madonna-style wraparound face microphones, however, seemed a little unnecessary and a little glaringly out of place in a period show.

With most of David Campbell's song sung into either a stand mike or a hand-held mike, (both of which were possibly just props because of the face mike he is sporting), you can't help but wonder whether the normal head microphone worn through the hair or down the side of the face would not have produced the same desired effect.

The music for *Shout!* is provided from two sources - one on-stage band and another group of musicians in the orchestra pit at the front of the stage. The five piece on-stage set are incorporated into the plot as O'Keefe's backing band and consists of guitars, bass, drummer and sax, while in the pit, seven additional musicians add to the depth of the sound under the guidance of musical director Charlie Hull. The mixture of sound from the two places works effectively and adds to the depth and richness of sound.

The casting of David Campbell in the title role is a brilliant choice. He is outstanding and gives the character an edge that is the powerhouse of the show. But he is not alone and is supported by the excellent Tamsin Carroll as his wife and Aaron Blabey as promoter, Lee Gordon. Trish Noble and Doug Scroope are also very good as his parents, and The Delltones are very strong and turn the Get A Job number into a showstopper. What I'd Say, I'm Gonna Knock On Your Door and Sing, Sing, Sing are also very effective. The title number, with Campbell giving it everything he's got, brought the audience to its feet on opening night. •

\* John Burfitt is an entertainment reviewer and writer who has worked in all facets of the performing industries. He is currently Features Editor of TV Week, as well as Musical Theatre & Cabaret Writer for The Sydney Star Observer. John has also worked as a performer and director in a variety of productions, ranging from PACT Theatre to the Enmore Theatre and the Closing Ceremony of the Olympic Games.

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Jackie Bristow	Mark Punch/Matt Fell	P Punch + M Fell	Album
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## CHARTS



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**ARTIST:** Neil Finn

**PRODUCER:** Tchad Blake and Neil Finn

**ENGINEER:** Tchad Blake

**ADDITIONAL ENGINEERING:** Sam Gibson

**ASSISTANT ENGINEERS:** Dave

McDougall, Joe Cook, Adam

Samuels, Neil Baldock

**STUDIO:** Roundhead Studios,

Auckland and Sunset Sound

Factory, Los Angeles

**MIXING:** Tchad Blake @ Sunset

Sound Factory, Los Angeles

**MASTERING:** Bob Ludwig @

Gateway Mastering, Portland Maine

## Fixtures Review - the Coemar CF7HE (cont from pg65)

Frosting is achieved by manipulating the focus, and fixed colour correction by using filters in the fixed gobo positions as required.

At 32kgs, it can be comfortably/safely moved and rigged by a single person. The holes provides for attaching clamps are beyond the edge of the unit, allowing users easy access to the nut/bolt arrangement is required.

Having gone through the 'pros' for the device, one significant 'con' would include the fact that service, repairs, gobo change, lamp peaking all require tools. It also is designed to specifically exclude dust - though when servicing the ones being used in Cash Bonanza (a very dusty and dirty room), 'Pineapple' was quite surprised how little dust there was on the inside of the unit - especially considering how much he had to wipe off the outside.

Another thing that surprised this writer was that they did not include more colour temp correction options - or ideally a fourth colour shutter in the CMY area that was specifically for providing

progressive unlimited colour temp control.

As mentioned in the Cash Bonanza article, the issue of increased light output was addressed by Coemar releasing the CF7HEX, which is essentially the same as the CF7HE, but with all of the optics redesigned and improved to increase the light output by 40% on paper. The colour temp of the output is also increased by from 5600°K to 6100°K. The CF7HE is priced at \$21,228 (pricing for the new CF7HEX was yet to be confirmed at time of publication).

## CF7 Wash Zoom

Associated with the CF7HE is the CF7WZ - the wash light model in the range. Stripped of the rotating gobos and prisms, this device includes diffusion filter and a rotating (par effect) filter. This unit includes a colour wheel for up to 6 filters including CTO filtering, and is priced at \$14,388 inc GST.

## CHARTS



**ALBUM TITLE:** Bestard Life or Clarity  
**ARTIST:** Thirty Ocd Foot of Grunts  
**PRODUCER:** Keryn Tolhurst and Thirty Odd Foot of Grunts  
**ENGINEER:** Julian McBrowne  
**ASSISTANT ENGINEER:** Boo McLeod  
**STUDIO:** Arlyn Studios, Austin Texas  
**MASTERING:** Steve Hal., Paul Lari & Dave Wilkins @ Future Disc, LA



**SONG TITLE:** Secret Agent Man  
**ARTIST:** The Superjesus  
**PRODUCER:** Ed Buller  
**ENGINEER:** Ed Buller  
**ASSISTANT ENGINEER:** Evan McHugh  
**STUDIO:** Festival Studios, Sydney  
**MIXING:** Paul Lari @ Royaltone Studios, Los Angeles  
**ASSISTANT MIXERS:** Chris Wozner

**SONG TITLE:** Get Jp  
**ARTIST:** You Am I  
**PRODUCER:** Clif Norrell  
**ENGINEER:** Clif Norrell  
**HARD DISK MANAGEMENT:** Chris Corby  
**ASSISTANT:** Mick Seage  
**STUDIO:** C Studios, Sydney  
**MIXING:** Clif Norrell @ Skip Saylor's Studios, Los Angeles  
**MASTERING:** Steve Marcussen @ Marcussen Mastering

ARTIST	PRODUCER	ENGINEER	SESSION
<b>Hindsong Studio</b> David & Lyn Hinds	+61 2 6582 7070		
Balance	D/L Hinds	D/L Hinds	Album Tracks
D/L Hinds	D/L Hinds	D/L Hinds	Radio Commercial
<b>Nu-Town Studios</b> Greg Hopping	+61 2 9516 3306	Digital & Analogue Recording & Production Facility	
World Beat	Stan	Mark Worrall	Album
Kelly Star	Greg Hopping	Mark Worrall	Album
Hammerhead	Greg Hopping	Mark Worrall	Single
Supa Nova	Sofie Loizou	Mark Worrall	Single
Dom	Andy Ciccone	Greg Hopping	Album
<b>Q Recording</b> Paul Conroy	+61 2 9212 4851	Recording Studio, SSL G+	
Mach 1	Dave Leslie	Mick Seage	Demos
Art Phillips	Art Phillips	Adrian Bolland	Album
Jade Henderson	Danny Calvo	D Gentile/S Gatsby	Demos
<b>R &amp; R Recording</b> Rob Zimola	+61 2 9672 4494		
Zen	Adams/Baker/Murray	R Zimola	CD
Dom O'Leary	O'Leary/Zimola	R Zimola	Album
Jargon	Jargon/Zimola	R Zimola	CD Tracks
<b>Rathouse Studios</b> Mark Macedone	+61 2 6962 2320	24 Track Analogue, 8 Track Digital, Cubase 24	
Fuselage	Chris Campbell	Chris Campbell	Album
Wings of Freedom	Chris Campbell	Chris Campbell	Album
Whitton Carp	Band	Chris Campbell	Demos
Roseanne	C Campbell & M Macedone	Chris Campbell	EP
Star FM Gig Guide	Chris Campbell	C Campbell	RadioShow
<b>Rockinghorse Studios</b> Jim Arnold	+61 2 6688 4005	48 Ch Neve V Series Console, Pro Tools Mix Plus	
The Cruel Sea	Magoo	Jim Arnold	Album
Afro Dizzi Act	Jeff Lovejoy	Jim Arnold	Album
Front End Loader	Magoo	Jim Arnold	Album
Pete Murray	A Lycenko	A Lycenko/B McCarthy	Album
Junk Boats	A Lycenko/DBrammak	Jim Arnold	Track/Mix
<b>Shire Media Studios</b> Shannon McCourt	0414 424 656		
Shire Christian Centre	Sam Towns	Trevor Beck	LiveAlbum
Andrew Gatus	Shannon McCourt	Shannon McCourt	Demos
Thirdson	Shannon McCourt	Shannon McCourt	Demos
<b>Sound Level</b> John Soane	+61 2 9552 3200	24 Track Digital & Hard Disk	
Grinspoon	Jorden Brebach	Jordan Brebach	Demos
Pip Duffy	Jorden Brebach	Jordan Brebach	Mixdown/Overdubs
Paul McDonald	J Brebach	J Brebach	Career Resurrection Attempt
Ben Goodwin	Jorden Brebach	Jorden Brebach	LiveTrack
<b>Soundwarp</b> Meredith Brooks	+61 2 9905 7144	Mastering	
Passionflowers	Lee	Meredith Brooks	Single
Trish Watts	Trish Watts	Meredith Brooks	Single
Utopian Babies	Dave Wilkins	Meredith Brooks	Compilation
Rai	Rai	Bill Syrratt	Compilation
Dale Nougher	Dale Nougher	Meredith Brooks	Compilation
<b>Studios 301</b> Sharnee	+61 2 9698 5888	SSL G+, Neve, Genelec Monitoring (5.1), Sony 48, Pro Tools	
Sick Puppies	Peter Blyton	Steve Francis	
Nikki Webster	Cameron McKenzie	Paul Pilsneniks	
George	David Nicholls	David Nicholls	
The Bank	Virginia Reed	Richard Lush	ABC Classics
Waikiki	Rick Ocasek	Anton Hagop	
<b>301 Mastering</b> Jaquie Espie	+61 2 9211 7301	CD Mastering Facility	
Karma County	Brendan Gallagher	Don Bartley	Album
Various		Don Bartley	Channel V 'Leg Up' Album
Skunkhour	Steve James	David Macquarie	Album
Wendy Matthews	Michael Szumowski	Don Bartley	Single
Popstars 2	Craig Porteils	Steve Smart	Single
<b>Velvet Sound Recording Studios</b> Dave McCunn	+61 2 9267 2915	24 Track Analogue & 64 Track Pro Tools	
Grover	Band	Tony Wall	Album Tracking
Shanley Del	Matt Fell	Trent Williamson	Album
Elie	Tony Wall	Tony Wall	EP Track & Mix
Sevenlives	Band	Daniel Clinch	Album
Porcelain	Band	Tony Wall	EP Track & Mix

### Queensland

**OPM Studios** Daniel Seymour +61 7 3374 0066 ADAT's with Logic Audio and Mackie Console

ARTIST	PRODUCER	ENGINEER	SESSION
Alchemy	Craig Tompson	Daniel Seymour	Overdubbing
The Disciples	Daniel Seymour	Daniel Seymour	Album
Fabian Foley	Daniel Seymour	Daniel Seymour	Albums
Alpha Omega	Band	Daniel Seymour	Album
Open for Inspection	Band	Daniel Seymour	Drum Tracks

**Stargate Music Productions** Dash Mclvor +61 7 3260 6294

Offenbach Trio	D Mclvor/Alex Pattro	Dash Mclvor	Album
Arch	Dash Mclvor	Dash Mclvor	EP
Tanya Self	Tanya Self	Dash Mclvor	Edits
Hot Toddy	Mclvor/Cunning/Twine	Dash Mclvor	Album
Ofillia Guiczun	Dash Mclvor	Dash Mclvor	Single

**Taramalin Sound** Allan Lahey +61 7 3208 9736 32 Track Digital/16 Track Analogue, Pro Tools, New 15"

Brick Subs			
Hotel 44	Hotel 44	Allan Lahey	EP
Defuse	Defuse	Allan Lahey	EP
Gold Finch	Gold Finch	Allan Lahey	Demo
Joe Fish & The Chips	Joe Fish & The Chips	Allan Lahey	Demo
The Wrath	The Wrath	Allan Lahey	Demo

**Vandersound Studios** Eric Vandersande +61 7 5546 8100 Valve + Digital, Training, Mastering

Sapid	Eric Vandersande	Peter Free	Master
Cheesecake	E Vandersande	John Ellwood	Edit
Freeman	Eric Vandersande	Paul Jackson	Edit & Pre-Master
Lot 34	Eric Vandersande	Dianne Burns	Tracking
Duckloaf	Andrew Hines	Emeline Dusek	Edit & Pre-Master

### South Australia

**Disk-Edits** Catherine Linke +61 8 8340 1377 Audio Mastering 7 Post Production, CD & Cassette Manuf.

DJ Reflux	D Yates	Peter Kolomitsev	Mastering/Cd Manuf
Neptune Rising	D Wahlheim	Neville Clark	Mastering
Roger The Band	Band	Neville Clark	Mastering
Suvome	T Lush/M Scruby	Neville Clark	Mastering/Cd Manufacture
Desley Beh	A Voigt/M Jones	Neville Clark	Mastering

**EarSight** Steve Fieldhouse 0407 970 425 ProTools Mix Plus Production/Tracking/Editing/Mixing

Indeeka	Steve Fieldhouse/Indeeka	Steve Fieldhouse	EP Mix
Skintilla	Steve Fieldhouse/Skintilla	Steve Fieldhouse	Album Mix
Ramshackle Jack	S Fieldhouse/John Oldman	S Fieldhouse	Album
Peter Gelling	Peter Gelling	Steve Fieldhouse	Album Tracking
Susie's Backyard	Dean Edwards/S Fieldhouse	Fieldhouse/Edwards	TVShow
Snap to Zero	Shari Kempe/Greg Mates/Band S Kempe/G Mates		EP Mix

**Mixmasters Productions** Mick Wordley +61 8 8278 8506 24 Track 2" / Pro Tools/SSL

Pornland	Jack Mousden	Jack Mousden	Live Recording
Merri-May	Glyn Lehman	Mick Wordley	Album
Gyro	Mick Wordley	Mick Wordley	EP
Hummell	Matt Hanley	Matt Hanley	EP

**Soundtrack Australia** Bob Allan +61 8 8362 2251

Penny Eames Band	Bob Allan	Bob Allan	Jazz CD
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### Victoria

**Audrey Studios** Craig Pilkington +61 3 9415 8599 Analogue, Digital + Hard Disk Recording, powerful sequencing/sampling, CD burning

Nabarlek Band	Craig Pilkington	Craig Pilkington	Album
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**Backbeach/Elevation** Mark Rachelle +61 3 5988 6948 Studio 1 Analog, Studio 2 Digital

A Van/ J Course	Van/Course	Mark Rachelle	Remix
16th Element	16th Element	Mark Rachelle	Mixing
Where Echoes End	Rachelle/Katz	Rachelle/Hibberd	Mixing
Hero Puppy	Hero Puppy	Hibberd	EP
Mindsnare	Mindsnare	DW Norton	Album

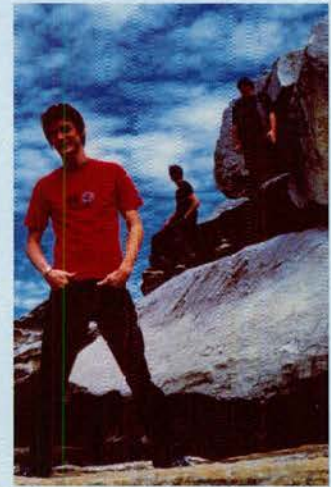
**Crystal Mastering** Joe Carra +61 3 9326 2318 CD Mastering Facility

Ross Wilson	Ross Wilson	John Ruberto	Mastering
Deborah Conway		John Ruberto	Mastering
Joanne	Papapetros/Kourilos	Joe Carra	Mastering
Paul Penton	Paul Penton	Joe Carra	Mastering

**JMC Studio** Damian Kondic +61 3 9696 4117 Educational/Commercial 32 channel Harrisson, 2" tape, Neumann mics

Sasha	Sasha/Damian	Damian Kondic	6 Arias for Album
The Avenue	Band/Damian	Damian Kondic	Single

## CHARTS



**SONG TITLE:** Never Come Down  
**ARTIST:** Fretzy Violet Star  
**PRODUCER:** Bird & Bush  
**ENGINEER:** Eird & Bush  
**STUDIO:** Monnow Valley Studios, Monmouth, Wales  
**MIXING:** Mark Freegard @ Masterock Studios, London  
**ASSISTANT MIXERS:**  
**MASTERING:** Don Bartley @ Studios 301, Sydney



**SONG TITLE:** Pace It  
**ARTIST:** Magic Dirt  
**PRODUCER:** Phil Vinall  
**ENGINEER:** Greg Wales  
**MASTERING:** Steve Smart @ Studios 301

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**SONG TITLE:** A Girl Like Me  
**ARTIST:** Marianne  
**PRODUCER:** Gary Kee  
**ENGINEER:** Gary Kee  
**PRO TOOLS:** Gary Kee  
**STUDIO:** Kooltunz  
**MIXING:** Gary Kee  
**MASTERING:** Nick Skitz

## Tracking Guide

## C H A R T S



**SONG TITLE:** Not For Me  
**ARTIST:** Primary  
**PRODUCER:** Jamie Fonti  
**ENGINEER:** Jamie Fonti  
**ASSISTANT ENGINEER:** Sean Fonti  
**STUDIO:** Little Boots Studio, Sydney  
**MIXING:** Chris Shaw @ Studio 301, Sydney



**SONG TITLE:** Because of You  
**ARTIST:** Kaylan  
**PRODUCER:** The Rockmelons  
**PROGRAMMER:** Kaylan and The Rockmelons  
**STUDIO:** Rockmelon Music Studios  
**MIXING:** Earl Cohen @ Beartracks Studio, New York



**SONG TITLE:** Hoarsey  
**ARTIST:** Palladium  
**PRODUCER:** John Cornfield  
**ENGINEER:** John Cornfield  
**ASSISTANT ENGINEER:** Mark Thomas  
**STUDIO:** Sawmills Studio, Cornwall, UK  
**MIXING:** John Cornfield

**SONG TITLE:** Bullet  
**ARTIST:** Superheist  
**PRODUCER:** Kalju Tonuma  
**ENGINEER:** Kalju Tonuma  
**AST ENGINEER:** Jimi Maroudas  
**STUDIO:** Sing Sing Studios, Melb  
**MIXING:** Rick Will@Studio 301  
**AST MIXERS:** Nick Cervonaro  
**MASTERING:** John Ruberto @ Crystal Mastering

ARTIST	PRODUCER	ENGINEER	SESSION
Blynd	Damian/Band	Damian Kondic	Album
Various	Various - Students	Various - Students	Recordings
Hard to Say	Damian	Damian Kondic	Album
<b>Newmarket Studios</b> Ben Hurt +61 3 9329 2877 24 Track 2" Analogue			
Smallgoods	Paul Thomas	Ben Hurt	Tracks
Simon McCarthy		B Hurt/Chris Corr	Album
Aljadida	Ben Hurt & Band	Ben Hurt	Album
Alex Burns		Ben Hurt	Demos
Louisiana Shakers		Rob Dillon	Album Mix
<b>Sound Around</b> Trevor Cronin +61 3 9531 3891 Mobile & Studio Recording facilities			
The Lovers	The Lovers	Trevor Cronin	Live Rec.
Chad Wackerman	Chad Wackerman	Trevor Cronin	Live Rec.
Slava Gregorian	Slava Gregorian	Trevor Cronin	Live Rec.
Christine Sullivan	Christine Sullivan	Trevor Cronin	Live Rec.
<b>Studio 52</b> Paul Higgins +61 3 9417 7707 Studio A:24trk 2"+HD, Stud. B:24trk ADAT+HD, Studio C:Paris 32tr			
John Huckin	John/Lex	Andrew Meakes	Tracking
Gary Haford	Trevor Carter	Mitch Kenny	Album
Camera Obscura Records	Bob Sedergreen	Trevor Carter	Jazz Demo
Airspace	Ed Nimervoll	Mitch Kenny	Radio Interviews
<b>Toyland Recording Studio</b> Adam Calaitzis +61 3 9482 2111 Logic Audio, 16 in 24 out, 24 track analogue			
Ikon	Chriss McCater	Adam Calaitzis	Live Album Mix
Delta Europe Car	Bob Knowls	Adam Calaitzis	Radio Ad
Order of Kaos	Adam Calaitzis	Adam Calaitzis	Album
Chrion	Adam Calaitzis	Adam Calaitzis	Album
B2	Adam Calaitzis	Adam Calaitzis	Russian Pop Band Album
<b>True Form Recording</b> Neil Gray +61 3 9398 0033			
Gridlok	Gridlok/Neil Gray	Neil Gray (E)	Album
Get Smart	Get Smart	Neil Gray (E)	Live Demo
Stonewall	Neil Gray	Neil Gray (E)	Mix Single
Ketcha Edwards	Ross Wilson	Neil Gray (E)	Album
<b>Wombat Rd Recording Studios</b> Barrie Clissold +61 3 5145 4204 24 Track Digital, Mastering & Duplication			
Vicky Wilson	V Wilson/Clissold	Barrie Clissold	Demo CD
John Corby		Barrie Clissold	Mastering

## Western Australia

<b>Revolver</b> Vic Manfrin +61 8 9272 7505 32 Track Automated			
Showbag	Band/Ben Glatzer	Ben Glatzer	CD Track/Mix
Sugarchild	Band/Ben Glatzer	Ben Glatzer/ Ben Chase	CD Tracking
Kingpin	Chris Gibbs	Vic Manfrin	CD Track/Mix
Reid Corp	Lance Outridge	Lance Outridge	Stage Production
<b>Satellite Recording Studio</b> Darren Halifax +61 8 9470 4003 Protools Mix Plus			
Marie McDonough	Marie McDonough	Darren Halifax	Demo
Deck Chair Theatre	Deck Chair Theatre	Darren Halifax	EP CD
On-hold Professionals	Rick Cameron	Darren Halifax	Messages
Rick Cameron	Rick Cameron	Darren Halifax	Demo
Mudcake	Darren Halifax	Darren Halifax	Album
<b>Witzend Studios</b> Alan Dawson +61 8 9336 1888 16 track analogue + 8 track digital			
Kristie Nicholson	Alan Dawson	Alan Dawson	Demo
Storm In A Teacup	Alan Dawson	Alan Dawson	Demo
Michael Pratt	Alan Dawson	Alan Dawson	Mastering
Sneekers	Sneekers	Various	Mastering live tapes
Heads We're Dancing	Alan Dawson	Alan Dawson	Album

## Other/Film/TV/Post Production

<b>Audio Loc Sound Design</b> John Dennison +61 2 9880 7081 Features, IMAX, TV Series, Documentaries, High End Cinema Commercials			
Warrior	Jo Min Hwan/Sidlis Corp		14thCentury
All Saints	Jo Porter/Seven Network	Rolan Morris	TV Series
Gori Girl	Penny McDonald/Chile Films	Penn Robinson	Doc.
Bush Mechanics	Jenny McMahan	Penn Robinson	Doc. Series
<b>Trackdown Digital</b> Mike Duffy +61 2 9550 6890 64 Track Digital/Post Audio			
Flipper II	Y Gross EMTV	D Candusso/Ryan	TV Series Audio Post
Tabaluga II	Y Gross - EMTV	T Lista/S & T Ryan	Audio Post
My Brother Jack	Samson Productions	T Lista/T Ryan	Feat. Film
Old Tom	Y Gross - EMTV	B Chesterman/Ryan	TV Series Audio Post
The Mad Dash	T M Dash/Candusso	Candusso	EP Track

## Music Messe 2001

Duncan Fry has words to say about Messe (pg79), but did he take up this challenge?

The Wall of Midas - Contestants had to climb up this wall of knobs and plug in four giant XLR connectors in the shortest time to win a chance at a holiday in Venice.

We at Connections wonder if there is a third side to this display with a few knobs broken off. Needless to say, Dunc is back in Australia and not in Venice.



### Arrivals

- ULA welcome new staff member **Glen Rostron**. He joins the ULA Melbourne group as part of the sales support team.
- Blacksheep Productions have appointed **Fiona Pascoe** as their Director of Sales and Marketing. [www.blacksheep.com.au](http://www.blacksheep.com.au)

### Departures

- It's a sad day when someone leaves an industry where they've been a virtual fixture. **David Williams** left Jands Electronics last month, after a career spanning three decades. He went across town to Jands with their mid 1980's takeover of Harman Australia, where he had started in 1973. A decent fellow, he is probably one of the only people to be associated with an audio brand (JBL) for this duration. David plans a quieter life, nearer to home and family.

## Helpmann Awards Break New Ground

The inaugural Helpmann awards were held on March 25, awarding "Bobby's" to the best of the live performances that have occurred the last three years. With seven categories for live performance, there were many memorable shows honoured during the evening.

- Best Musical – The Boy From Oz (Gannon Fox Prod)
- Best Play – Life After George (Melb Theatre Co)
- Best Opera – The Eight Wonder (Opera Australia)
- Best Ballet or Dance Work – Skin (Bangarra Dance Theatre Company)
- Best Visual or Physical Theatre – Sava's Snowshow (Backrow Productions)
- Best New Australian Work – Skin (Bangarra Dance Theatre Company)
- Best Special Event/Performance – Olympic Opening Ceremony (Spectak Productions)

Other awards give that night went to **Trudy Dalglish** for her lighting design of The White Devil, and **Bruce Jackson** for best sound design at the Olympic Opening Ceremony.

The introduction of the Helpmann Awards for live performances completes the missing link in award ceremonies for the entertainment industry. The ARIAs are for music, The Logies for broadcast and the AFIs for film.

Then the ENTECH Awards for technical excellence across the entertainment industry are held every two years as part of the ENTECH Trade Show, coming in February.

- **Francesca Peskops** left EVI Audio Australia HQ in Sydney last month after nearly 5 years as marketing manager. She was an excellent advocate of their cause. Fran is headed into the Events Industry as a sales and marketing manager.
- **John McCubbery** has left his senior role at Musiclink in Melbourne, to take up the position of Vice President of World Sales for Behringer, based in Singapore (Behringer's world HQ). "I see huge growth opportunities for Behringer in the years to come and so it means that my maxims - leave the world better than you found it, make a difference every day - can have a new chance to be realised."

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## ? Helpline

### Exactly what is ANSI Lumens and ANSI contrast?

(from [sheba\\_girl@hotmail.com](mailto:sheba_girl@hotmail.com))

As 'Sheba' said in her email, typing in "ANSI Lumens" into an internet search engine will get you nowhere, and surprisingly the info could not be found on the ANSI website - so here is the answer:

First, you need to get the test patterns used - we use Kayye Consulting DisplayMate ([www.kayye.com](http://www.kayye.com))

ANSI Lumens is calculated using a light meter, the special ANSI Lumen test patterns and a mathematical formula. After adjusting the screen brightness and contrast so that greys are evenly displayed, nine measurements are taken at the screen while the ANSI lumen grid is displayed.

Calculate the average of these nine numbers (Av. Lux) and also calculate the displayed screen size (area) in square metres. You can then use the formula (Av. Lux) x (Area) = ANSI Lumens

ANSI Contrast is calculated in a similar manner. Using the ANSI Contrast display grid, the lux level in eight white squares and eight black squares is measured. Then the following formula is used: (Av. White Lux) / (Av. Black Lux) = ANSI Contrast

If you really want to finicky, make the same measurements at the two extremes of the zoom, and average the result.

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<b>(02) 9966 9888</b>	



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2	Sony K1234 Base Station for 6 x WRR860A	\$10,000
6	Sony "Sharkfin" antennas	\$150
2	Sony WRR850 Dual Hand Held Systems Includes 1 x WR850, 2 x WRT867 with Audio OM-7 heads	\$5,000
3	Sony WRR840/WRT850 Dual Ch. Body Pack Wireless systems with Countryman B3	\$4,350
4	Apex Dominator II Limiters, as new	\$1,500

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## The Queen's BBQ at Kurnell

by Paul A Curry

It is spring in 1970, and 200 years have passed - Sydney is celebrating the Bi-Centenary of Captain Cook's discovery of Australia. It is about seven in the morning and Vince and I have just arrived at Kurnell in the company Combi vans. So too has the police patrol boat Nemesis and a few fishing boats - with the nor'easter it will be gentle, glorious day on Botany Bay. After three days of rehearsals with the ABC's radio and TV crews, we dubbed the gig, "The Queen's BBQ", especially after the crew, security, police and artistic direction took to having a few beers and a BBQ at the end of each day of rehearsal.

For the week preceding the big day, we had erected lots of horn speakers on twenty foot poles along miles of foreshore for the general public. The real "quality" in the sound system was the multitude of brown boxes on sticks in the official bleacher seating enclosure and dais. These line array columns were called "Billy Gramms" having been especially designed by Dr. Ernie Benson, as the major speaker component of a large arena PA for the Billy Graham Crusades, way back in the late fifties. Tens of thousands of people had found their 'savior' by listening to word of God on these speakers. In the company catalogue, the boxes were described as an AWA557, comprising four 6" X 9" MSP (Etone) car radio speakers arranged in a column with ports, relatively flat from 175hz to 10khz and could handle about 10 watts before the internal 100v line transformer saturated. The whole system was driven by a stack of 120 watt TOA "Blue Line" amps, with battery power backup. The TOA amp was ubiquitous in the PA Hiring Dept - we loved them. One knew when the amps were seriously clipping without listening to the speakers as the output transformers would rattle and the little red light on the front panel would go dim. Also, a few extra watts could be squeezed by running the amps on car batteries which supplemented the lack of microfarads in the ac power supply.

The protocol of the time would not allow us to use our mics on the 'chromium cocky perch' for HRH Betty Windsor, oh no. Only the ABC were allowed to do that, so we had to take a split. We were not even allowed to take a transformer isolated split of the actual mics because it hadn't been invented yet. So the PA was to be run on a combined split of voice and tape replay from the ABC. The only two mics we ran were the on site announcer and the band mic, neither of which were going to be broadcast.

Gone are the days when one could do a whole band mix on one mic. I would place

the mic just in front of the conductor and say "What ever you can hear, the mic will hear also," and they would believe me. The ABC had sound splits running everywhere, to all the commercial radio and TV broadcasters including international press. The ABC had spent many hours with the two mics on the cocky perch, both running separately to two RCA 6 channel mixers and exactly lined up to produce 0.775v into 600 ohms at the outputs - one hundred percent redundancy was ensured (or so they thought). ABC TV provided the fold back to the performers on the beach with their monitor system.

Nemesis is cruising off shore about 200 yards to ensure that the hundreds of small craft are kept away from the dais, the crowd had swelled and the official guests are all checked in by uniformed police and double checked by the Premier's department officials working as front of house. We get a GO and the military band play God Save the Queen then Ch7's evening news presenter, Roger Climpson is sounding sweet on our local announcement mic, introducing and explaining the line up of many healthy children about to perform a tableau in the sand before our Queen and Nation.

The live performance starts. At this point I became religious and started speaking to Jesus a lot. Coming weakly out of our speakers is one hundred percent of thin crappie distortion. Vince turns the main wick up a bit more and it is still crap, but louder - well that proves that volume control still works. The Duke leans forward and looks enquiringly at the speaker under his chair and puts his fingers in his ears. The royal children are squirming and I'm going a whiter shade of pale. Whilst this is happening, two guys in a little dinghy, powered by an out board motor, running very close to the shore, pull up in front of the dais to a rock about twenty yards out. One of the men clambers on to the rock with a flag and tries to erect it whilst shouting out some prepared protest speech. I can't recall the flag but it wasn't the Aboriginal one as it hadn't been invented yet either. The Special Branch, with panic on their faces, are asking me if it is sabotage by the uni students or something? I can barely think as we check over the gear, saying "It has to be the split from the ABC, it's not us". I keep repeating this mantra as I re-check the gear while the rest of the electronic media, except the remarkably calm ABC TV crew, are screaming about the lousy sound. We soon figure it out, ABC TV have good sound!

A fat sergeant of police starts wading out to the little boat while non-uniformed police

## Ten Years Ago...

### Channels

The professional sound and lighting magazine

### New Clair Bros. PA here

Jands debut 54 MK.II

Clair Bros. has announced the debut of its new 54 MK.II PA system. The system is designed for professional use and features a range of options including a choice of speaker configurations, a choice of power supply and a choice of control systems. The system is available in a range of configurations to suit different venues and applications.



The 54 MK.II PA system is a complete solution for professional sound reinforcement. It features a range of options including a choice of speaker configurations, a choice of power supply and a choice of control systems.

Channels magazine is a leading authority on professional sound and lighting. It provides news, reviews and technical information for the industry.

The precursor to Connections was a little rag known as Channels. Produced by Julius Grafton, it was a Jands in-house mag. Its first issue came out a little over ten years ago, and here is a snippet of the news of the day. Bear in mind, Grafton didn't know how to operate his spell checker. And still has trouble with it.....

Page 4

## Piggyback Banned

Almost unbelievably the Energy Authorities of Australia have banned the Piggy Back plug. HPM Industries announced that production had ceased in October, and Clipsal (Gerrard Industries) are also believed to have ceased production at the same time. The move follows a directive from the S.E.C.W.A. Approvals branch, who reasoned that it was possible to connect a piggy back plug to act as a socket on a lead, a situation that is certainly dangerous. However, it is equally possible to wire a normal mains plug to both ends of a lead too.

The move means that effectively from November 1st 1990 the approval for the re-wireable Piggy Back Plug is withdrawn. Effectively, it will be illegal to sell, expose for sale, or hire re-wireable piggy back plugs or extension leads. It remains to be seen whether existing users of piggy back plugs, ie: lighting hire companies, are to be pursued or prosecuted in event they continue to hire existing equipment fitted with piggy back plugs.

The ban does not extend to molded piggy back plugs, ie: non-rewireable, so there is a little hope there .... but life without the piggy back is almost too horrible to contemplate.

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## The Queen's BBQ at Kurnell (continued)

run to the waters edge to confront the protesters. The guy in the boat is panicking and is frantically trying to restart the outboard motor, his mate is balancing on the rock with the flag, Vince, who gets the big money, rushes over to the van and grabs a 12" portable valve TV and one of those single earpieces that look like a hearing aid. He hands the earpiece to me and I tear off the earpiece, bare the wires with my teeth and push the wires into the binding post terminals of our mixer as he stabs the mini jack into the headphone socket on the TV.

If you are old enough, you can probably remember, valve TV's take an eternity to warm up, especially when trying to find an empty power socket in the days before Kambrook power boards, and not pull anything important out among the poultice of cables. The guy in the boat has success with the outboard motor but his throttle is wide open, the boat suddenly spurts forward and he falls down in the boat stunned. The crowd are yelling out "don't leave your mate behind" and the fat sergeant is getting deeper and closer. The little boat is spinning around in circles and our TV is starting to warm up, there is Premier Askin on the screen saying very clearly on the TV, without distortion, "Your Royal Highness", tap tap, pause "Your Royal Highness", pause, tap ! tap ! "YOUR ROYAL HIGHNESS !". He grips the heavy cast iron round base mic stand with both hands and thumps the whole assembly up and down on the dais. By this time we have the TV sound on to the PA, the Premier, being very astute, senses that his tapping and thumping have fixed the problem and commences to reintroduce Her Majesty.

Nemesis wants to get in on the act and powers in toward the official dais at full speed. Realizing just in time that they need to avoid ploughing up the little children on the beach in front of the dais, the ten ton vessel makes a sudden decision to go hard right. This creates a tremendous spray all over the dais, splashing the Royal Family's boots. I can't recall the children getting wet as they were all wearing green plastic garbage bags with cut-outs for limbs and head. (Plastic was really in then, especially as Cristo, a French artist had wrapped up part of the Botany Bay foreshore in Gladwrap as his contribution to the Bi-Centenary art happenings)

Nemesis then over shoots the little boat and the fat sergeant by now, up to his armpits in the bay, receives Nemesis's huge bow wave right over his head while the gaggle of plainclothes police rush up the

beach away from the wave. Miraculously, the little boat is not swamped, the guy comes to, steadies the boat, and picks his mate off the rock, they zoom away, hugging close to shore, which is too shallow for Nemesis to follow and cut them off. The ABC Radio senior engineer, reaches over to one of the RCA mixers and turns down the master knob and the electronic media stop screaming, Vince monitors the ABC split and it is clean, then the penny drops, one of the output leads from the mixers which were being summed into another mixer would be out of phase. We were all given the summed mix except ABC TV.

Why this glitch never surfaced during rehearsals we will never know, a cone of silence descended over ABC radio. I could hear the police radio chatter saying that the protesters had beached their boat on the shore about a mile away and had melted away into the crowd, I think they got away with it, probably saved by the sound from the evangelistic loudspeakers. When the re-enactment was over, I happened to overhear the BBC correspondent talking, summing up the day live to England, "Well listeners, that ends a perfect day here at Botany Bay, marred only by an inefficient public address system". The evening newspapers had headlines, "Public address system fails at Botany Bay" "Queen embarrassed by sound system". Later that night while watching a replay on commercial TV I broke into hysterical laughter, seeing the chromium cocky perch going up and down with white clenched knuckles in front of the worried face of the Premier or the evening news. The next day, Vince, myself, the PA Hiring manager, the chairman of Amalgamated Wireless Australia Ltd, along with the ABC, were hauled before the Premiers Dept for an official enquiry, but of course nothing was said publicly of the outcome, it was old news.

The Industry Soapbox is a place where industry professionals can have the opportunity for extended comment on any industry subject or issue they feel needs closer attention.

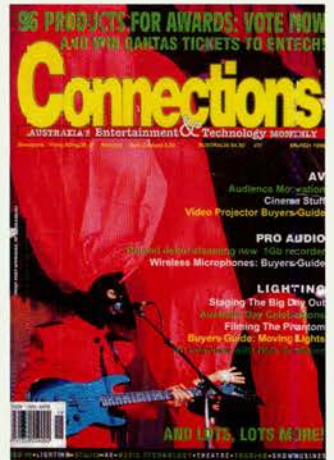
You can even relate a story about some thing that happened some time ago - if the passage of time makes it now possible to tell the story.

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## Five Years Ago...



Into its fourth year, Connections was busy preparing for ENTECH '96. Other news of the day was...



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Essentially an eight-track (with eight virtual tracks per track) digital hard disk recorder/editor is combined with a 14-channel fully digital mixer for flexibility in both recording and mixing.

Two effects processors can be added using the onboard expansion slot. Finishing off this complete package, easy-access data storage, in the form of a removable one gigabyte Iomega Jaz drive or a fixed hard drive, can be built right in.

**Hindsight: a wildly successful device, shame about the Jaz drive!**

# Connections

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by Graham Walne

## That It's Done At All

**T**he title of this article is a quote from the English 18th Century Lexicographer Dr. Samuel Johnson who referred to a dog walking on its hind legs and said the wonder was not that it was done well, but that it was done at all. This set me thinking about the value of mounting theatrical events in unusual locations. As I write this, news is suggesting the 'Cats' tent might be used for a national tour of 'Grease' and, if that is successful, then maybe other musicals will follow. Readers of 'Connections' will recall the trials, tribulations and triumphs of staging 'Cats' on the road.

Managements are becoming more and more interested in this method of touring because it overcomes the vagaries of different venues. For example, Radiohead have just concluded a European tour with a 10,000 capacity tent (actually using 2 tents to overcome gaps in the performance schedule).

Tents are effectively hybrids - an indoor venue but with more needs than an arena. Tents suffer from wind effects and most are situated away from local power, thus requiring extensive generators and, in Australia, unlike Northern Europe, these also have to provide airconditioning. These problems bring experts into the team that would be unthinkable indoors. Some years ago I was asked to light a tour of the Bolshoi Ballet staged outdoors, but in a touring proscenium stage complete with flytower, so, aeronautical engineers were involved to assess the wind resistance on the tower and climatologists to predict wind strength from day to day.

Unsurprisingly the poor weather in Northern Europe has hitherto limited the use of tents and few non-circus events come to mind over the past 20 years or so, a brave Bolshoi Ballet in Battersea Park stands out but not much else. Interestingly the recently renovated Open Air Theatre in Regents Park in London loses less than 5% of its performances because of bad weather - although sales of umbrellas and sweaters do very well. By contrast tented theatre has been successful in the US, notably in the resort and tourist towns and perhaps 'Cats' is the start of a trend here in Australia.

Tents provide an intimacy which is not feasible in an arena. For example the tent used for Radiohead actually holds 15,000, an economic number for a large arena tour. I have some reservations however about the sightlines because the rake of the seating tier is limited by the structure - however sadly poor sightlines are not the prerogative of tented structures alone. Despite considerable attention to ambience and resources the theatres on most cruise liners have poor sightlines because of compromises between decks (although the 'Monarch of the Seas' provides two tiers for its 1050 patrons). Another problem is the distribution of the air cooling system which cannot evenly locate extract vents at high level, as in a permanent building, and this, coupled with the complexities of the temporary seating, can result in some uneven temperatures across the auditorium.

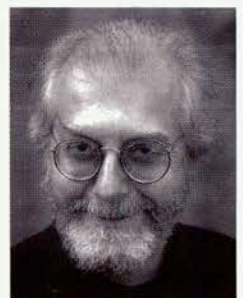
Unusual structures can behave unusually, especially with regard to acoustics, frequently being more reverberant than expected. This is true of Shakespeare's Globe in London for which I was lucky enough to be part of the design team. This reconstruction, a circular outdoor venue with 2 galleries, and based on its Elizabethan predecessor, demands just the right amount of level, shouting doesn't work but a stage whisper is very effective. It also demands clear but natural articulation from its actors (a dying art) but the venue's policy rules out any artificial help and even acoustic treatment is a major issue for its historians. Other outdoor venues can sound very dead and require considerable help but sometimes the demands of the heritage registration can limit the quantity and location of equipment introduced.

Acoustic problems multiply when opera is mounted in unusual spaces, usually large arenas, a fad in Europe that seems to be slowing slightly. There is a logic to this because opera (and ballet) are the most expensive art forms to stage and thus more seats promises more box-office. I lit 16 ballets in repertoire for the Bolshoi in 1993 at London's Royal Albert Hall, turned into a 5000 seat proscenium stage with vast thrust. It was successful for the modern works but not for the classics which didn't suit the thrust. Early arena operas received plaudits for their spectacle - but brickbats for the sound - what a brave thing to attempt as a sound designer given the opera purists! But I suspect that these events are not catering to the purist audience. Certainly the logic behind my 1993 Royal Albert Hall season was that the Royal Opera House's establishment image deterred the masses from enjoying ballet and thus a more user-friendly venue would be preferable. The RAH is fixed in the Brits' consciousness for pops, wrestling, Proms and Memorial event and the difficulties of mounting the show their (ably overcome by a military operation by a rock and roll crew - theatre crew I'm afraid would have had a harder time) worked well.

I'm curious to know if the tented experience and other unusual venues causes the audience's expectations to be different from those they would have indoors. I'm particularly interested to learn what effect this has on their main-stream theatre going experiences. At best the tents are a compromise on what can be achieved on a permanent basis and most audience members have some theatre-going experience on which to draw. Circus on the other hand is, for most of us, our first experience of the Big Top and thus we accept it's limitations because most of us haven't been lucky to witness circus in a purpose designed venue so we've little to compare.

Nonetheless tented tours have the potential to take work to areas which might otherwise not be able to enjoy it, and their informality might attract people deterred by a more permanent building.

**"...stage management training traditionally provides a broad base [of] skills, as well as running rehearsals and the corner."**

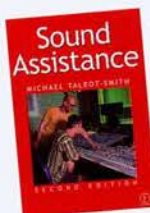


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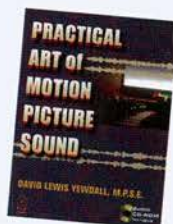
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 By Michael Talbot Smith. Offers an easy-to-understand account of sound operations in radio and television studios. New edition covers microphone sensitivities, loudspeaker listening tests, stereo transmission in radio, stereo PPM interpretations, MiniDisc, and more. 250 pgs, 1999.



**STAGECRAFT \$44**  
 By Trevor R. Griffiths. The complete, practical manual of modern theatrical practice, with coverage of every aspect of the subject, from choosing a play to backstage and front-of-hour management. With its aid, even the most inexperienced amateur group can attain professional standards. 192 pgs, 1982.

**PRACTICAL ART OF MOTION PICTURE SOUND (with CD),**  
 2nd edition \$84

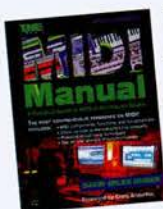
By David Lewis Yewdall, MPSE.  
 This book features such topics as: Pre-production planning, production tips, temp dubs and test screenings, custom recording sound effects, dialog editing, non-linear editing, music in film and television. The audio CD contains sound effects and demonstration material. 265 pgs, 1999.



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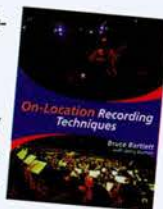
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**THE MIDI MANUAL** 2nd Edition \$55  
 By David Miles Huber. The book provides a close-up look at the industry's top products and teaches you how to integrate them with your computer. Illustrations and step-by-step lessons teach you how to set up an efficient MIDI system as well as how to use your PC to expand your musical recording and performance techniques. 255 pgs, 1999.

**ON-LOCATION RECORDING TECHNIQUES**  
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By Bruce Bartlett, with Jenny Bartlett. Focuses exclusively on the special techniques used for recording outside the confines of a studio. Offers a clear explanation of stereo miking theory, along with specific techniques, procedures and hardware. Also covers mixing and editing a live gig tape, building a recording truck, surround-sound miking, binaural and transaural stereo. 278 pgs, 1999.



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## Frankfurt 2001

Hold the sausage Mother, I've taken a turn for the wurst

**F**t's late summer/autumn here, but in the Northern Hemisphere it's still icy cold winter. This minor detail had slipped my mind when I stepped out of the warm Frankfurt airport at 5.45 am a couple of Mondays ago, ready to do battle at the MusicMesse exhibition. Foolishly I had dressed for tropical comfort during the flight and three-hour Kuala Lumpur stopover, forgetting that at some stage, I would actually have to get off the plane somewhere cold.

Yikes. A searing blast straight from the Arctic sliced through my t-shirt and shorts, causing me to curl up in a foetal position over my bag while I frantically unzipped it trying to find my warm coat, naturally packed several layers down under a pile of brochures and samples in the second bag. Once found, I then had to gather up all my worldly goods (now spread out over the footpath) and re-pack both bags, while other well rugged up passengers strode past sniggering and grabbed all the taxis!

Still, I was soon ensconced in a warm Mercedes station wagon, whizzing our way through the grey dawn to the hotel.

Checking in took only a few minutes, although there was a little discrepancy over the room charge. What I thought might be a reasonable price for buying the hotel room outright turned out to be the daily rate for using it for six days! And this was at the heavily reduced corporate rate.

I tell you, being a world traveller with our current Pacific Peso is no joke - even cheap places become expensive, which means most prices in Frankfurt around showtime become totally astronomical. Being presented with the bill in most Frankfurt restaurants causes a distinct nervous flutter in the old sphincter.

Tony Hosking from the Resource Corporation and I were sharing the room; his plane had arrived around midnight so he was already checked in, wide awake and looking for some breakfast action.

So, after I had a quick shower to erase the smell of the plane, we went looking around town for breakfast. Our hotel seemed to be situated in the nightclub/ bar/ strip joint area, and at that early hour there was a distinct lack of anything open. So, we walked further afield until we found the Cafe Mozart, oozing olde worlde charm and the delicious aroma of fresh coffee.

Have you ever ordered food in a restaurant where you can't understand anything on the menu? It makes for interesting dining. Neither Tony nor I spoke much German, apart from the

obligatory cry of the Australian tourist "Zwei Biere, bitte (Two beers please)" and our waitress spoke no English, so we glanced through the menu, pointed at the second cheapest thing we could find, then sat back and waited to see what would appear. Luckily there were no guffaws of laughter from the chef when she gave him the order, and she soon returned with bread rolls, jam, butter, and a cup of coffee each. We polished off the rolls and sat back sipping our coffees. Just as we were about to leave, the waitress came over with two boiled eggs for us! They were delicious, perfectly cooked, but I couldn't help thinking that they should have arrived first rather than last! Maybe it was a way of getting us to order another couple of coffees to wash the eggs down with. If so, then it worked!

One of the things you can't help noticing in Europe is the huge amount of people smoking. I'm no anti-smoking puritan - live and let die, I say - but after five days of the show, every piece of clothing I had reeked of secondhand tobacco smoke. There appears to be no encouragement not to smoke, although when I got off the plane, at the end of the air-bridge there was a sign saying 'Welcome to Frankfurt's smoke-free airport'. A pleasant thought, but purely wishful thinking, since it was accompanied by an overpowering smell of stale smoke. People used to say that kissing a smoker was like licking out an ashtray, but this was more like wearing a pillowcase full of old cigar butts over your head!

As we walked back from breakfast to the hotel, I saw something that made my eyes light up - Crazy Herman's Bargain Corner, the Frankfurt equivalent of the \$2 shop, absolutely jam-packed with useless doodads and knick-knacks, stuff that you must load up with and take back home with them just in case the wife says "Did you get a souvenir of Frankfurt for the woman next door's nephew's cousin's best friend?" I can't help myself in those shops, and bought up big, even though Crazy Herman turned out to be an Indian Sikh wearing a turban, and speaking German English with an Indian accent.

In our hotel room were some glossy mags of things to do and see, some business magazines, and a lifestyle magazine, appropriately called Lifestyle. In Australia these magazines are almost invariably aimed at feminine readers, but apparently not so in Germany. This magazine had not only the usual plethora of homewares, renovation and design sections, but also a six-page spread of naked young women frolicking in the snow and splashing in hot tubs!

Now that's the kind of lifestyle magazine that even I would buy!

I can read even less German than I can speak, but does this sign mean that Mackie's running man has seen the share price and is urgently heading for the toilet?



Christ Cranes...  
Our motto: Let's hope to Christ it doesn't fall down



The Tea Boy - Advertised in Lifestyle magazine, this little penguin shaped gadget is aimed at the terminally lazy, so naturally I bought one (purely in the interests of research). It works like this: First you hang the string of your tea bag over its beak, with the bag in your cup. Then you pour the boiling water into the cup, and set the timer on the side of the Tea Boy. When the time is up, the penguin's beak lifts the tea bag out of the cup, saving you the onerous chore of doing it by hand!





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### You Can't Change The Laws Of Physics

I've read the VDOSC comment & answer thread & can't see a clear line of discussion. For starters this industry is full of little errors of detail - Like calling the horn shaped affairs that tweeters are attached to "Waveguides". They're really "Launchers" or "Impedance transformers". The nearest thing we have to a Line Array in the real world is a highway. Traffic noise behaves as though it came from a line array for a considerable distance from the road. A Line array of loudspeakers would need to be about the length of a highway to become a true line array. Nonetheless the sound will behave as though it came from a line array if the distance from you to the array is such that you would be flattened if it was hinged at the bottom & toppled towards you. In free space that affect will start to disappear beyond that limit and eventually, at some distance, the inverse square law will prevail.

Are VDOSC stating that their "Line Array" sound exhibits minimal interference & lobing patterns in its dispersion pattern?? If so then I am not displeased. (I'm still not sure if that's what the argument is about but I'm not displeased.)

Are they saying that a pair of line arrays will not produce an interference pattern in the overlap area ?? If so then we have an argument.

People have been demonstrating interference patterns from two wave generators (or loudspeakers or antennae or whatever name you will give them) in ripple tanks for a long time wherein Nodal & Antinodal lines are simple to calculate & even easier to demonstrate.

Greater perfection of lobe & interference free dispersion from a loudspeaker makes for more obvious Nodes beside the centre line where the two "beams" meet.

The typical "Stereo" arrangement with a stack of speakers each side of a stage produces an interference pattern that increases in audibility with improving speaker construction & improving acoustic environment.

If you want to hear the effect just try walking across the front of the stage, parallel to the stage, about 15 to 30 metres from the stage. Near the centre, you'll hear the tonality of the vocals change with every step you take IF .... you're at an outdoor event with few slap echoes etc and .... If the speakers form a good single source array.

That effect will be with us regardless what type of array we have until the laws of physics are repealed. (I know it would be nice if we hadn't needed Newton & Einstein to describe the ones we have but, complex as they are, we're stuck with them.)

The interference effect near the junction of two sound sources could be minimised by stacking up two huge piles of poorly arrayed multiple driver boxes. Such a heap system would produce massive interference patterns so dense the ear would average the whole mess into a semblance of what it wanted to hear.

But who would want that?? (I'm sure we've all heard it ..... but who wants it.???)

The real answer is a properly assembled and operated LCR system but this note is already too long. Mumble, mumble, Rhubarb, SPAGhetti.

- Peter Patrick  
Scientific Acoustics

### Once Bitten Twice Shy

As a long term reader and an even longer member of the industry, I thought long and hard about this before taking up your request for a response.

Last year, as I eased myself back into full-time work after being ill, I put my hand up for some work with [name removed] down here in Melbourne. They strongly complained about having to pay me \$15 per hour + GST and it took several days before they would agree to the figure. After doing a few shifts it became blatantly obvious why. Most of the other "crew" on calls were actually \$10 per hour casual labour from a local non-industry casual labour company.

I spent most of my calls re-rolling leads correctly, re-patching or reconnecting incorrectly set up equipment and teaching people how to lift safely. Very few of their staff had any significant industry experience, and those of us that did were treated very uncoolly with endless grief regarding our expected standards, length of calls and pay rates.

The whole episode came to a very abrupt end when, post a hurriedly thrown together country gig, I unofficially complained about a very significant and VERY dangerous work practice relating to others working and driving versus alcohol. Rather than deal with the problem and address the safety concerns I had, they seemed to have just forgotten my phone no.

I have been in this industry since 1985 and on the whole have never really had a problem with pay rates and conditions offered, other than a few occasions. This one was the most blatant and - I am sure you would agree - potentially dangerous re health and safety.

- Anonymous (name supplied)

(Ed - We are still looking into this issue, and have had some very interesting submissions, that we will print at a later date)

### Is Duncan Fry real?

Or is he some mythological character, conjured up by the minds at Connections to fill pages with words of cunning wit (say that slowly and carefully). I enjoy reading his and Walne's page every month - keep it up!

- greeraudio100@yahoo.com  
Audio Engineer

### Does AC/DC Matter?

How many times do I get to read the same story by Julius Grafton? You guys are worse than CLEO. You know, they recycle their stuff and get away with it, 'cos their readers grow up and get a life. So, grow up, and get a life! I mean, so what if AC/DC are the loudest band on the planet? What about a story on The Corrs or something interesting?

- Don't care! Sydney

• Thanks, Mr/Ms Care! Last month makes the third time in ten years that I've written an AC/DC concert review. In a couple of years, I'll probably do it again too. - JG

### Loving Connections

Thank you! Every month the recycled brown paper bag arrives, I lovingly use it for my son's lunch the next day.

My magazine is always here a couple of days before I spot it at the newsagent in Port Pirie.

I love Connections! Thank you.

- Jessie Smith. Port Pirie



Greg Simmons, former editor of Audio Technology magazine, seen enjoying his first beer, and contemplating his next 40 years without a suit. Happy birthday Simmo!

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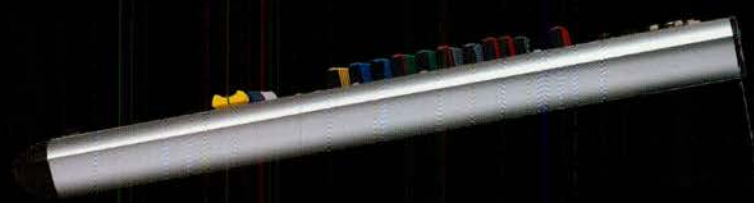
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