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**INSIDE:** Long Way to the Top • Tascam's DM24 V2 •  
Oceania buy 2 line arrays • Enter Artnet • All about Gels  
• Studio Monitors: Market Report

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PG48



PG58

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PG57



PG81

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PG52



PG56

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Audio Telex has not sought or received endorsement for the above MediaMatrix users.

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# Connections

The Asia/Pacific Professional Audio and Visual Technology Monthly

OCTOBER 2002

## DiGiCo debut new live console

*Soundtracs console platform relaunched as D5 Live, while Bob Doyle claims MIDAS had no digital program. The live digital console market just got more interesting....*

Earlier this year Connections spotted an unbadged prototype console on the Rod Stewart tour. Now the D5 Live is born to the new company known as DiGiCo.

DiGiCo was born suddenly when Soundtracs founder Todd Wells tired of the battles that bug anyone trying to make meaningful pro audio gear.

Suddenly Bob Doyle, the urbane head of Midas, jumped ship to head the newly reconstituted conglomerate. And he said that as far as he knew, Midas had no forward program for development of a live digital console.

So DiGiCo is now a real firm, and its first console offering is the D5 Live console. This is a system made up of a front-of-house Digirack containing A/D converters and I/Os, a matching stage Digirack and 100m of fibre optic cable. It's a complete, self contained system that does away with the need for a multicore, splitters,

line drivers, dynamics processors and – optionally – an entire effects rack too.

The D5 Live can also record live to multitrack with a single MADI cable and a



hard disk multitrack recorder.

Virtually every feature is visible at a glance, > please turn the page

## ACN stalls as ART-NET poised to carry DMX

*DMX 512A is virtually here, and one ethernet protocol appears ready to carry it*

LONDON: Art-Net is the new defacto Ethernet standard for network distribution of DMX. It became so in September at Plasa, when the industry buzz said it was time. Now consoles are sprouting Art-Net ports, to date it appears on several and soon will grace products from MA, Jands, LSC and Compulite to name but a few. But not ETC, who perhaps are protective of their own Ethernet protocol, called ETC-Net.

It seems the American lighting industry is suffering denial that the proposed Advanced Control Network (ACN), will fail. There are ACN ports on some new devices, but they are a wish and a prayer, since they don't do anything yet. But the world may yet end up with ACN being the American standard, and Art-Net the standard for the rest of the planet. After all, America has its own unique mobile phone standard, useless anywhere

else, so why not lighting control?

Art-Net came because the review of Ethernet protocols was taking forever. Lighting manufacturers have trouble breathing the same air as their competitors, and getting DMX 512A into existence was more than enough for one lifetime. The depth of immaturity and hatred within the lighting equipment business amuses us here at Connections. Five years after the very patient people at ESTA established a working party on an Ethernet protocol, the only agreement is that it will probably take another 2 years.

Meantime Wayne Howell from Artistic License in the UK grew bored with waiting and set about making his own protocol. Enter Art-Net. It isn't a replacement for DMX, rather a carrier. And it isn't 'proprietary' in the secret sense. Anyone can build it into

> please turn the page

## INSIDE

**OUTDOOR LIGHTING**  
Market Report. See page 60



**STUDIO MONITORS**  
Market Report. See page 47



**E-x-p-a-n-d-e-d STUDIO ROUNDUP!** Who is doing what across Australia?

See page 72.



## Apple bites man

### Mac update from Connections

We've had backlash when we've reported our Mac hassles over the years, including Apple pulling their advertising from these pages.

I'm sure there are happy Mac users out there, and I'm sure that their ProTools never causes the slightest moment of grief. However I don't use ProTools. I publish.

My latest drama came on deadline when - *silly me* - I upgraded from System 9.04 to 9.1 in order to get Illustrator 10 to work. Then I couldn't print.

After reinstalling everything the problem persisted and what really bothers me is that I could find no fix noted on the Apple website. Eventually I discovered the hard way that Extensis Suitcases and ATM (Adobe Type Manager) are suddenly conflicting on System 9.1, whereas they were happy together on System 9.04 and earlier. Obviously Apple feel third party issues are not their concern. But they surely would have known about this problem. And these two utilities are used by almost ALL Apple publishing customers.

The cost to me was 5.5 hours downtime.

- Julius Grafton

Wayne Howell from Artistic License with some of his products. A very generous human!



## DiGiCo

(continued from previous page)

or at most a single finger press away. The four LCD touchscreens present their feature sets exactly as an engineer would expect to find them on an advanced analog console, with instant access and no menus to navigate.

This intuitive approach means that, despite packing in powerful digital dynamics, an optional effects package, total recall of every function, a 38 x 8 output matrix, up to 96 input channels and 40 multi-configurable internal buses, the learning curve will be hopefully short.

D5 Live software provides flexibility in configuring the console to suit the show. In both 56 or 96 input console versions, the 40 internal buses can be set up as mono or stereo auxiliaries and mono or stereo surround buses. The console is fully 5.1 ready as well as for L/C/R, with three joystick surround sound panners for instant sound placement.

The engineer can also instantly select a

basic set-up for either front-of-house or monitor mixing.

Three solo modes are provided, along with the facility to 'gang' groups of input faders together for single-fader control.

The dynamics package offers comprehensive frequency-conscious gating, compression and limiting with sidechain EQ, and a four-band fully parametric equaliser plus high and low pass filters. The moment an EQ control is touched, the screen displays a real-time EQ curve - with visual feedback provided for every other feature.

At any time the console's entire status can be committed to a snapshot memory and as there's no limit to the number of snapshots that can be stored, a complete show mix can be recorded, stored on a tiny USB key and then recalled on another continent with another D5 Live.

24 VCA-style control groups are provided, and inputs can be swapped between physical faders and groups of faders to suit.

There were no distribution announcements at presstime.

• [www.digiconsoles.com](http://www.digiconsoles.com)

## ArtNet set as new standard

(continued from previous page)

their console, or moving light, or even make distribution solutions. Which is what Artistic License do - they build elegant and useful boxes and panels for Ethernet routed lighting.

Wayne is either insanely great or greatly insane, because he is not charging anyone a license fee, indeed you can get the plans and install his Art-Net into your device today, the only cost is your own engineering outlay.

Wayne told Connections that he grew weary of waiting and needed an Ethernet solution for his own products, so he designed it. Then he figured if it became a standard, then he would sell more products - even if others were imitating his Art-Net enabled

distribution devices.

In five years or so, we will see if Wayne is Greatly or Great!

- Julius Grafton

**About Art-Net:** 10BaseT Ethernet can carry up to 40 times more data than a DMX 512 cable. Now Neutrix offer a 'roadable' RJ-45 connector in an locking XLR shell, and TMB and others are making a flexible, touring resistant Cat 5 cable, the industry can enjoy the benefits of Ethernet distribution of DMX.

Ethernet wiring is a 'star' topology, more reliable than the daisy chain world of DMX connections. This does mean more cable is used, but it is safer. DMX remains the language of lighting, Art-Net simply 'carries' it, through Ethernet cable and connectors, with low cost hubs and even wireless transmitters.

Art-Net allows internet interface of DMX, which will lead to remote monitoring and configuration of lighting devices. Since the first part of a dmx message is a unique manufacturers identification code, it is logical that future controllers and devices will be able to identify not only what kind of product or light is on a certain dmx address, it will be able to read the serial number and determine operating status and lamp life remaining too.

Finally for those confused about the almost nearly finished DMX 512A : well, Art-Net will be able to carry it, in whatever form it finally assumes.

• [Info from www.artisticLicense.com](http://www.artisticLicense.com)

## Prosound conference shrinks to one day

November NT Pro Sound Conference repackaged to create better value - with more Dave's

It's been renamed the Dave Day, as four notable audio Davids are on the programme. The two Dave's from very major venues, David Claringbold (Sydney Opera House) and David Watson (Hillsong Church) will be joined by David Dennison, a leading system engineer who currently advises Meyer Laboratories. The fourth Dave is David Scheirman of JBL, who will not attend but who will contribute via video.

As the first of kind, the NT Conference has seen a teething problem overcome when the two day program was shrunk to one. This will ease concerns that the conference would

take too long and cost too much. The whole two day program will now be attempted in one day, perhaps akin to the show 'The Complete Work of William Shakespeare'. But probably not quite as funny.

The ProSound day is now Tuesday Nov. 5 in Sydney and Tuesday Nov. 12 in Melbourne.

Other NT Conference days are unchanged: OH&S; Wed. Nov. 6 (Syd), & 13 (Melb), Lighting; Thurs. Nov. 7 (Syd) & 14 (Melb) and Vision; Fri. Nov. 8 (Syd) & 15 (Melb).

The conference cost is \$225 per day.

More info from [www.conpub.com.au](http://www.conpub.com.au) or call Connections on 1-800-635-514.



Diana Krall has embarked on a world-wide tour. FOH engineer Tony Romano (above) swears Audix SCX microphones are: "the best piano mics I have ever heard!" The SCX25 mics are strategically placed on top of the piano bars via the Audix D-flex mic clip.

## I'm not secretive! Nor is Uli Behringer dead....

Uli Behringer is alive and well, and determined to shake off the 'secretive' tag that this writer has applied to his company. He emerged from his Phillipines base to host his first press conference at the London trade show Plasa, where he launched a new line of analog mixers, the UB41 range. U for Uli, B for Behringer, and 41 for his age.

Looking younger, the obviously mensa-smart uber trader read from a prepared script, and didn't reveal much other than that his latest products were originals.

This marked a change in direction for the German company, whose history is contro-

versial. Their new direction appears to be with their own research and development.

Mr. Behringer told Connections that he preferred the lifestyle in Manilla, where there were many talented musicians. He preferred not to disclose the firms revenues, 'after all, we are secretive' he joked.

Wild stories alluding to Mr Behringer abound. In one scenario he was unwilling or unable to attend trade shows in Europe, or was surrounded by bodyguards when he did. The Plasa appearance disproved that, he was sighted alone in the cafeteria, and certainly didn't appear threatened. **-Julius G.**

## INSIDE

**CHAMELEON EXPAND**  
Cover Story. See page 39



**OCEANIA BUY NEW PA'S**  
We go inside their HQ

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**LONG WAY TO THE TOP**  
Superb production values for local show

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### NEW DIGITAL CONSOLES:

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- Innovason launch System 40 [Go to page 46](#)

**ALL ABOUT GELS**  
The story of colour

Starts on page 30



**RACK MOUNT DISPLAYS**  
Marshall debut newbies

Read about it on page 40



**WHAT IS DVI?**  
Does it come with fries?

Explained on page 40

## Stolen ID

We accomplished a major relocation from Los Angeles in the last few years. Unfortunately, it has not been without some troubles that we have been aware of for some time. As these difficulties have continued to spread (thanks to the wonderful technology known as "the internet") we have written this note to advise of the problem.

The problem is generally described as "identity theft", and has taken two different directions. The first has been the attempt to acquire our credit and personal identities in the U.S. We moved quickly to stop this problem, and it was made easier by the fact that we could ask the credit bureaus to completely "shut down" the issuance of credit reports and other items from our files.

Secondly, a person with a name very similar to mine began to put very annoying and abusive messages in what are called "chat rooms" and other discussion areas on the internet. At some point the existence of this person and the real "Brian L. McCarty" we all know and love became one and the same.

Numerous attempts by some of my friends to disabuse people of this connection have proved to be futile, a spitting of electrons in a digital typhoon. The email addresses used in this regard have been abandoned and yet messages continue unabated. The range of harassment has included forged email, forged fax messages, and other things.

**Brian McCarty &  
Sandy McCarty, Qld.**

## Are you out of your mind?

On "Behringer's Danalog takes on big 2" (Connections September) you write and I quote: "Ramsa and Tascam make digital consoles in this category too, but these three aspire to be more things to more people"

Hello ?

Again Hello ?

Please explain to me how the Tascam DM24 therefore aspires to be less things to less people ?

It has 16 xlr inputs; can be expanded to 32 balanced analogue inputs; has 32 channels of tdf inbuilt, 8ch of adat; motorised faders; has compressors and gates on 24 channels; similar sized screen to 03D; phantom power in banks of 4; 2 internal effects, one of which is TC, also has Antares; and priced around \$7,000.

So in all aspects, it's competitive with the all three consoles you've compared.

How on earth could you dismiss it with a flippant wave ?

Had you said you didn't have one available for testing that would be a different story - but only on the "ears" and "hands on" parts. Practically everything else in your article can be gleaned from spec sheets and pictures.

I'll be upfront and say that I do own a DM24, but that's not why I'm writing. I also own an MX2424 but if you dismissed the Adat HD24 in the same way I'd still complain 'cause it's also a good unit for what it does.

**Andrew Gissing  
Perth WA**

• *We made a mistake. Another DM24 lover (Mark Williams from Mildura) contacted us and offered to write a review of his DM24, with the new V2 operating system. We gladly paid him to do so, the review starts on page 42. Sorry. -Ed*

## Last word on Test and Tag!

I would like to add some points to last month's letter(s):

1. The whole issue of Testing & Tagging is based on AS/NZS 3760, this standard is not free, it needs to be purchased from Standards Australia [www.standards.com.au](http://www.standards.com.au) (\$46.73 for a

downloadable PDF).

2. According to AS/NZS 3760:2001; Hire equipment (both earthed and double insulated) must be Tested & Tagged every Month (Not Three or Six months) And also must be Tested between every Hire. ( Table 2 in AS/NZS 3760:2001 states "Inspect before each hire. Test monthly". Here the word "Inspect" means perform the 3 fundamental tests being: Visual inspection, Insulation Resistance, and Eath Continuity/Bond. The word "Test" means these three tests plus the Tagging of the appliance and the Recording in a Log book.)

3. Testing & Tagging alone is not enough! A record, Log Book, of Test results needs to be kept on Site and the person who performs the Tests should keep a copy also (for their own legal protection).

4. The standard AS/NZS 3760:2001 is not perfect. One problem is the testing of appliances that have a soft power switch such as computer or video equipment. If tested according to AS/NZS 3760:2001 they can only be tested up to the primary of the power supply as internal circuits cannot be switched on without 230V being applied to the appliance at the same time. Usually not a problem as most electronics operate at very low voltages, however TVs, Monitors and Projectors do have lethal internal High Tension Voltages. The only way to test for faults is with a "Power On" test, here the Appliance is on and operating while the Test Device measures Insulation Resistance and Earth Continuity, one of these Test Devices will cost between \$3,000 to \$8,000.

5. The next revision of AS/NZS 3760 will possibly be in 2003 or 2004. The implication of this is that investment in Training and Equipment now will possibly be valid for only the next 1 to 2 years. It is quite likely (if Insurance companies, Work Cover, etc have their way) that the next standard will be a lot tougher.

**Mark Barry, bssound**

Mail to: [mail@conpub.com.au](mailto:mail@conpub.com.au)



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## Autograph introduce weird PA loudspeaker

Hard to believe, but this PA box has a 43" long ribbon driver

The theatrical sound design specialists, Autograph Sound Recording, were recently hired to do sound at London's Royal Festival Hall for the staging of Stephen Sondheim's FOLLIES.

They chose a new and unique loudspeaker product for this show, the INSIDER 665. A line source product from Sweden, manufactured by LLW, the INSIDER 665 was being used for the first time in the UK, typical of Autograph's openness to new products.

This new Swedish loudspeaker has been designed to handle wide and long distance coverage in large indoor venues, synchronised with pure sound reproduction. Six cabinets a side were used at the Royal Festival Hall for FOLLIES, with no further delay speakers required throughout the venue. This unusual design even left a mark on the critics, Charles Spencer from The Telegraph commented on the natural sound of the orchestra ".....what a pleasure to hear a big pit band that doesn't rely on electronics".

FOLLIES was a tricky project given the venue and the short time scale of the production period. Autograph's spokesman said: "the INSIDER'S did everything I could have hoped for and proved that they are a product well worth using. The sound they produce is full of information, orchestra and vocal detail was very exact, indeed given that the cast spent most of the show three meters downstage of the speakers, the clarity and level of the vocals produced should

not have been possible".

INSIDER 665 represents a new loudspeaker technology based on the principles of the "Homogenous Line Source" - or HLS. A Homogenous Line Source produces a plane wave front whereby all frequencies reach the listener at the same time.

To form the Homogenous Line Source, the INSIDER 665 is loaded with 6 x 6.5" drivers. The Ribbon driver (developed by LLW) is 1085 mm (43") long. It has a radiating area equal to a 8" cone driver. The diaphragm is made of a very light (only 1.3 gram) special aluminium alloy for reliable operation and fidelity. The ribbon driver has a neodymium magnetic structure to achieve optimal performance.

Each cabinet is made of heavily braced MDF, is constructed with no parallel walls to avoid standing waves, and has 20 rigging points. The cavity has separate chambers for high and low frequencies.

• [www.llw.com](http://www.llw.com)



## DPA Launches New Miniature Mic

DPA's new 4071 Miniature Microphone is an omnidirectional miniature condenser microphone designed for performing talent in television broadcast and film.

It has been developed in close consultation with professional audio engineers from leading European broadcast organisations, notably Danmarks Radio.

The objective was to optimise intelligibility and clarity in a low-profile miniature microphone for use on location and on set; the designers specifically addressed many of the problems of body-worn applications which had previously necessitated a skilled engineer's 'tweaking' and fine-tuning to achieve acceptable voice definition.

For example, the 4071 has built-in presence boost, a permanent 5dB soft boost at 4-6kHz which targets the so-called 'presence area', the range at which the human ear is most sensitive, and the range of speech intelligibility, clarity and definition.

•Info: [www.dpamicrophones.com](http://www.dpamicrophones.com) or call D2a on +61 2 9957-5389

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## News Bites

**Steve Rickertt** service manager BJ's sound & lighting, Technical Director for Dreamstage productions, has helped provide future roadcrew for the industry with the birth of his second son. Wife Debbie and Brock are doing well. Congrats!

## ESTA Publications

The American National Standards Institute is now offering electronic copies of ESTA's ANSI-approved standards and other technical publications for sale on-line at <http://webstore.ansi.org/>. Ordering electronic copies on-line gives members of the entertainment industry almost instantaneous delivery of needed documents. To order ESTA's standards users can select a "standards category", inside which is a special ESTA category.

## CMS @ Day2Night

Day2Night P/L have announced their newest team member and alliance. **Bill Richardson** and his Compact Monitor Systems, has joined with Day2Night P/L. Bill has joined the team as a Senior Engineer and Business Development Specialist.

Day2Night is a full service production company specialising in Broadcast Radio, Live Music Performances, and Special Events.

- Day2Night +61 2 9889 7220

## Additional Euphonix System 5 For ABC

The Australian Broadcasting Corporation has purchased an additional Euphonix System 5B for use in their new state-of-the-art Ultimo Studios for Live-to-Air and Live-to-Tape recordings. The 130 channel, 2-core console with 252 inputs, 196 outputs and 56 faders is the biggest Euphonix purchased by the ABC and takes their System 5 inventory to eleven.

## Shure Ships New Addition To The SM Line

Shure recently announced the immediate availability of the newest microphone in the SM line, the SM86.

Combining the ruggedness of Shure's SM line with the studio quality audio of a Shure condenser, the SM86 handheld vocal microphone is the first model to join the SM line in over 10 years.

The SM86 has a cardioid polar pattern and a wide frequency response of 50 Hz to 18 kHz. The microphone additionally delivers high gain-before-feedback and a tailored frequency response for a clear reproduction of vocals.

The SM86 is additionally equipped with an integral two-stage windscreen and pop filter,

and has a built-in, three-point shock mount that virtually eliminates stand and handling noise. The microphone requires phantom power for operation and is housed in a rugged, silver-coloured, enamel-painted enclosure incorporating a steel-mesh grille.

Standard accessories offered with each unit include a microphone clip and vinyl storage pouch. With a recommended retail price of \$565, the microphone is now available. Along with the arrival of the SM86, the entire SM family of components will begin appearing on dealer shelves in new, attractive packaging bearing detailed specifications and information on the complete product line.

- Jands Pty Ltd +61 2 9582 0909

## 300 MediaMatrix Systems for Audio Telex

Australia's Audio Telex has announced the sale of the 300th MediaMatrix system into Australia and New Zealand. Audio Telex Pro Sound Product Manager Don Mc Connell sold the first system for Audio Telex and no one is more pleased than him to see number 300 go out the door.

"MediaMatrix has been huge for us and our authorised dealer network. Our customers quickly became comfortable with the software and saw from almost day one, as we did, that MediaMatrix was many steps ahead of anything else on the market. The MediaMatrix guys have done a great job in keeping the systems many steps ahead with new features and interfaces coming out all the time. Some of the biggest developments have come out in the last six months."

"The other good news is that we know what's just around the corner and it will put a huge smile on the faces of the MediaMatrix users around the world".

Audio Telex is currently running seminars on some of the latest features such as X Control Remote Panels, Echo Cancellation and Network Control. Call Audio Telex for more details.

Audio Telex: +61 2 9647 1411.

## ALTO for Jansen

Jansen Professional Audio & Lighting has been appointed the exclusive New Zealand distributor of Alto professional audio products. Music Link newly handle this line in Australia.

Alto is the culmination of a long quest for the extraordinary by the Italian design visionary GP Staffa. Alto delivers a full range of analog and digital processors, and more

- [www.altoproaudio.com](http://www.altoproaudio.com)
- [www.jansen.co.nz](http://www.jansen.co.nz)

## Redback Solutions

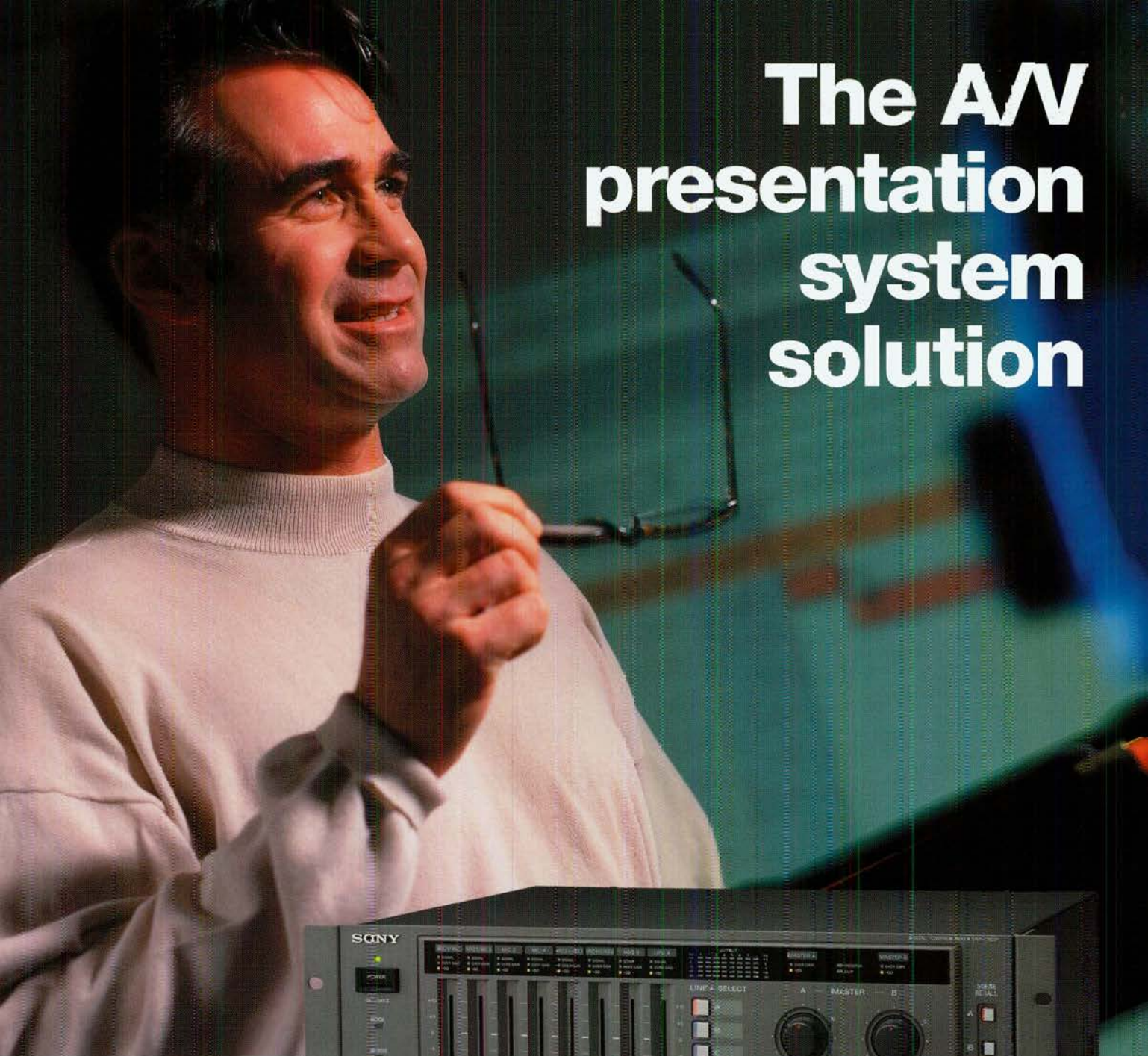
Redback Solutions is a range of useful "audio tools" designed to help overcome common problems during installation of audio systems. All models are designed and manufactured in Australia, with the range set to expand in coming months.

The current mix of product has been selected after repeated requests from leading sound contracting companies. The half width 1RU design allows for individual units to be used stand alone, or with the use of the custom bracket up to 2 units can be rack mounted side by side.

- Redback Solutions are available from Altronic Distributors +61 8 9428 2199 [www.altronics.com.au](http://www.altronics.com.au)



# The A/V presentation system solution



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# LIGHTING CONSOLE SPECIAL

## maXim-MP LAUNCHED

The range of maXim lighting control desks from Australian based designer and manufacturer, LSC Lighting Systems has expanded to six variants with the addition of the maXim-MP model.

Alan Graham, Marketing Director stated "...the MP came from Distributor requests asking for a smaller version of the maXim desk with the PaTPad moving light module permanently fitted, primarily to compete in the smaller end of the market. The modular structure of the maXim allowed us to easily do this, so the result is a very powerful desk with all the maXim functions in a surprisingly compact package."

The MP is a well featured desk with 48 fader channels each with Flash Button and status LED; 24 Playback masters with 9 pages of memory; 216 memories for scenes, chases and stacks; fully proportional softpatch out to 512 DMX channels; SVGA output port and 3.5" disk drive unit as standard; electronic labelling of memories; two Sound to Light triggers; universal power supply with "brown-out" protection; and the PaTPad moving light module.

Utilising Resistive Touch Screen Technology, the PaTPad is capable of controlling up to 20 Intelligent Lighting Fixtures at any one time. Up to 24 parameters per Fixture are allowed for, but no upper limit is placed on the number of control channels allocated to each Fixture. Any six parameters may be displayed and controlled simultaneously while all 24 are only one key press away. Individual move and delay times can be stored with each parameter. Filtering and storing according to Colour, Beam or Focus type is of course standard! Fixture templates are available from LSC's website or new ones may be created on any PC.

The PaTPad's advanced features include programmable palettes, presets and groups, extensive filtering options, cloning of looks, multiple storage options and a comprehensive fixture library.

• [www.lsclighting.com.au](http://www.lsclighting.com.au)



## Hog III is the debutante of THIS London ball

The lighting biz in never run on traditional business principles. Only once a lighting manufacturer gets publicly listed does attention turn to good old fashion profits. Until then it's a fashion business, complete with cut of control egos and the odd drug fuelled delusion. And that's before you look too closely at the profiles of some LD's!

Of course every one of the manufacturers on this page has a sound business model for all these incredibly sexy new consoles.

High End Systems are a sensible firm, who have taken over the Flying Pigs lighting console business, having done very well with Hog II. Hog II is selling a storm, especially since those waiting for the Hog III may buy a Hog II and trade it in later.

The Whole Hog III is the wunderbabe of

the lighting biz right now. Everyone wants one, and according to High End, the wait is virtually over. The HOG III display at Plasa was hard to get near, such was the interest.

The Hog III is a full lighting networked control system, the desk outputs ethernet and from that you hang outboard dmx processors. It is so awaited, because you can use multiple desks to run a show.

The range of outboard devices includes a MIDI/Timecode processor, a Show Control processor, and various Fast Ethernet switches. On that subject, the tech world have uniformly embraced the new Neutrik EtherCon connector, and TMB have released a seriously roadable Cat 5 cable.

I suspect we may sooner, rather than later, be using Cat 5 and EtherCon almost everywhere, sidestepping the more costly and difficult optical options.

The final act in the current Whole Hog show will be when the Hog PC is shipped. This is the 'Hog for everyone' with mini wing boards (which also work with Hog III). You output from your PC's USB port to a little 'Widget' (pictured at top left) and there's your DMX!

Watch this space.

• [www.ula.com.au](http://www.ula.com.au)





## Compulite's new Vector Family Console

The new Compulite Vector Family Console is 'the world's first true lighting workstation', according to the firm. Featuring an integrated CAD package and enhanced paper work capabilities, the console and its software modules are designed to take you from concept to closing night with as little hassle as possible, they say.

The Vector architecture is built around a multi-processor system. One processor handles the user interface and is optimized for comfort. It runs on the stable, familiar embedded Windows XP operating system. Using the powerful GUI capabilities of the Windows OS will guarantee that the system may be upgraded to accommodate new

technologies and that operators will immediately have an intuitive sense of console navigation. The second processor, calculating the real-time components of the system runs on a robust, deterministic, Vx-Works platform. It is designed for speed and stability providing blazing performance and response while seamlessly operating in the background.

The two processors communicate via an internal Ethernet network that will make future connections to additional Windows or Real-time processing devices a snap, thus providing an upgrade path to enhance performance and features.

• [www.cdaust.com.au](http://www.cdaust.com.au)



### Compulite's New Ipac Remote

The Compy Wireless LAN remote for Compulite consoles is based on off the shelf computer products and specially designed software.

An iPAQ handheld computer is the heart of the system.

The iPAQ communicates with the console via a WLAN PCMCIA card, a Wireless Access Point and a twisted pair cable either directly to the console, or via a hub.

The range of the WLAN system is approximately 100-150 meters depending on brand of WLAN and building structures, more access points can be added.

The software is dedicated to one iPAQ only, the actual iPAQ is the "dongle" for the software.

• [www.cdaust.com.au](http://www.cdaust.com.au)

## Martin's MAXXYZ set to battle Hog III, GrandMA, Vector, ETC....

This console even has an inbuilt DVD player, with speakers! Martin up the ante, as Julius Grafton saw in London

Martin's Maxxyz is a serious contender in the new battle for market share (desk) category. It incorporates all the features that professionals should expect: fast processing power, direct fixture access, a powerful effects generator, USB, motorized faders, quality touch screens, along with SMPTE/VITC/LANC/MIDI timecoding.

Maxxyz is one of the first of its kind to incorporate digital LCD buttons designed for tailored, flexible programming. This lets LD's group functions and customize their layout to enhance ease of navigation and fast recognition.

A key element of Maxxyz is its built-in 3D Visualizer, fully integrated into the console software. The Visualizer lets you view your light shows in highly realistic 3D. Full real-time PREVIEW allows you to create and refine your designs without interrupting the running show.

Maxxyz has been developed with multimedia in mind. The console has a DVD/CD-RW

multi-drive so you can synchronize your light shows with audio and video. The combination drive also lets you save your shows to CD-ROM, or you can use it to watch your favorite DVDs (!) during those idle moments.

Maxxyz includes a further 39 GB of space available for backup purposes.

MAXXYZ has 8 DMX universes available directly from the console. By connecting to a series of EtherDMX boxes, Maxxyz' capacity expands to 64 DMX universes or up to 32,768 channels. That'll do us!

• [www.maxxyz.com](http://www.maxxyz.com)



## GOBO's are UNITED

The directors of The Gobo Factory and Lighting by Design have joined forces creating a new company, GOBOTECH Pty Ltd. Both are successful companies in their own right but the directors felt the time was right to combine their resources into a new efficient entity that can dedicate time to R&D and product improvements.

GOBOTECH will provide a comprehensive custom gobo service. "The move will allow us to better co-ordinate and prioritise our workflow which directly impacts on the turnaround times of our jobs. This is extremely important as we service an industry that works on very short leadtimes," said **Mark Blackwood**, one of the directors of the new company. The new company will ensure that we can continue to improve our range and quality of products.

"The process we utilise is the best available in the world today and with access to a new high resolution film process you will find our gobos are second to none on the world scene. As a member of the Beacon gobo group we can also access an enormous amount of information and support from around the globe as well as access to new image collections" said **Joakim Odlander**, the other director of the company, who has been manufacturing the Beacon greyscale and colour gobos since 1995.

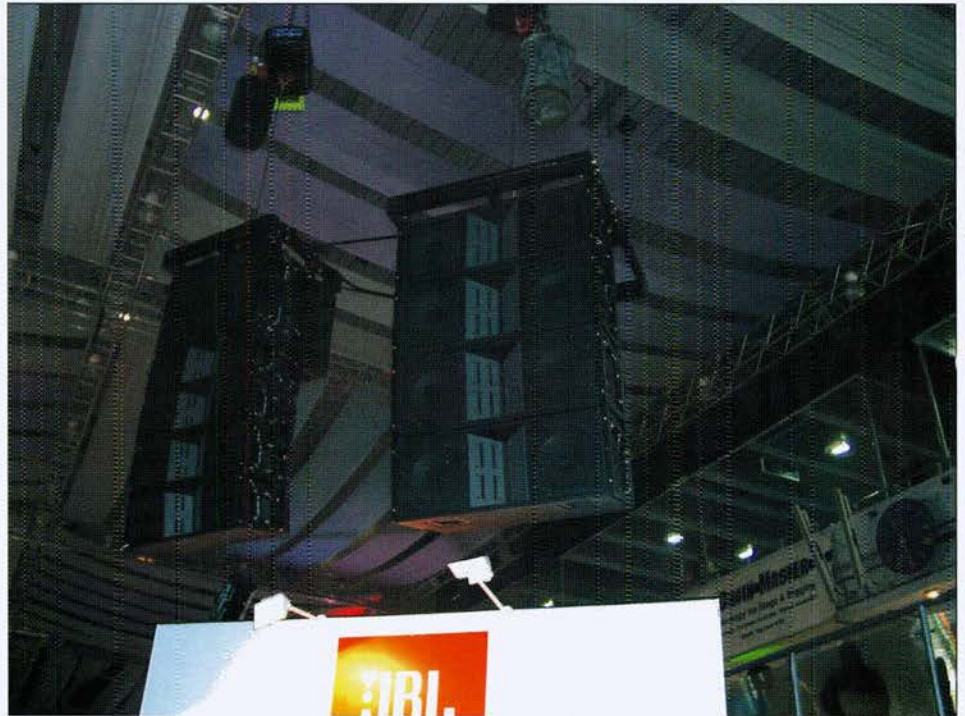
New products in the pipeline or available now include;

Beacon Blackline - A scratch resistant substrate and a black non reflective surface.

Ultra Hi Resolution gobos - Available now, they can output greyscale images at 600 line screen effectively making pixels invisible. Plus more.

The new telephone numbers for GoboTech is:

- Tel: +61 7 55 29 0500 and
- Fax: +61 755 29 2226
- www.LBD.com.au



## JBL expand and shrink VerTec

New models have future option for power amp modules, take on V-Dosc, EAW and Meyer

In a significant move, JBL have just released not one but two shrunken line array products, plus a complementary subwoofer with the longest excursion of any 15" speaker yet made.

"It's like we put the VerTec on the photocopier and hit shrink" said product manager David Scheirman (pictured).

The new models start with the midsized VT 4888, a direct competitor to the EAW KF760 line array. "This is the same size as a DV-Dosc, but with eight components instead of three, and it weighs 13% less" he asserted.

The 4888 is loaded with 2 x 12" drivers, 4 x 5.5" drivers, and 2 x high frequency drivers. It comes pre-engineered to accept a forthcoming amplifier and processor module.

This box measures 991mm x 355mm x 508mm deep, and weighs 49kg.

Likewise the baby device, named VT 4887 also will take an amp module, it is loaded with 2 x 8", 4 x 4" and 2 x 1" compression drivers. The box measures 787mm x 279mm and is 405mm deep. Weight: 28kg.

The new sub is named the VT 4881, and is loaded with the new 2256CPL 15" motor, a remarkable driver that has three

inches drive excursion. This sub measures 787mm wide and so it will fly in an array with the smallest box or fly under any VerTec array with an adaptor

JBL have quietly changed the way they rate power to their loudspeakers. This will be a topic touched upon at the forthcoming NT ProSound Conference session 'Truth in specification'.

David Scheirman noted that JBL's proprietary standard for power rating was eight times greater than the AES standard, so they have revised - upwards - their power handling capabilities.

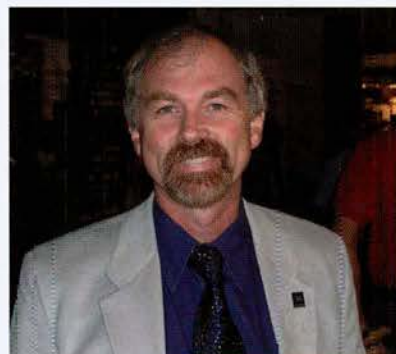
The issue of truth in specification is a hot potato, as David Scheirman puts it, "if I hold up a prism, what coloured light do you see? You see red, blue, green ....."

Meantime, JBL's first VerTec offering, the VT 4889 is doing well across the world,

including Australia where Jands Production Services have it in their inventory alongside V-Dosc.

The VT 4889 is loaded with 2 x 15" drivers, 4 x 8" midrange drivers, and 3 x high frequency drivers.

JBL have possibly the lightest components in the business, making VerTec a popular choice.



• [www.jands.com.au](http://www.jands.com.au)



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Sennheiser's new EMP2015 Soundfield System is designed for classrooms, particularly for schools with students with impaired hearing. Using a Sennheiser ME3 Headset mic and SK500 body pack transmitter, the teacher's voice is transmitted to a receiver with an integrated power amplifier, and is then reproduced by several loudspeakers in the classroom. Usually, it is not necessary to set a high volume level, as the sound-field generated is uniform throughout the classroom, thus increasing speech intelligibility considerably. The system allows teaching concepts such as "team teaching" with several teachers, the use of audio/video material, the connection of personal FM systems such as Sennheiser's 2013 System or systems from other manufacturers.



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**Evolution**wireless

### Features:

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- Excellent sound quality due to UHF wideband technology
- 1280 frequencies on 16 presets means interference free performance in adjacent classrooms
- Sennheiser's HDX noise reduction system delivers peerless fidelity
- The receiver amp can handle 2 other receivers, or audio inputs
- Compatible with full range of Sennheiser Evolution accessories

### Benefits:

- Freedom of movement for teacher
- High quality condenser mic deliver life-like fidelity and unsurpassed protection from feedback
- The sound-field generated is uniform throughout the classroom
- Increased intelligibility - improves student concentration & reduces strain on teacher's voice

For nearest dealer contact Syntec International (02) 9417 4700, or visit website [www.syntec.com.au](http://www.syntec.com.au)

# Oceania buy 2 line array systems

*Oceania plan to stay number one in NZ while stepping up border incursions into Australia*

## "Beatles use Line Array for their Concert at the Auckland Town Hall"

*Greg Peacocke writes about the firm's Line Array decision:*

As always, fact is stranger than fiction. I'm not sure if the Beatles actually bought a couple of WEM "Column" speakers with them or some Audio Frontiersman resident here in Auckland, actually supplied them a pair of Shure Vocalmaster "Column" speakers. Not having attended university means I can't say for sure, but I would have thought all those old column speakers we tossed out decades ago were actually technically Line Arrays.

Although Chiropractors and trucking companies around the world are pretty hacked off with Christian Heil from L-Acoustics for re-applying the Line Array principle, all us PA Company owners around the world are indebted to him for pulling us back from a fleeting glimpse of a once-in-a-lifetime disaster – actually showing a profit for 12

*Paul Jeffery, pictured with one of his wedge designs*



**By Julius Grafton**

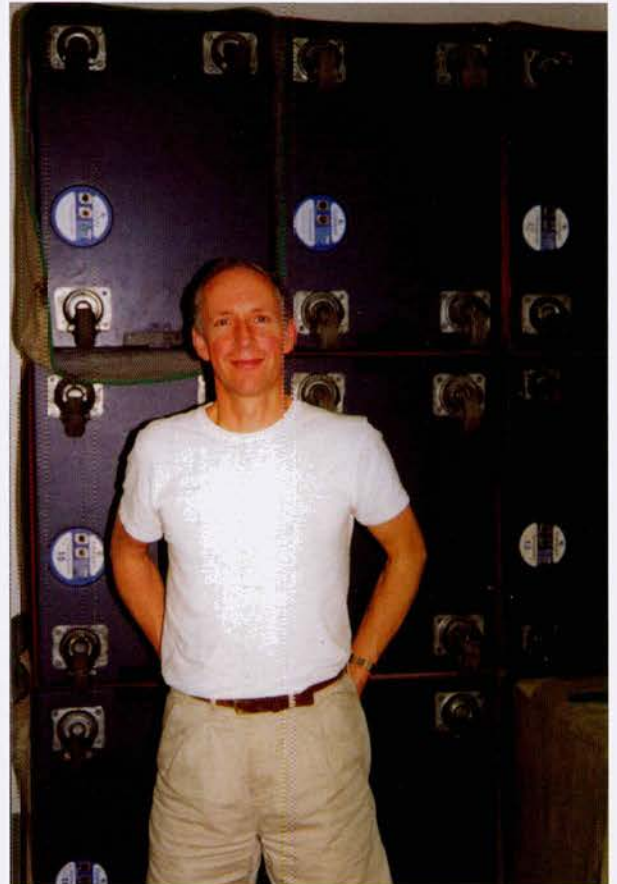
Oceania Audio is a top echelon professional audio company who consistently punch outside their weight. This explains why the Auckland based outfit secured a European tour with Burn The Floor, last year's Robbie Williams tour of Australia and NZ (although Robbie Williams is a known V-Dosc client) and Cliff Richard throughout Australia and NZ in Feb 2003.

It appears Oceania are up to the challenge with their Turbosound Flashlight/Floodlight Systems and their new EV X-Line and Meyer M3D/M2D speakers.

After a more than a year of fence-sitting, Oceania plans to use the purchase of their new Line Array Systems as a spring board to re-mount their push back into the Australian Touring Market. Future Tours will be quoted and manned by full-time staff members sent from NZ.

Michael Smeaton, who joined Oceania in 1988, has returned from a 2-year sabbatical, working mainly in North America. He is the key Oceania person driving the Australian Touring arm. Michael is a Meyer Factory trained SIM Engineer and was given the responsibility for the very first M3D equipped Tour of North America with Bare Naked Ladies last year.

Oceania's downtown HQ in Auckland is a



relaxed, tidy and friendly site – home to 27 full-time staff. A satellite facility in Melbourne, run by Simon Venning, is home to roughly half of their 360 concert speaker cabinets, Micæs consoles, wireless systems, and monitor rigs.

The day I called, Oceania partner and CEO Greg Peacocke (pictured above) was out hanging a small PA in the Town Hall for a Hale and Pace show that night, before taking off for school holidays with his five children. A single father, Peacocke has the affable charm that characterises most successful production people in this part of the world – necessary to navigate the shoals of duplicity in the rough seas of showbiz.

The Oceania story starts sometime in the mid 1970's, when Greg and Paul Jeffery got together. Legend has it Paul was in a band who hired a sound system off Greg. Paul is a certified brainiac who sings and plays keyboards so damn well that Neil Finn hired him to play keyboards AND mix monitors on a tour of Europe and the USA recently.

This makes him the first monitor engineer we know of who can mix twelve concert sends PLUS jump onstage for seven songs. Presumably his pay scale reflects this!

NEW NEW NEW



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## OCEANIA

months trading! We nearly did it. Had the Line Array acid not finally dribbled all the way down the side of the world and onto New Zealand, we could have made money this year and I could have finally got a new roof on my house!

Instead it's business as usual – let's work all year then send any profit we may happen to end up with through obvious overcharging of those "struggling" Promoters, off to our favorite Pro Audio Manufacturers.

Why change the habit of a lifetime?

So we've done it – signed all those personal IOU's (in lemon juice) and got ourselves a couple of new "hairdos" to wear to the next few shindigs we attend as PA Suppliers to the Stars. And what "look" did we go for in the end, considering all the hoopla and head-turning palaver evident in all the worldwide Pro Audio Press currently?

Bit like buying wine really, in the end we just said "bugger it" and went for the ones with the nicest labels...

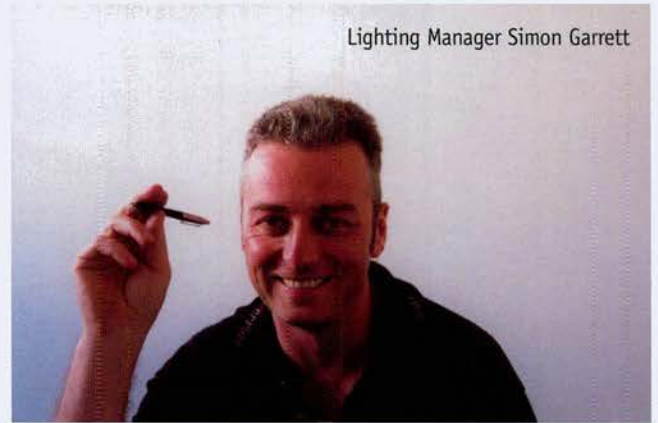
They say you can't go wrong with such a scientific approach so there you go – we've done it. Two new American babies, 42 x Meyer M2D's and M3D's as well as 54 x EV X-Line speakers. The truth is, they were both such nice Salesmen that we just couldn't say no to either of them.

Seriously, the decision was a mission, mainly because it's such early days for everyone except V-Dosc, and with the unchanged V-Dosc box about to have it's 10th birthday, that one didn't feel right.

We do have to thank V-Dosc for all those years of trail blazing but our focus was on the second and perhaps, even third generation Line Arrays such as the self-powered, cardioid M3D's. Self-powered just has to be the way of the future. No tears from me if I never have to lift or setup another amp rack thanks very much.

I reckon I'm actually about an inch shorter now than I was some years ago when I met my first amp rack in a dark truck one night. Same with that nifty little speaker

The Oceania partnership marched forwards with a rig made up of Cerwin Vega speaker cabinets and their own amplifiers. A Turbo TMS 3 rig was purchased in the early 1990's, making the company competitive across the Tasman, which is just three steaming days by boat from Auckland harbour.. Buoyed by happy days with the TMS-3's, Oceania lashed out and added 140+ pairs of Floodlight and Flashlight



## Mac2000s for hire. grandMAs too.



Not that sort of Grandma! We mean the new grandMA lighting console from MA Lighting. grandMA features 3x touch screens, motorized faders, 2024 channels, 4 DMX outputs, built in UPS, keyboard mouse and trackball. Control includes audio input, SMPTE Timecode entry, MIDI in/out/thru and DMX in.

The Martin Mac2000 is a 1200 watt automated profile which features CMY colour mixing, indexable rotating gobos, strobe, smooth dimming, prism, frost, colour correction and much more.

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- Optional single rack mounting kit available
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- 12 months warranty

## REDBACK Solutions™, it doesn't get much easier...

The Australian Made REDBACK® Solutions™ range of equipment has been tailor made to meet the requirements of everyday installations at very affordable prices. The series includes two distribution amplifiers, mic/aux balanced line pre-amplifier, DI box, alert/evac tone generator, phantom power supply and a 24V DC regulated power supply. The REDBACK® Solutions™ range is continually being expanded to meet new demands.



### Modular design:



Rack Mounting Kit

The entire range is made to half width 1RU rack dimensions which can be either free standing or rack mounted with the optional (H 4990) rack mounting kit.

### Series features:

- Front mounted controls
- LED power indicator
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## OCEANIA

at the back of the M3D and it's Sub-Low mate, hammering away all night out-of-phasing itself silly and keeping that Stage quiet as well as dialing up another valuable few dB's before feedback.

Think about that cardioid principle for a moment, I think they're on to something here that can really bring obvious improvements to our war against the laws of physics - gain before feedback. (Ever tried to make an orchestra loud and vaguely natural? Same with a lavalier or lectern mic)

At the man's end of the M3D specs you have a max SPL of 145 dB! That's a full 9 dB more max SPL than a V-Dosc! More importantly, fewer boxes required to come and go in that cursed truck each day. Two dollies of cabinets a side in many venues and that's the PA up chaps. No big "music hoses" being pulled up from amp rack city to the array in the sky just a bit of mains power and a mic lead and see you later!

Again, with the X-Line we have a 2nd generation Line Array that, according to a number of serious end users, is said to offer better sound quality and coherency as well as a lot more bottle than older designs - 4 dB more than those French ones. Laars Brogard who mixes Rod Stewart and was one of the main end-users to bring V-Dosc to the attention of the rest of the world, has moved on to X-Line. Britannia Row in London has purchased a large X-Line System this year and speaks very highly of it. They own V-Dosc as well. So that was enough to turn us into Line Array lemmings and off the cliff we go.

The other neat thing about both the Meyer and the EV X-Line is that the 3 or 4 cabinets travel and fly off a single dolly so no need for the nuisance value of moving seats or holding up the Stage while they make the old Line Array snake up, stretched out on the deck. Both these cabinets remain "rigged" from one venue to the next and do a simple vertical lift in blocks of 3 or 4 off their truck dolly. Again, a big time saver for the man-in-a-hurry to Catering.

So there you go - Oceania has joined the "Emperors New Clothes" Club and it's all down hill from here!

cabinets in the late 1990's, an inventory that has generated considerable work through international riders. Splitting the inventory between Melbourne and Auckland leaves enough cabinets in either place to handle most venues.

But concert audio isn't the core of the business. Oceania import and distribute some leading brands like BSS, Drawmer, Joe Meek, Summit, Nady and many more. This part of the business is run by Nigel Russell.

Corporate audio is a strong contributor, run by Andy Tate. Greg is astounded at the return on capital of a powered speaker box on a pole, verses his Midas, Cadac and Turbo inventory.

Finally, lighting plays a part too, although several years ago the lighting division was almost scrapped. Demonstrating that the best item of equipment eats food and breathes oxygen, Simon Garrett came on board to head up Oceania's lighting efforts. Greg is fulsome in his praise, and again indicates corporate work more than pays when it comes to lighting.

Simon Garrett is well known across the region as both an LD and as the former travelling emissary of Selecon, the Auckland based manufacturer of lighting equipment. In his decade or so with Selecon, Simon met

*(continued on the back, on page 67)*

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## JBL CONTROL CONTRACTOR SERIES

# WHY ARE SO MANY TOP VENUES CHOOSING JBL CONTROL CONTRACTOR SERIES?



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# JBL

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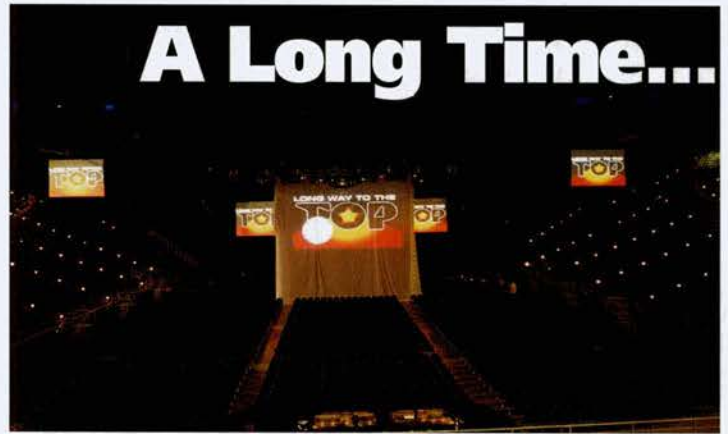
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[www.jblpro.com](http://www.jblpro.com)

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After the success of the ABC television rockumentary series *Long Way To The Top* it was only a matter of time before a live concert was created...as seems to be the Australian way at the moment. Producers Michael Chugg, Kevin Jacobsen and Jack Utsick were the ones to do it, assembling over 30 acts to cover the formative years of the Australian rock scene from the 50s to the 70s in a four hour live concert spectacular.

Backstage, the crew line-up was as legendary as the performers out front. ABC veteran Ted Robinson was at the helm as live show and TV director and 'Mr Jands' Eric Robinson was back on the road as Production Manager. Jeff Pavey was brought in to design the light show, Andrew Raymond designed the impressive



set, and Greg Rossman had the formidable task of being sound designer and head mixer for the massive line-up.

With so many acts to get on and off stage in such a short space of time the concept of a revolve stage was decided early in pre-production. Steve Swift was the original lighting and set designer but when commitments called him back to England, Andrew Raymond who had been advising on the design stepped in as designer.

"Many of the big design problems had been sorted out by the time my involvement was formalised. We had agreed on using a mechanism such as a revolve but we were very conscious of not making it a show about a revolve," explained Andrew.

The 30' diameter revolve sat on a standard 60' x 40' concert stage and was divided in half allowing for set-ups to occur at the back while bands played on the front. Andrew also designed the graphic artwork backdrops used to signify each of the eras. Of major design consideration was providing adequate room for all the equipment backstage.

"We were touring something like eight drum kits and there was a 'guitar alley' with about 50 guitars all lined up. Add to that 40 crew and 100 or so artists and backing musicians and you get an idea of the scene. The logistics of all that was a fascinating thing in its own right."

Jands Production Services supplied an L-ACOUSTICS V-DOSC system to the tour and a

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# ...Now they are Back On Top



five man sound crew. As Sound Designer and FOH engineer, Greg Rossman designed a split system to deal with the large number of performers and impossible changeover times. Greg explained one half of the revolve was dedicated to artists that had their own bands and required a complete set-up, while the other half was for those using the 'generic' house backing band.

"We basically ran two separate systems – two monitor set-ups and two FOH set-ups, one pertaining to each side of the revolve. There were two engineers out front and two at monitors – one each looking after each side.

"While one act was live on stage, the other engineer would be doing line checks and the crew would be swapping gear out the back. It came down to running by the skin of your teeth because when it was time for the revolve to go it went whether you had finished line checks or not. You really had to rely on things being the way they should be, and nine times out of ten they were. For the number of times things were unplugged and plugged in over the length of the tour the percentage of mistakes was minimal. Overall I was really pleased with what the guys did backstage. They had an extremely difficult job and they dealt with it admirably."

Greg used a standard configuration of two drops of 12 V-DOSC boxes as the main left and right array, with three of the dV-DOSC underneath both of those. The two auxiliary hangs were six V-DOSC and three dV-DOSC

deep. In total there were 28 sub-bass cabinets but Greg explained he configured them slightly differently to most engineers.

"I fly more than half of my sub-bass cabinets in the air in order to minimise the amount of sub-bass I have to put on the ground. I find it evens the system out all around the room and thickens up the sound upstairs. And it doesn't leave the punters who are paying big money down in the front seats getting thumped away by large amounts of sub-bass. It takes a bit more time with having to fly amp racks but as far as I'm concerned the end result is worth the extra effort."

Greg described monitors as the most complex part of the sound department with the crew having to deal with so many different requirements and egos on stage, so to make their job a little easier Greg specified programmable consoles for them. He relinquished having a Midas XL4 and Heritage at FOH so that they could be used at monitors.

"Greg Clarke and I winged it on a couple of old PM4000 at FOH and basically changed things as we went. It was easier for us to do that at FOH than it was for the guys at monitors. While FOH was completely split into two separate systems, in monitors we made everything generic and turned both consoles into one big console. I had the main monitor engineer Bob Daniels mixing all the vocals and he was fed band mixes by his offside Alan Moran. They basically worked in tandem with each other being one monitor

**The successful tour of Long Way To The Top has spawned rumours of its possible return (Volume 2?) in the near future. And why not?**

**Mandy Jones takes a look backstage at this unprecedented event.**

## Visuals for Long Way



### By Ben Alcott

The poster ads for the show promised 'mega screens to travel you back to your teens' – and so video was an important element of this production. Ted Robinson and Andrew Raymond envisaged a show featuring 5 screens in total – 3 as part of the set, and 2 for Imag (Ed – "Imag" is an industry term for video relay of the actual performance images to the screen). Video was used for a number of different purposes within the show – for pre show entertainment, which included clips from the ABC series played on all 5 screens before the show and during interval; intro and outro packages for each act; 'nostalgia' clips for use as backdrops behind acts; and, of course, for Imag. A couple of the acts even sang along with B/W clips of themselves – this was achieved by running click track off the hard drives directly to the drummers.

To look after the video component of the show, Eric Robinson brought in outside broadcast supplier Blacksheep Productions, who managed the 5 cameras on the OB, the 6 replay sources, and the 5 screens and projectors.

Imag was looked after by four main cameras – one Front of House (operated by multi skilled projectionist David Bonanno), one in the pit on a dolly (looked after by Ian Rhodes); one handheld on stage (Paul Howard); and a hothead mounted in the set remotely controlled from the OB racks by TD David Beattie. The video crew were amused to note that, when looking back at the audience, all you could see was a sea of glasses glinting back at you.

An additional 3 chip Sony MiniDV

(continued over)



system looking after both halves of the same revolve. It worked better having one person control most of the work on stage as far as levels were concerned."

Greg said he would have been reluctant to tackle such a complicated mission without Bob Daniels on board.

"Bob is such an experienced wedge and in-ear guy. Not surprisingly all the old dogs preferred to use wedges on this. We tried to talk a few of them around, especially the drummers, but they all wanted to feel some air moving up against them. The only major act on ears was Marcia Hines."

Apparently many of the "dinosaurs" (as some have dubbed them) were in awe of the new technology available for large scale touring.

"A lot of the acts hadn't used anything like that quality of gear before and they were blown away by the clarity of being able to hear themselves instead of a muffled mess coming at them. A few of them were totally blown away by using radio mics and being able to walk where they wanted around stage!"

Greg described touring with his boss Eric as "fine" saying it made him feel all the more at home.

"We have the same arguments on the road as we do in the factory so it's no different. It's just like being at home! But he's good to have around. He takes a lot of the heat which is what a good production manager should do, so he's good like that."

When Jeff Pavey first saw the advertisements for *Long Way To The Top* he recalls thinking to himself "not for a million dollars and not in a million years would I get involved with that". But when the call came three weeks before opening that they needed a lighting designer to replace Steve Swift, and when Jeff heard the legendary names among the crew handpicked by his good friend Eric Robinson, he couldn't say no.

Despite having such a small amount of time to put it all together Jeff came up with a new design and had his choice of equipment through Chameleon Touring Systems.

"I didn't want it to be a 50s and 60s show with moving lights," Jeff said.

"Those era's weren't about that. It was very basic lighting back then, so that's what I took on. I tried to make it about big 50's and 60's looks rather than make it current. And I



didn't want it to be like a normal old rock show where you've seen everything in the lighting design in the first four songs, so I really diversified the design of the first half of the show from the second half."

The 70s era in the second half of the show was where Jeff was able to introduce movement into the design. Using par 64s on movable 'fingers' and with the help of oil wheel projectors Jeff created authentic looks for the era.

Jeff's specification included 24 x

Mac2000, 14 x Vari\*Lite 2402, 10 x Mac600, 7 x Studio Due CityColors, 8 x Martin Atomic Strobes and 210 chrome Par 64s. He ran everything off a WholeHog II with wingboard.

"I've used Mac2000s on one-off shows but I hadn't used them on a tour before. Their gobos are pretty average but I always use custom ones anyway. The main thing about them is their brightness. I'm used to using Icons on Tina Turner shows and the Mac2000s compare well, especially since we had a trim height of 40 feet in the stadiums because of the video elements of the show.

"The VL2402s are a very nice light. It's good to see Vari\*Lite have finally got it together again after years of trying. There's a real difference between them and other washlights. The VL's are so smooth compared to the others, you don't get that shakiness when you diffuse out and you don't get hot spots. And you get those true Vari\*Lite colours that are so rich."

Jeff has undoubtedly started a new trend by replacing the old 'six-liter with scroller combo' with CityColors top-mounted on the front truss to light the audience.

"I always try to light the audience to make them a part of the design so the CityColors were great because I could diffuse as well as bump between colours really quickly. I also had some Martin Atomic strobes which are the best strobe on the market. With twelve of those you can really annoy people!"

Jeff was full of praise for the equipment and service supplied by Chameleon as well as the highly dedicated four man crew they provided for the tour - crew chief 'Simmo', dimmer-mar. Pat Clarke, moving light technician Luke Raddick and touring rigger Derrick Weith. He also wanted to thank Chris McGuffin for his 3D CAAD drawings.



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camera was used to add various 'video feedback' style effects for some of the 70's acts. The main cameras were Sony DXC-D35s running triax systems.

Projection was supplied to Blacksheep by Technical Direction Company (TDC), with Michael Hassett and Toby Waley providing significant support throughout the tour. Projectionist David

Bonanno had 2x 20x15' front project screens for imag; 2x 16x12' front project screens hanging either side of the main set; and a central 25x19' custom made screen as the set centre piece.

Projectors were three Barco R8s - on their first major Australian event, and two Barco G5s. The central screen was powered by an R8 near the front of house position, sometimes with throws of 60+ metres - even then, the pictures were superb. These units were easy to tour, and always gave great pictures (thanks Dave!)

Control was provided by Blacksheep's OB1 SDI system, with playout being an integral part of the show. Throughout the event, Ted Robinson's running order called for various screens to show various

different images - sometimes all screens showed IMAG, sometimes they all showed playback from one source; at other times 3 different replay sources played onto the 'set' screens with IMAG showing on the outsides; then they would change to the 'set' screens showing different camera angles. This was controlled via a 16 x 16 Matrix Switcher, with all sources and the switcher being run via Dataton Trax showcontrol software.

The main program was played off Blacksheep's Media 100 RFE system, with other programmed elements running off one of four Pioneer DVD players (including a DVD recorder to cater for last minute changes), and sometimes (such as a last minute tribute to Shirley Strachan on the anniversary of his death) off Beta SP. The Media 100 RFE was also used to re edit the show as more archive footage was discovered (which was almost daily)

As Blacksheep's Managing Director, I directed the vision elements of the show, completing the 5 person Blacksheep 'flock'. I am keen to recognise the team work within the whole touring crew, with the lighting, sound, staging, and backline all being great to work with - 'the turnarounds were sometimes very tight, but teamwork (and a lack of sleep) pulled it together every time!'



(left to right) Ian Rhodes, David Beattie, Ben Alcott, Paul Howard, David Bonanno

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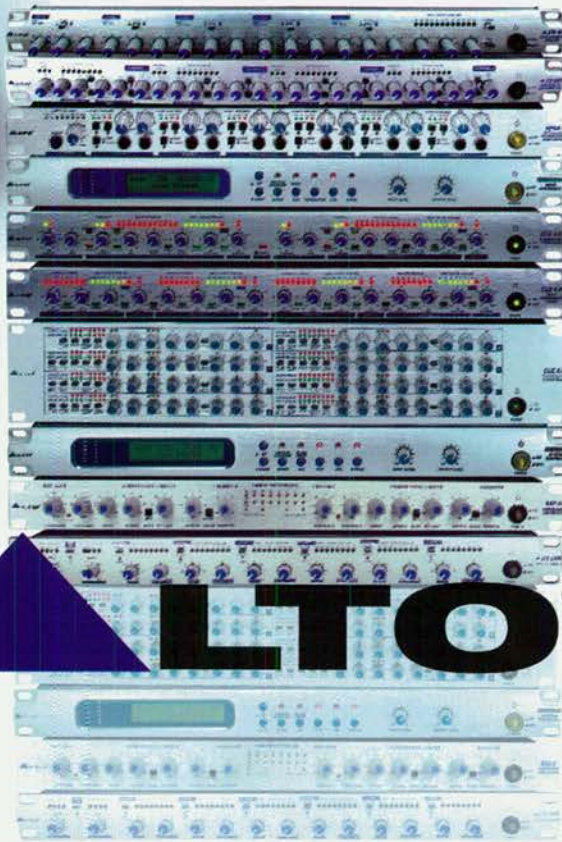
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by John Grimshaw

**It is a consumable product that is used on almost every show. However, the properties of gel remains largely unknown by the vast majority of those that actually use it – until now. Here is a look at everything you need to know to get the most out of colouring the light path...**

#### Polycarbonate shortage

Interestingly, the rise of use of CDs around the world has limited the availability of the base material - polycarbonate. While production of the plastic has ramped up to meet this need, this is reportedly the main reason for Rosco reducing their gel roll length to 25 feet.

**M**ost people already know that a colour filter changes the colour of the light by absorbing portions of the colour spectrum, and allowing others to pass. Because some light is absorbed by the filter, it degrades. The more light it has to absorb (or the darker the gel), the shorter its lifespan. Most technicians think that this is all you need to know about gel, but there are numerous other pieces of information that could help save your show serious costs in wages and materials by removing the need for re-gelling.

From the manufacturer's point of view, in producing gel they have to balance the need to produce a product that will withstand high light absorption for the longest possible time, against the end cost of gel. Different companies choose different means and each have their own pros and cons.

Gel can be made by three distinct process – by coating the surface of a clear plastic base material, by welding or embedded the colour to the surface of the base material, or by completely mixing the colour with the base plastic. The dyes themselves are often organic based dyes, while the base material is currently either a polycarbonate or polyester plastic.

Before we look at the dye options, is it best to understand the options for the base material substrate polycarbonate or polyester plastic.

#### The Substrate

The polycarbonate offers a better combination of heat and optical properties, able to withstand temperatures up to around 150° to 160°C range. However, the nature of these properties makes the gel more difficult to produce - particularly the need to keep colour and thickness within tolerances. Polyester filters are only able to cope with temperatures up to around 125° to 145°C, but are significantly easier to make.

As a result, manufacturers tend to make the

lighter colour filters out of the Polyester base material. Rosco indicate that around 35% of their range uses the Polyester base material because they are "either light tint colours or colours that cannot yet be reproduced in the polycarbonate plastic."\*

Lee Filters produce a significant amount of their product range in the polyester, with darker colours optionally available in polycarbonate. They call this type "High Temperature" (HT) gel, and their swatch book indicates which colours can be optionally purchased in HT.

#### The Dye

The ability for the base material to cope with heat can be compromised by the

dye itself, because the absorbed light is dissipated as heat. Filters that absorb more light - particularly the red and infra-red parts of the spectrum, will wear out faster. This is why a technician may find that they are changing the blue and green gels more often than the red ones.

Gels that use the "surface coat" method of colouring will typically wear out faster than ones with the embedded colour. This is because the dye on the surface is able to sublimate (change directly from solid to gas), while embedded colours are restricted by the fact that the dye is not on the surface. However, because of the relative ease of production, surface coat gel types can be cheaper to produce. They can also more easily offer a vast range of colours.

The Lee Filters range uses a double coat of dye – one on each side of the substrate. They have a huge range of colours, and are often adding to their range. The double coat option gives the colour a little more durability against scratches, as well as allowing Lee Filters further precise control over the exact colour. This control means that there is often very little difference between batches of the same colour. However, with the dye on the surface, it is more able to sublimate off, thus reducing its life - particularly in darker colours or if used in very high output fixtures. In the last few years they have invited lighting designers to ask for custom colours to be added to the range. Currently known as the "700 Series", these gels are proving quite popular to all designers around the world.

Rosco uses a number of different processes, depending on the application.

Rosco's Cinegel is coloured using the 'deep dyed' method - the colour is melded to the base

(continued...)

\*Sourced from "Color filters for entertainment lighting" – a technote available from Rosco ([www.rosco.com](http://www.rosco.com))

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Consumables



Lee filters have stopped offering separate numeric and designer's editions of their swatchbooks. Now, the colours are laid out in colour order (as for the designers edition), but on the back of each white data page is a page number. So each colour can be cross-referenced using a special page/colour number chart at the back of the book. However, you need to be careful not to use the 'page' number when ordering gel!!!

Pictured here is a 'half cut' composite colour, cut for a Selecon Acclaim. You can see the adhesive tape in this picture. When installing this colour into the frame



and in the lamp, it is a good idea to have the tape on the side facing away from the lamp. This way only filtered light hits the adhesive and the sticky tape itself.

**Note on Additive & Subtractive light**

Remember - white light is a composite of many colours of light, so the easy way to understand 'which is which' is that filters 'subtract' the unwanted colours from white light. Additive light sums the colours from two separate sources to create a new colour.

The 'half cut' piece of gel (pictured above), if used in a profile lamp, uses both additive and subtractive methods. The green and the blue gels 'subtract' the unwanted colours from the white light that passes through. However, the resulting projected colour image is an exact overlay of both colours in the same area of the stage - ie 'additive'.

material rather than simply coated on the surface. This was done for the film and television industry so that the natural static properties of the plastic would let it stick to glass windows without any adhesive (this part of the industry needs this feature so as to 'colour balance' internal and external light sources). The Cinegel range is largely made up of a vast array of colour correction filters for almost every possible application, as well as numerous diffusion media and reflective surface options.

The Rosco E-Color range is another gel that uses a 'surface coat' dye, however in this case they only coat one side. The single sided coat allows for the gel to continue to use that static property of sticking to glass, while still offering a huge range of colours. If you intend to use darker shades of this gel, it would be a good idea to face the dyed side towards the light source. This way, only filtered light passes through the base material. By doing this the overall temperature of the gel is lower, and therefore the lifespan of the gel is extended. The numbering system of this colour closely matches the Lee Filters one.

Rosco Supergel is made from either polyester or polycarbonate (depending on depth of colour), however the plastic is dyed *before* it is made in sheet form. According to Ian Baseby at Rosco in Sydney, the factories have drums of colour pre-made in pellet form, which is then heated, extruded and pressed into sheets as required. Thus the colour is right through the depth of the plastic. Supergel has the longest lifespan of any of the plastic gels.

GamColor is a US brand that also uses a 'deep dyed' process to colour their gel. While this gel is not so common in this part of the world, touring shows from the US (or US lighting designers) may specify colours in this range.

There are numerous other brands of gel available throughout the world, but it is unlikely that you will come across many other manufacturers. If you find that you have to source another brand, you may find that you will have to import it yourself.

**Getting the most out of your filters**

For shows that require the use of dark filters for

extended periods of time, there are a couple of options available to ensure you maintain the colours specified by the designer:

1. choice of filter - where possible, make sure you choose a polycarbonate based filter. If the filter you happen to use is Rosco E-Colour, remember to put it in the frame the right way around.
2. choice of fixture - some lanterns are designed specifically to reduce the heat emitted with the light. This can be achieved by the design of the optics (like the Selecon Pacific), the choice of light source or special heat dissipation planning.
3. adding a heat shield - most filter manufacturers make a clear heat shield that can be placed in the light path before the colour filter. So long as air can freely pass on both sides of both filters (ie they are not in the same gel frame), the coloured gel is not doing all of the absorption work so it is not getting as hot and will last longer.
4. change the filter - plan to change the filter after a period of time running the show.

**Composite Filter Effects**

There are a couple of things to consider if you are planning to put more than one filter in the light path. For example, numerous lighting designers ask to have a frost filter included with a colour in the one frame for a fixture. It is worth noting that by doing this, you are going to shorten the life of both gels. This is because the air captured between the gels will be superheated and unable to escape. In lighter coloured gels or in lower wattage lanterns this may not cause a problem. In the case of some lanterns (like cyc lights) where you cannot install two gels separated by an air gap, you may need to consider some of the coloured frosts that are becoming more popular, or use a TV/Film solution and attach a sheet of 'spun' out from the front of the lantern. Spun is usually attached to the barndoors of a Fresnel or flood, and is intended more to 'smooth' the output of the light rather than diffuse it. A significant air-gap is an important aspect of using this product.

Another way of putting multiple colours in the one fitting is by making a composite colour using sticky tape. This has different effects in different fitting types. For example, using a gel that is made up of two half cuts of colour in a



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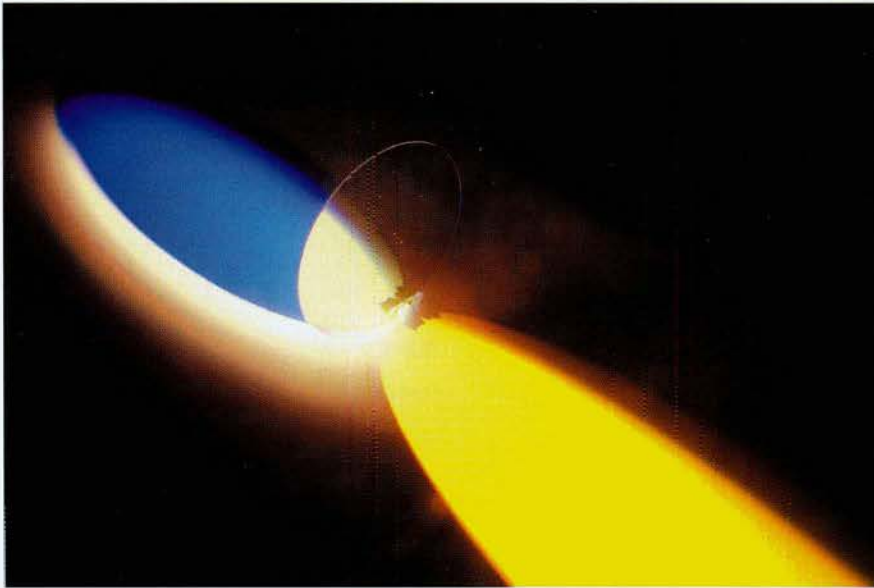


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The above picture demonstrates how a dichroic glass filter reflects unwanted light. Note the white halo to the blue side of the light indicates where the white light source is. The yellow light is purely reflected light. (Thanks to Rosco Australia for providing the glass to stage this shot)

profile lamp should achieve a colour effect similar to having two separate fittings, with each colour focused on the same place. By using a 'half cut' colour in a single lamp you avoid any edges/shadows that would be present in a "two lamp" solution - in other words avoiding one or the other colour being visible by itself. If the profile lamp has poor quality optics, this type of gelling can also have interesting effects on break-up gobos, further adding to the "break-up" effect. Using the same 'half cut' gel in a Fresnel or PC lantern would result in a very soft focus projected image of the gel.

Obviously, you need to consider the sticky tape used for this type of application. Of the hundreds of tape types out there, only a few will withstand this kind of punishment over a long period. You should do a bit of homework and choose a polyester based tape that uses an acrylic adhesive and has a temperature range comparable to gel (up to 150°C). Ideally, if you are not sure how the tape will cope under the heat, you should test the tape before use.

Herkes sell a 25mm scroller tape branded "Permacel", and is about \$38.50 per 66m roll.

Connections contacted 3M to see if they make a comparable product. They do - though they don't really tell anyone about it. Called "8440/Transparent", the tape is

available only on order. The polyester tape with acrylic adhesive is rated to 175°C, and has the strength needed. 3M can supply tape rolls in any width (6mm increments), and a 66m roll of 12mm tape will cost \$36 - though there is an additional \$25 charge per order to cut the rolls of the main supply. The 3M Information Centre can be contacted on 136 136

**Dichroic Filters**

This type of filter uses glass as its base material, and is most commonly found in moving lights. The Rosco website describes the process of creating these filters:

"Dichroic filters are created by depositing vaporized minerals onto glass. In the Rosco Permacolor process, the materials are deposited in alternating layers of varying thickness. This allows narrow portions of the spectrum to be transmitted and superfluous portions reflected. The result is pure and saturated colors."

So, a dichroic filter is fundamentally different from a normal filter because it reflects the unwanted light rather than absorbing it. As a result of this (and the fact that the base material is glass), dichroic filters have a significantly increased lifespan over the plastic based ones.

Those that have used these filters may have noticed that the colour output of a dichroically filtered light seems to look more saturated or colourful. This is possible because of the precise tolerances required to make the filter.

There are a few drawbacks to dichroics, the most obvious being that they are fragile. Even in moving lights where the actual size of the filter is quite small, a catastrophic explosion of the bubble can result in several shattered colour filters. There are two thicknesses of glass you are likely to come across - 1.75mm (as used by Rosco) and 3.3mm (as used by Lee Filters).

The next most obvious drawback is the cost. The glass filters can be purchased numerous sizes ranging from the size of a twenty cent piece to large format panes of glass. However a filter that is mounted into a frame and intended for use on a Par64 could be as much as \$300 per filter. Because of the lower production volumes, it is unlikely that this will change anytime soon.

The third drawback is that ideally you need good optics to get the best out a dichroic filter. If the light passes through the filter at an angle, it could modify the colour hue of the output.

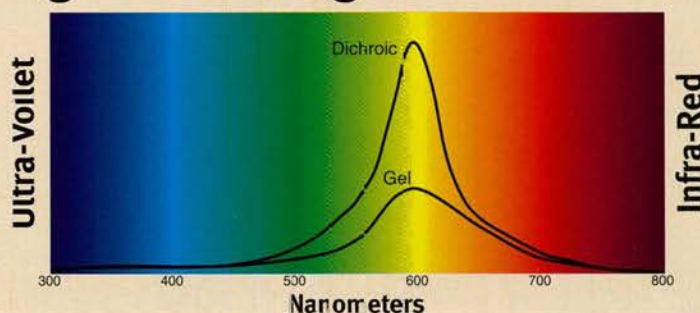
Despite all of this, you will find these filters in outdoor installations like those of the Disney theme parks. The extreme longevity of the filter and limited handling makes it ideal for this kind of application. Lee and Rosco both offer associated standard gel filters to match with the dichroic options.

**Why dichroic colours appear more 'saturated'...**

When a conventional plastic filter is designed to allow a specific frequency of light to pass, it has to "mute" some of the required frequency (see example picture). This type of filter is not able to achieve a "sharp spike" of colour in the spectrum/transmission graph. High transmission levels would require more of the unwanted colours in the spectrum to be added - therefore making an entirely different resulting colour. So, to achieve a pure colour, gel filters rely on extremely low transmission levels to keep out the unwanted frequencies.

However, the dichroic filter option can have significantly less of this "muting" effect - it can produce a sharper spike of colour on a spectrum/transmission graph. As a result, more light of the specific colour frequency is passed through the filter.

**Light wavelength**



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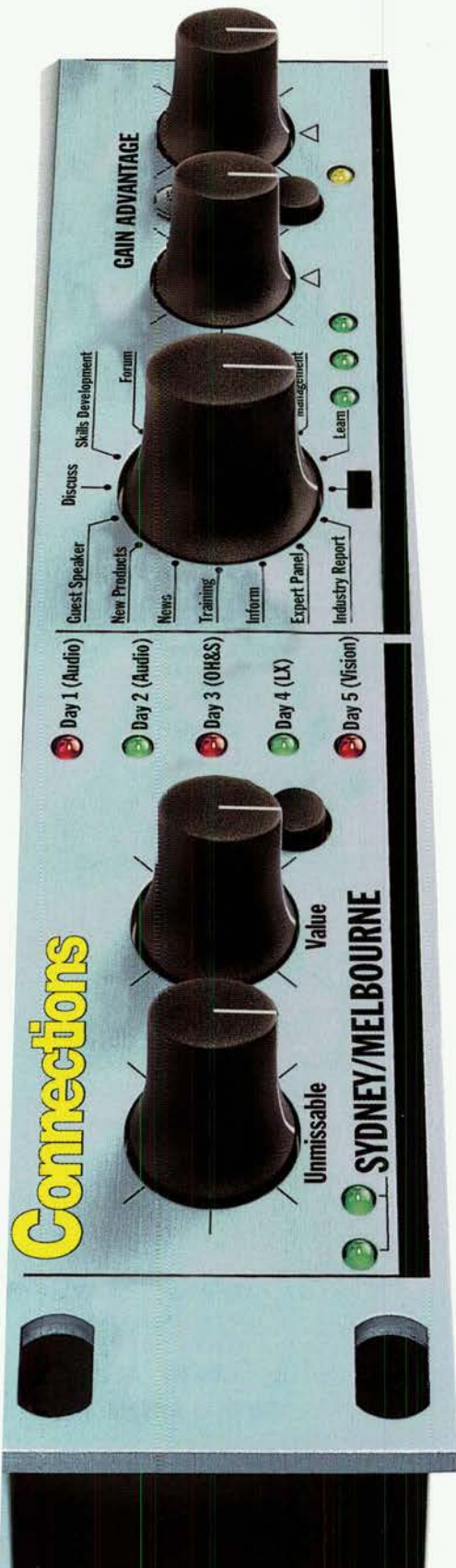
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Possibly the biggest issue of the year is public risk insurance. We detail industry responses and deliver anecdotes on *just how hard* it has become. Why? We tell....

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**Workplace** John Grimshaw will talk about the latest draft of the national qualifications for technicians currently being put together by Create Australia. He will provide an insight into the development of the new qualifications and what venues can expect from people that have specific qualifications.

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#### DMX 512A

This could be too good to be true. Bi-directional DMX, what it means for your existing inventory, and what it could mean for you in the future. Exciting! It means a new generation of control desks is around the corner too. We explain....

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How the propeller heads are plotting to build better, brighter sources. All about LEDs and low voltage lamps. Optical info!

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Michael Hassett, owner of Technical Direction Company, will talk about image-blending (the very latest imaging buzz word) to produce seamless landscaping of multiple sources. He will also discuss image creation using a specially adapted version of PowerPoint.

##### State of the Art: Projectors

We show, demo and detail the some fine examples of new projection technology. Talk with our panel about what best suits your application.

##### Vision in Live Performance

The growth of big screen images in Live Entertainment has seen a marriage between

presentation and broadcast technologies. One of this country's premier production vision specialists talks about the various technologies employed to achieve the seamless interaction of live and pre-produced material.

##### Technology Training

Company and individual options for training to international standards. Jon Sellar from Australia's chapter of ICIA (Infocomm) will talk about the training options for installation and operation of presentation systems. John Grimshaw explains the latest draft of the national qualifications for technicians currently being put together by Create Australia.

##### Industrial Vision Stories

We detail how large corporates are utilising

vision technology, who is integrating it, and just what 'off the shelf' equipment can do.

##### Whiz Bang Boxes

There's a lot of new and exciting boxes out there, and we have found them. This is a demo and detail session where we show a variety of cool devices, and you say, 'Hey - I can use that!'

##### Business Report

Connections Magazine report on issues affecting technology businesses across Australia. The magazine has just conducted a wide ranging survey, and the results are shared here.

#### SOCIAL DRINKS AFTERWARDS:

There is no technology involved!

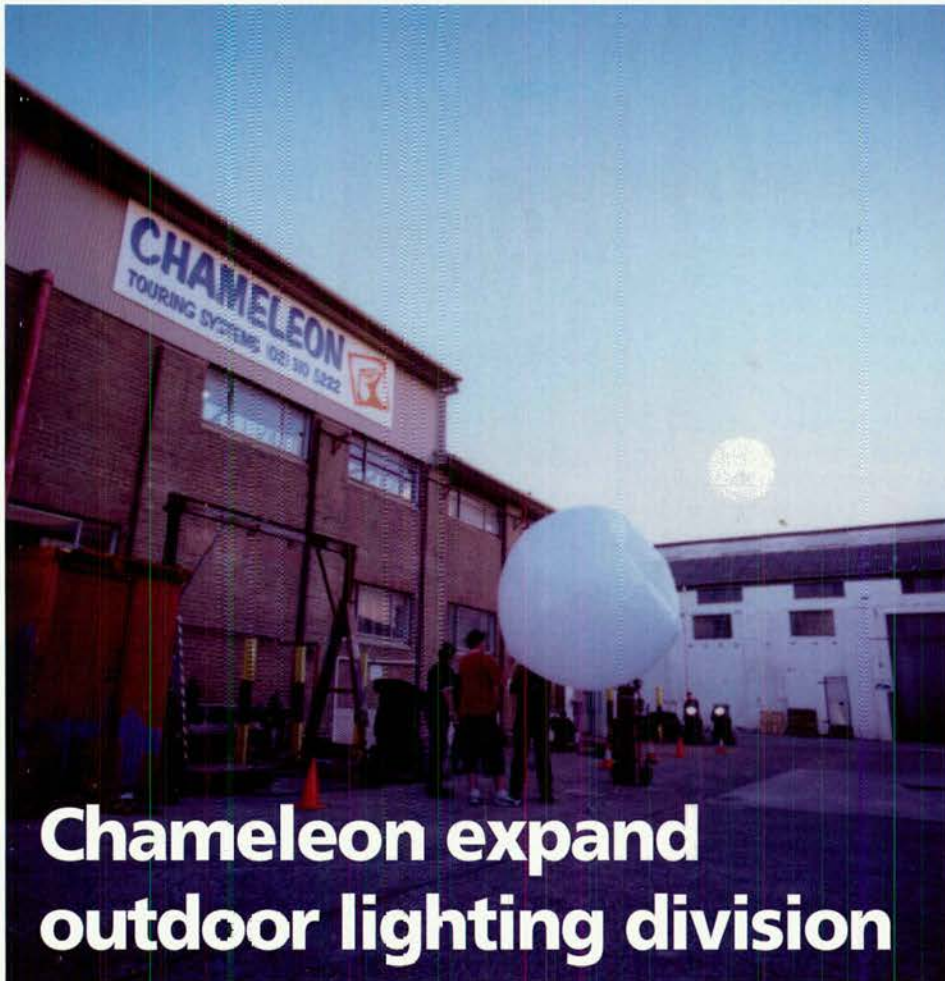
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## Chameleon expand outdoor lighting division

The great outdoors, lit in a temporary fashion

It is a natural extension from being one of the largest lighting production conglomerates in this part of the world to doing a lot of outdoor lighting. Since Chameleon Touring Systems have once again expanded inventory with new outdoor devices, including fast and bright helium balloons.

They have added the Airstar Linux 200 system, which as our cover shot shows are helium filled balloons that have an internal halogen light source to provide quite powerful and even lighting coverage in all directions. Best of all they go up fast, and stay up there, usually tied off to a generator.

The system is quite easy to implement, with the whole lot packed into what looks like a large toolbox. The process of installation that we saw at Chameleon involved inserting the suspended internal lamp array (the Linux 200 has 4x 1kW lamps configured in an "X" shape), sealing the cable/lamp entry point, attaching the tie-down lines, and inflating the balloon with industrial helium.

Once filled, the balloon is allowed to rise to its desired position where it is tethered by the three or four tie down lines. This is very simple, and as the evening closed in

and daylight left, they proved quite effective when we shot the photo.

The balloon material is a sealed polymer based fabric, which can be covered with an outer sheath to display logos etc. The Linux 200 measures 2m wide. Each balloon requires the use of a special control box, which allows different combinations of lamps to be lit for different light intensities.

The balloons are hired out by Chameleon for all sorts of outdoor events, film and television work, and even as emergency lighting.

Chameleon's relationship with the great outdoors extends back some time, according to CEO Tony Davies. The key to lighting buildings, gardens, parties and spaces is understanding the ambient lighting variations and the distances involved, he states, plus understanding how and where to source adequate power. Placing devices in the right place, usually in daylight, with an understanding of safety, is the primary job.

Chameleon have a broad inventory of outdoor rated equipment nowadays. This includes devices by Griven - like the Colour Jet, a 4kw xenon cmy colour mixing spot/

flood, that has a zoom feature. Other devices ex stock include Studio Duo City Colour, a wide angle flood, with full colour mixing available in two sizes: 2,500w and 1,800w.

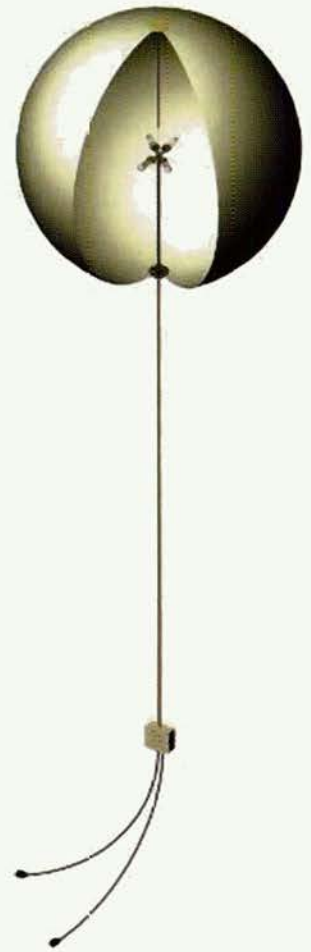
Searchlights are abundant too, for the 'Lights Over Sydney' project during the Olympics Chameleon supplied over 40 searchlights around the city. Stock includes Griven Imperial 4k xenon searchlights, and Space Cannon 4k and 2k's.

Aside from IP56 rated outdoor weathproofed equipment, Chameleon also own more Martin Mac 2000's than anyone else in the region. These are quite hardy outdoors, and can be sealed into an Ecodome for bad weather work.

Other outdoor work handled by the Sydney based firm (with a branch in Brisbane) includes the Centenary of Federation, Australia Day at Darling Harbour, Ignite Festival at Homebush, Domain Festival of Sydney, Carols in the Domain, and recently Big Brother, and the Mamma Mia opening night party.

Tony Davies is proud, but not too proud. "We can light car parks too" he added.

• Call Sydney +61 2 9310-5222  
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## Demystifying DVI

What are the different types of DVI connections, & where do you get the cables and adapters?

DVI is a high speed connection for visual displays that is "display technology independent". It uses a data protocol and encoding algorithm called TMDS (transition minimised differential signalling). The DVI signal can be either a "Dual Link" for very high resolution images, or "Single Link". According to the Digital Display Working Group (DDWG) who created DVI, the spec for each of these types is:

"Dual Link DVI supports 2x165 MHz (2048x1536 at 60 Hz, 1920x1080 at 85 Hz). A dual link implementation utilizes all 24 of the available pins. Single Link DVI supports a maximum bandwidth of 165 MHz (1920x1080 at 60 Hz, 1280x1024 at 85Hz). A single link implementation uses 12 of the 24 pins."

In addition, there are connectors in the range that have been designed to carry normal analogue RGBHV signals as well as the digital signal. A quick look at the pin-out chart (below) should sort out the connectors for you.

If you need to use the DVI format, currently it is very hard to source the cables themselves, & I am yet to discover a supplier that has DVI-I connection cables. Most high end displays (projectors and desktop displays) will come with the DVI connection cables needed, while computer video cards typically only come with a dongle looking device that allows the user to plug normal 15pin HD D connectors.

EYO Technologies ([www.eyo.com.au](http://www.eyo.com.au)) have a selection of cables, adapters and extensions at reasonable prices. I discovered they even have a robust build quality when I tried to pull one apart to adapt for my uses. For those that need to know, I believe that their "DVI to DVI dual link 2 meter" is a male to male (dual link) DVI-D cable. Axis Audio Visual out of Melbourne has some DVI switchers and signal splitters (+61 3 9761 2688)

As far as I can find out, no one locally will just sell you the plugs, and most computer/electronics sales people will look at you with a strange expression of puzzlement when you ask them about DVI.

The big advantage to the format is that it eliminates the variance in picture quality that any cable (crappy or quality) can introduce. It provides a reliable, very high quality connection which is especially desirable in precision graphics environments and CAD studios. The disadvantage is that you cannot send the signal very far (4.5m) - unless you use DVI-X.

# Rack Mounted Displays by Marshall

When Image Design Technology sent Connections the catalogue on these little Marshall devices, I had to get some to see for myself - and the choice is extensive. The full Marshall range of rack mountable display devices range from a ten screen unit in a 3RU panel through to a couple of 17" LCD screens in an 8RU configuration.

There is a staggering range of options - 16:9 and 4:3 screens, 10, 4, 3, 2 and single screen units, various inputs types including SDI and VGA on some models, a few have TV tuners and some have built in audio. The screens themselves are very high quality active matrix LCD screens - at numerous resolutions.

The potential range of applications is also pretty staggering - monitoring large scale video replay installations (like Command Systems installs), camera switching, securable monitors for touring applications like lighting desks and so on.

The two key questions are - how good are they and how much do they cost. I managed to get a play with the V-R44P (Four 4" 4:3 LCD in a 2RU chassis) and the V-R72P-SDI (Dual 7" 16:9 LCD w/ SDI input in a 3RU chassis). The while the images on the four way unit would be a little small for me for camera switching, the clarity was surprisingly good. Obviously, small text was not displayed very successfully on the 480x234 pixel screen, but when your eye is perpendicular to the front face of the unit the colour clarity and shades of grey were very good. One of the first things you need to get used to if using these screens is that you need to position the screens so that you get the best image. While there is very little difficulty seeing a clear image when horizontally off-axis from the centre of the screen, you do not have to move very far vertically before the image becomes dark and unwatchable. To counter this problem, Marshall have configured the unit so that it can be easily tilted up or down while rack mounted - to get the



exact viewing angle you need. There are no on/off controls on the unit, only brightness, contrast, colour and tint (the latter for NTSC) knobs for each screen. I have no trouble getting a very good picture on each of the screens. Each screen has separate three colour Tally LEDs - Red, Green and Yellow. Each are powered internally and are activated by contact closures on a special 15 pin HD D connector on the back. The composite video

inputs are all terminated, with an active powered loopthrough output for each channel.

As the name suggests, the V-R72P-SDI is capable of taking an SDI input, as well as composite and s-video. Being 16:9 screens, there is an additional control for each screen where the user can specify if the incoming signal is 4:3 or 16:9. Other controls on the front panel are input selectors for each panel and a colour bar generator. While this particular unit does not have Tally LEDs, the 7" diagonal screen makes this a great option for camera monitoring - particularly with the SDI inputs. Each input is terminated and an active output is provided. The SDI input gets an additional output - supplied by a 10bit D/A converter (uses SMPTE 259M standard). Like the 4" model above, the vertical off-axis viewing is not desirable, but this unit also has tilting capabilities to suit the operator.

Both units are powered with a 12DC supply (great if you need these to run on batteries!), and are pretty stylish.

For all these features, you would have to expect that these items will not be cheap - and you would be right. The 4 way V-R44P is priced at \$3,013 (trade inc GST), while the V-R72P-SDI is \$5,207 (trade inc GST). This might seem expensive, but these are high quality devices in an area where there are few options.

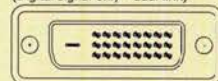
• Image Design Technology +61 2 9417 4924

A company called "Sumitomo Electric" ([www.sumitomoelectricusa.com](http://www.sumitomoelectricusa.com)) has built an optical version of the system that can extend the digital images distance to up to 500m. This is very clever, cutting edge technology, where the optical emitters

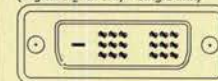
**DVI-I**  
(Includes analogue signal)



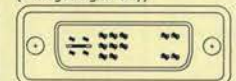
**DVI-D**  
(Digital signal only - dual link)



**DVI-D**  
(Digital signal only - single link)



**DVI-A**  
(Analogue signal only)\*



\*Unused pins help to locate the plug when mating connectors

- 1 TMDS Data2-
- 2 TMDS Data2+
- 3 TMDS Data2/4 Shield
- 4 TMDS Data4-
- 5 TMDS Data4+
- 6 DDC Clock
- 7 DDC Data
- 8 Analogue Vert. Sync

- 9 TMDS Data1-
- 10 TMDS Data1+
- 11 TMDS Data1/3 Shield
- 12 TMDS Data3-
- 13 TMDS Data3+
- 14 +5V Power
- 15 Ground (return for +5V, HSync, & VSync)

- 16 Hct Plug Detect
- 17 TMDS Data0-
- 18 TMDS Data0+
- 19 TMDS Data0/5 Shield
- 20 TMDS Data5-
- 21 TMDS Data5+
- 22 TMDS Clock Shield
- 23 TMDS Clock+

- 24 TMDS Clock-
- C1 Analogue Red
- C2 Analogue Green
- C3 Analogue Blue
- C4 Analogue Horizontal Sync
- C5 Analogue Ground (analog RG&B return)

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# JVC

PROFESSIONAL

# Tascam's DM24 digital mixer

By Mark Williams

Last month Michael Orland and myself did a three way comparison between Berginger's new 3216, Yamaha's 03D and Soundcraft's Spirit 328 Digital. The little Yamaha won. As soon as the mag hit the street we started getting calls, saying 'what about the DM24, you KNUCKLEHEADS!' Plus, of course, those who could not swallow a five year old digital desk winning a comparison against a new one.

We reflected, and observed that at the time, the DM 24 didn't register all that large on the horizon. It seems our horizon looks different to the one many of our readers gaze towards.....

The DM24 comes STANDARD with 16 analog inputs and XLR's. That's realistic!

Then Mark called from Mildura to say he had just got version 2 software for his console, and would we like a review! WOULD WE? Here it is!

-Julius Grafton



Tascam released the DM24 about a year ago and since then the mixer has had two fairly significant operating system upgrades- the most recent being Version 2 in September 2002.

The DM24 is a fully automatable 32 channel 8 buss digital console with 4 band fully parametric EQ and compression on every channel, with channels 1 through 16 also having a noisegate/expander. There are 16 mic/line inputs with inserts and phantom power, and 6 Aux sends, two of which would normally be used to feed the two internal effect units. The effect units, which can also be inserted into any channel include TC Works Reverb, Antares mic and Speaker Modeler and Tascam's mediocre delay, chorus, flange, phaser and pitch shift effects. Although there are two internal effect units you can only run one reverb.

## Ins and Outs

Three TDIF ports for 24 channels of digital I/O come standard as does a single 8 channel Adat light pipe. As well there are two digital ins and outs on both AES and S/PDIF connections.

There are four analogue sends and returns, all on TRS balanced connectors. These can be configured as assignable inserts on any channel or the stereo buss, but the sends would normally be used as Aux send outputs.

Other I/O includes balanced Stereo Out with inserts, Control Room monitor out, Studio Out, 2 trk in and two headphone outs, all of course being stereo.

The Control Room and Studio Outs can be fed from the Aux sends, the busses, Trk in 1 or 2, 2 track in or the stereo buss making it an extremely flexible monitoring system.

Non audio connections include MIDI in, out and thru, SMPTE timecode input, word clock, DTRS remote control RS422, GPI and an external footswitch jack.

## Control

Three fader layers are used to control channels 1-16, 17-32 and buss and Aux masters. As well as controlling channel and Aux levels, the faders also have several other uses. Parameter control is handled via two sets of four rotary encoders which Tascam call pods.

Directly below the large LCD screen there are four pods and four buttons. Each parameter on screen lines up with one of the four which are used to control it.

The other set of four pods control parameters for the currently selected channel and have a ring of LEDs around them to indicate the pod position as has become common on other digital mixers. These pods default to control EQ gain, freq, bandwidth and pan but can be set to control just the gain of the four bands of EQ or the Aux sends.

Transport control buttons are also provided on the mixer face and can be setup to work with just about any machine imaginable.

Tascam has packed more features into this mixer than I have space to cover. There is talk of

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more to come, the question is how much more can you squeeze out of or into this little black box.

#### How far can you go?

Digital mixing requires DSP (Digital Signal Processor) power. The DM24 and digital mixers in general are designed to operate within the limits of the particular DSP motor that has been placed under the hood. Functions such as EQ, compression and FX will use up a certain percentage of the power available from the DSP pool. These functions obviously change the signal and hence require DSP power.

For example: One of the user requests which Tascam was not able to implement in V2 was EQ and compression on the Aux sends like the Yamaha 01V, this would require extra DSP. Another request was to make the

channel so a setting of 0% for the helicopter channels would achieve this.

My favorite new feature in the 5.1 arena would have to be the square and circle patterns. The pattern size is adjustable and the data wheel is used to spin the selected channel signal around the circle enabling very easy 360 degree panning. This is all automatable.

Mackie's HUI device can now be emulated to provide control of fades, pans and mutes for Pro Tools, Nuendo etc. The DM24 has always had good MIDI control but it used the audio fader layer to send MIDI at the same time that it was controlling the audio. Now it has its own dedicated fader layer just for MIDI.

#### Top Heavy Trim Pots

There has been much debate about the trim pots on the DM24. The taper of these pots require a 3 o'clock setting for a normal mic level, where on most mixers the equivalent amount of gain would be achieved at around 12 o'clock. The last quarter turn produces most of the gain available from the pot. The amount of gain is not the issue here and most users will be satisfied in this regard. The issue as it translates to the real world is the fact that you need to be careful when adjusting the gain for instance, of a low level acoustic guitar on a live stage as you may tip the foldback into feedback.

Tascam has again listened to its users and now offer the "Trim Pot Upgrade". This entails the replacement of the pots with the ones that they are using on their much more expensive SX1 Workstation Mixer for a reasonable fee of around \$370. This new pot will make the gain easier to control. It will not provide any extra gain, nor will it change any other characteristic such as signal to noise ratio.

The mic pre-amps actually sound wonderful and are very quiet.

#### Round'em up move'em out

I have used the DM24 since November 2001 in both live and recording situations and have been impressed by its operation. Its flexibility, particularly with regard to routing is probably its greatest asset, while at the same time, possibly its greatest drawback! The average user can now afford a piece of technology which will exceed their understanding.

There are so many ways that this mixer can be configured. Some people may fail and some will blame Tascam. For those who will meet the challenge, it sounds great, the reverb and compressors are good, the moving faders don't chatter like the 02R and 01V, it has great surround mixing options and its 24/96 ready although in 96k mode only 16 channels and 4 Aux sends are operational.

I have two Soundscape SSHDR1 DAW's, which have TDIF ports so the DM24 with its three TDIF ports is a perfect match and a great money saver for anyone who needs TDIF interfacing.

On the downside I have encountered the odd bug and while this has not yet caused myself any serious inconvenience, it must be stated that Tascam's OS is not as stable as Yamaha's 02R or 01V which I have used for many years without one problem. Tascam would be well advised to test beta versions more thoroughly before official release.



effect returns assignable to the stereo buss thus saving four channels. This was implemented in V2 because it did not require extra DSP and was a useful feature.

Among the upgraded features is an almost totally flexible routing capability. For instance mic input 1 can be assigned to any or all channels. It can even be assigned direct out to a DAW or direct to the stereo buss without using up a channel to do either.

The internal effects which previously needed to be assigned/returned to 4 mixer channels can now be assigned direct to the stereo buss.

#### 60 channels at mixdown!

So if you have 32 inputs coming in via TDIF and Adat lightpipe, 16 channels of MIDI modules and samplers coming into the mic/line inputs assigned direct to the stereo buss, 4 channels of digital in, 4 channels of returns and 4 channels of FX returns, all assigned direct to the stereo buss, you could have 60 channels of mixdown.

Note that only the 32 mixer channels will have EQ and dynamics etc but you can insert over the mic inputs.

There is also a mode where you can assign the mic inputs directly to Aux 1-2. In this mode Aux 1-2 are stereo paired so you get a pan and a fader for each input. You can then assign Aux 1-2 to the stereo buss.

Any way you look at it is pretty impressive, particularly when the retail price of \$7000 is considered.

Improvements to the already rich surround mixing include a LPF for the boom channel, choices being 80hz 120hz and off, and a center channel percentage value. This value dictates how much of the signal is allowed into the center channel. If you were panning a helicopter from left to right you wouldn't want it to encroach on any dialogue that may be happening in the center

# VCA desks for the real world

The ML consoles embody our mission to make previously exclusive technologies affordable to people on a real world budget. These mixers have changed the rules for VCA desks, forever raising the pro audio industry's price / performance expectations.

→ ML3000



→ ML4000



→ ML5000



## ALLEN & HEATH

### ML3000 / ML4000 / ML5000 features:

- **8 VCA Groups** / Giving you control of any number of channels from a single fader, including control of all post fader sends
- **Advanced Mic Preamp** / The ML pre-amp uses a new custom made potentiometer and in addition to achieving the lowest possible noise and THD figures, we've eliminated inter-modulation distortion - something that makes many other products sound harsh
- **Front-of-house / Monitors / Group / Aux mode switches** let you use the MLs as full function front-of-house mixers or full function monitor consoles
- **LCRplus Panning** / Paired blend and pan controls on channels and groups allow you to position signals across the C and LF buses

Allen & Heath live sound mixers:  
ML5000 / ML4000 / GL4000 / ML3000 / GL3300 / GL2200



# Compact System 40

New INNOVASON digital live console expands outputs, allows upgrades



Digital Live Mixing Consoles are the 'now' hot 'must-have' in a world where there are more than 60 brands of analogue mixers – the ones with more knobs than you can count. But the digital console business has been held back by lack of processing power, and lack of clear direction regarding a friendly user interface.

Now there are three levels of complexity, and three arguable product sectors, with not many consoles to choose from. Yet.

At the bottom end are Yamaha's family of 02V, 03D and 02R/96, then Behringer, Tascam, Ramsa and Soundcraft all field single contenders. These cost under 20k. In the middle is Yamaha's DM 2000, and Innovason's Compact. Sony's DMX-R1000 doesn't really qualify as a 'live' console, but it shares this sector, where pricepoints are well under 100k.

Up in the stratosphere are Yamaha's PM1D, Harrison's Show Console, DiGiCo's new Soundtracs derived D5 Live and surprising for some, the Euphonix System 5. These devices all carry price tickets that range from 300k and upwards, ever upwards. Whether Cadac or Midas have a digital console program is anyone's guess, former Midas chief Bob Doyle asserts they do not.

To the credit of the console makers listed above, their live console offerings have all proven hardy and reliable. Our files have very few console disaster stories that relate to any of these. So with the product mix growing, the market is now turning to digital live consoles, and Innovason have just released a new contender – the Compact Sys40. Short for System 40.

All Innovason consoles share the same platform concept, and it is a simple one. There is a fader for every channel, and a select button to bring that channel to the central control area for adjustment of EQ and dynamics – such as noise gate and compressor/limiter.

The control area has rotary faders for each of the four way fully parametric EQ functions, and dynamics. Where Innovason differ with their competition is that all fader functions need to be read from a well positioned LCD screen just to the right of the control area. In practice, this works well. The other manufacturers all use encoder type rotary controls with 11 to 15 little red or green LEDs embedded around them, to actually 'see' where the rotary fader is set. Having said that, there is sometimes a need to check the screen for 'exact' settings because the LEDs are more approximate than accurate. One thing is certain, and that is sound engineers are much more comfortable with digital user interfaces now than they ever have been.

Compact Sys40 is an upgrade of the Compact Live, with Compact Live users able to update their platform via a kit that contains software and a new DSP engine. Innovason are committed to keeping their platforms useful, and this is evidence of that.

At the back of the console are eight slots, where you pick and choose analog input and output cards, each loaded with 8 XLRs. System 40 allows up to 32 mic/line and 8 line level inputs, or a mixture of AES digital inputs to a total of 40.

At the output end you may run 12 mono, plus left / right / centre outputs, like the original Compact, but you can also generate 27 outputs, vs. the original 15 – by the change to 12 stereo outputs plus left / right / centre. This answers one of the criticisms of the original Compact, namely not enough output mixes.

The other comment some users made of the Compact is that you can't insert a piece of outboard equipment across every input channel – and you still can't, but there are two caveats. Firstly, there are eight insert points possible. Secondly, with onboard dynamics it's unlikely you would need much in the way of patched processing across input channels.

Continuing Innovason's cool architecture philosophy, a remote 'stage box' can be run out off the end of fibre optic cable, containing the same 8 channel analog input and/or output modules that you can fit the back of the desk. So it is possible to be very flexible about where your real world analog audio cables actually route to. Using the stage box it is possible to double the number of inputs to 72 and outputs to 32 too.

It might be French, but it is friendly.

Spotted by Julius Grafton in London

# MARKETREPORT Studio Monitors

## UNPOWERED MONITORS

**Monitor (series) configuration; freq resp; Continuous Power rating; Acoustic features; Description; Price**

**Alesis Monitor One Mk2** 2-way; Near field, 45Hz-18kHz; Cont. Power - 120w program/200w peak; Acoustics - SuperPort technology overcomes monitor "choking"; Desc - Shielded for use near computer displays, High power output; Excellent bass transience \$799

**ART ART SLM1** 2-way; 6.5"; Near field, 40Hz-20kHz; Cont. Power - 70w; Acoustics - Accurate audio reproduction; Desc - Front port; MDF; 5kg, Ferro fluid cooled HF; Shielded \$799

**Audix N10** (Reference Series) Ported 2-way; Midfield playback, 40Hz-20kHz; Cont. Power - 150-350w; sens. 89dB 8Ω; Acoustics - Excellent bass handling; Desc - 22" x 10" x 13.5" 1"; Wood composite, \$3,995

**Audix N30** (Reference Series) Ported 2-way; Reference & playback, 40Hz-20kHz; Cont. Power - 150-350w; sens. 89dB 4Ω; Desc - 45" x 10" x 13.5" 1"; Wood composite, \$6,995

**Audix N5** (Reference Series) Ported 2-way; Mastering, 40Hz-20kHz; Cont. Power - 150-250w; sens. 87dB 8Ω; Acoustics - Exceptional imaging & audiophile sound quality; Desc - 15x9.5x11", 1" Wood composite, \$3,495

**Audix Studio 1A** (Studio Series) Ported 2-way; Near field, 50-18k (+-3dB); Cont. Power - 150-250w; sens. 87dB 8Ω; Acoustics - Clear, concise sound; Desc - 15" x 9.5" x 11" 0.75"; Wood composite, Available with video shielding \$1,495

**DAS Monitor-8** (Monitor Series) 2-way; 8"; Near field, 38Hz-32kHz (-10dB); Cont. Power - 125w RMS; 250w prog; Sens: 89dB SPL; Acoustics - Designed with DAS acoustic modelling software; Desc - 42 x 28 x 29cm; 12.8kg, Mons. selected for P. McCartney Lpool Institute \$800

**Dynacord FE40** (Compact Monitor Series) 2-way Fullrange; Near field, 65Hz-20kHz; Cont. Power - 60w; Acoustics - Wide controlled dispers; High definition sound; Desc - Composite cabinet; 2.6kg, \$1,159

**Dynaudio Acoustics BM15** (BM Series) 2-way Fullrange; Near/midfield, 43Hz-20kHz; Cont. Power - 100w RMS (1,000w peak); Acoustics - High power capacity & extended bass response; Desc - Esotec 1.1" Tweeter/9.0" Woofer; 12.3kg, Performance comparable with many "main" monitors \$2,995

**Dynaudio Acoustics BM5** (BM Series) 2-way Fullrange; Near field, 55Hz-29kHz; Cont. Power - 100W RMS; Acoustics - Exceptionally linear phase & frequency response; Desc - 1.1" Soft dome tweeter/6.5" Woofer; 5.7kg, Cabs matched +/-1.5dB; Thermal tweeter protection \$1,595

**Dynaudio Acoustics BM6** (BM Series) 2-way Fullrange; Near field, 43Hz-20kHz; Cont. Power - 100W RMS; Acoustics - Outstanding imaging & accuracy w/ high SPL; Desc - Esotec 1.1" Tweeter/6.5" Woofer; 6.9kg, Cabs matched +/-1.5dB; Thermal tweeter protection \$2,395

**Dynaudio Acoustics M1** (M Series) 2-way Conso.e-top; Near field, 50Hz-20kHz; Cont. Power - 300W RMS (1,000W peak); Acoustics - Purpose-designed for meter-bridge positioning; Desc - Esotec 1.1" Tweeter/2 x 5.5" Woofers; 11.2kg, "High Energy" monitor for long term hi-SPL output \$6,100

>> **EAW MS103** (MS Series) 3-way

Reference; 15" LF/7" MF; Sealed 3mm tweeter, +3 dB 40Hz-19kHz; -10 dB 30Hz; Bi-Amp: Internal passive crossover; Cont. Power - Full range passive: 300; Passive (MF/HF): 200; LF: 800; Desc - Mirror-image L/R; 508x610x425 mm; 47.7kg, Switchable powering \$4,995



**EAW MS20** (MS Series) 2-way Reference; 7" LF/1" tweeter, +3 dB 50Hz-19kHz; -10 dB 40Hz; Bi-Amp: Internal passive crossover; Cont. Power - 150w; Desc - Mirror-image L/R; H:378 x W:248; 7.3kg, \$1,095

**EAW MS30ci** (MS Series) 2-way Reference; 8" LF/3mm tweeter, +3 dB 45Hz-19kHz; -10 dB 38Hz; Bi-Amp: Internal passive Xover; Cont. Power - 200w; Desc - Mirror-image L/R; H:357 x W:432 x D:318 mm; 15.5kg, \$1,395



<< **EAW MS63** (MS Series) 3-way Reference; 12" LF/7" MF; Sealed 3mm tweeter, +3 dB 50Hz-19kHz; -10 dB 38Hz; Bi-Amp: Internal passive Xover; Cont. Power - 40 w; Desc - Mirror-image L/R; H:406 x

W: 610 x D:318 mm; 39.5kg, 3mm Tweeter on Wave Guide Plate \$4,095

**Electro-Voice S-40** (Compact Monitor Series) 2-way Fullrange; Near field, 65Hz-20kHz; Cont. Power - 160w; Acoustics - Wide controlled dispers; Highly accurate sound; Desc - Composite cabinet; 2.6kg, \$999

**Hafler M5** 2way Near field; 5.25", 70-21kHz; Cont Power-200w; Acoustics - True/flat sonic reproduction; Desc-Ported at front; MDF 5Kgs, Linkwitz Riley Xover; Exponential waveguide \$995

Listen carefully! The theme of Reference Studio Monitors is this month's professional audio feature, and congratulations - you have found the right place for a snapshot comparison of what is now available in Australia for high-end professional studio monitoring product.



How did we put it together?

There were a few ways in which we could have structured the report; near, mid, main, far, (as well as 'back there' with 5.1 and 7.1 systems), 2-way, 3-way and the like, so we have kept it nice and simple and divided the report into two: powered and unpowered.

Brand	Distributor	Phone	Web	No of Speakers
Alesis	Electric Factory	+61 3 9480 5988	www.elfa.com.au	2
ART	Network Ent Technology	+61 2 9905 5997	www.network-et.com	1
ATC	Technical Audio Group	+61 2 9519 0900	www.tag.com.au	12
Audix	Production Audio Services	+61 3 9415 1585	www.productionaudio.com.au	6
Behringer	Behringer Australia	+61 3 9877 7170	www.behringer.com.au	1
DAS	magna systems	+61 2 9417 1111	www.dasaudio.com	2
Dynacord	EVI Audio Australia	+61 2 9648 3455	www.eviaudio.com.au	1
Dynaudio Acoustics	Amber Technology	+61 2 9452 8600	www.ambertech.com.au	8
EAW	Production Audio Services	+61 3 9415 1585	www.productionaudio.com.au	4
Electro-Voice	EVI Audio Australia	+61 2 9648 3455	www.eviaudio.com.au	1
Emes	Innovative Music Australia	+61 3 95400658	www.innovativemusic.com.au	12
Genelec	Studio Connections Australia	+61 3 9874 7222	www.genelec.com	4
Hafler	Network Ent Technology	+61 2 9905 5997	www.network-et.com	5
HHB	Audio Products Australia	1800 642 922	www.audioproducts.com.au	5
JBL	Jands	+61 2 9582 0909	www.jands.com.au	10
KRK	Musicklink Australia	+61 3 9765 6565	www.musiclink.com.au	12
Legend Acoustics	Legend Acoustics	+61 2 6288 7276	www.legendsspeakers.com.au	1
Mackie Design	Australian Audio Supplies	1800 502 015	www.ausaudio.com.au	3
M-Audio	Electric Factory	+61 3 9480 5988	www.elfa.com.au	3
Meyer Sound	Meyer Sound Australia	1800 4 MEYER	www.meyersound.com.au	12
Nagisa	Front End Audio	+61 8 8370 0499	www.frontendaudio.com.au	1
NewAudio	NewAudio	+61 2 9975 1631	www.newaudio.com.au	4
NHT Pro	Awave Productions	+61 3 9819 4603	www.nhtpro.com	6
Phonic	CMC Music	+61 2 9905 2511	cmcmusic.com.au	10
Roland	Roland Corporation Australia	+61 2 9982 8266	www.rolandcorp.com.au	4
Samson Audio	Electric Factory	+61 3 9480 5988	www.elfa.com.au	3
Soundcraft	Jands	+61 2 9582 0909	www.jands.com.au	2
Tannoy	Syntec International	+61 2 9417 4700	www.syntec.com.au	8
VideoLogic	Syslink	+61 3 9722 2089	www.videologic.com	2
Yamaha	Yamaha Music Australia	1800 805 413	www.yamaha.com	7
Yorkville Sound	Dynamic Music	61 2 9939 1299	www.dynamicmusic.com.au	2

## What was included:

We were looking for professional level, designed-for-the-studio monitors. Having said this, we acknowledge that there is some crossover with the domestic Hi-Fi and professional sectors, such as the desktop editing sound/video PC markets. The demand for better componentry and standards in these areas is increasing, so it is possible to pick up a well specified pair of monitors out of this area. Another market catered for by most distributors is surround sound, again from semi-pro to professional film and multimedia recording, post-production and mastering. Some of these systems are listed, and most brands will be able to put together a system if required, so contact the distributor for more details on the brand you prefer.

## Where's my brand?

We invited many distributors and manufacturers to send in product specifications on the studio monitors they support. Some brands listed in last year's report are not represented this time around, so you may have to refer to your back-copies of Connections to hunt down them down. We have attempted to produce a comprehensive list of the major studio monitor brands, so call us if you have been left out, or know of a brand that should be here!

Some distributors took the opportunity of writing a few more words about the brand they support. This is what they wrote:

The quality, clarity, and unique high quality sound of **Audix** powered monitors are the culmination of a variety of factors including, the use of the highest quality micro electronic components, advanced polymer materials, and high technology manufacturing. Make the comparison compare with any other brand or model in any price range, and be surprised.

The **Behringer** B2031 has adjustable low-frequency roll-off, high frequency adaptation, and four-way room compensation allowing optimal adaptation to any listening situation. In addition, selectable power mode, high and low mute, balanced XLR and TRS connectors, power and clip indicators, full electromagnetic shielding and a low vibration MDF enclosure round out this professional and unusually flexible monitor system.

**Dynaudio Acoustics** 'AIR Series' is a world first, and combines Dynaudio's vast experience in loudspeaker technology with the advanced digital

## UNPOWERED MONITORS (continued)

Monitor (series) configuration; freq resp; Continuous Power rating; Acoustic features; Description; Price

**HBB CIRCLE3P** (CIRCLE Series) 2-way Fullrange; Near field, 70Hz-20kHz; Cont. Power - 60w program; Acoustics - High quality sound reproduction; Desc - Injection moulded synthetic cone, Magnetically shielded \$999

**HBB CIRCLE5P** (CIRCLE Series) 2-way Fullrange; Midfield, 48Hz-20kHz; Cont. Power - 120w program; Acoustics - Exceptionally accurate, highly detailed; Desc - Injection moulded synthetic cone, Magnetically shielded \$1,699

**JBL 4206** (4200 Series) 2-way; 6" woofer; Near field, 42Hz-21kHz; Cont. Power - 75w (300w peak); Acoustics - Multi-radial baffle, L/F-H/F transducers; Desc - (HxWxD): 390 x 229 x 241mm; 6.8kg, Sens: 87dB; Crossover: 2.8kHz; Imp: 8Ω \$1,095

**JBL 4408A** (4400 Series) 2-way: Near field, 35Hz-30kHz; Cont. Power - 100w; Acoustics - 8" Woofer, 1" titanium dome tweeter; Desc - (HxWxD): 438 x 305 x 293mm; 12kg, Sens: 89dB; Crossover: 2.5kHz; Imp: 8Ω \$2,450



<< **JBL 4412A** (4400 Series) 3-way Fullrange; Mid-near field, 30Hz-30kHz; Cont. Power - 150w; Acoustics - Transducers: 12" LF; 5" Mid; 1" HF; Desc - (HxWxD): 362 x 597 x 286mm; 21kg, Sens: 89dB; Crossover: 850 Hz, 4kHz; Imp: 8Ω \$3,490

**JBL LSR32** (LSR Series) 3-way Fullrange; Mid-near field, 40Hz-22kHz; Cont. Power - 200w (800w peak); Acoustics -

Transducers: 12" LF; 5" Mid; 1" HF; Desc - (HxWxD): 394 x 635 x 292mm; 21.3kg, Sens: 93dB; Crossover: 250Hz - 2.2kHz; Imp: 4Ω \$6,395

>> **KRK Krok** (Passive Series) 2-way; Direct field, 57Hz-22kHz; Cont. Power - RMS 100w/8Ω; Acoustics - 7" Latex-coated LF/1" Silk dome HF; Desc - MDF coated in heavy duty Zolotone, 1 year warranty \$1,599

**KRK Krok Shielded** (Passive Series) 2-way; Direct field, 57Hz-22kHz; Cont. Power - RMS 100w/8Ω; Acoustics - 7" Latex-coated LF/1" Silk dome HF; Desc - MDF coated in heavy duty Zolotone, Magnetic shielding; 1 year warranty \$1,799

**KRK Rokit** (Passive Series) 2-way; Direct field, 69Hz-24kHz; Cont. Power - RMS 75w/8Ω; Acoustics - 6" Polyvinyl LF/1" Silk dome HF; Desc - MDF coated in heavy duty Zolotone, Magnetic shielding; 1 year warranty \$999



<< **Legend Acoustics Joey 2** (Kangaroo range Series) 2-way; Near field, 55Hz-19kHz; Cont. Power - 70w (200w peak); Acoustics - Wide controlled dispersion; Desc - Constrained layer damping cabinet; 7kg each, Ruthlessly revealing w/ very low resonances \$799

**NewAudio Xenica 5.1** (Decadence Series) 5 monitors/1 sub., 35Hz-20kHz; Bi-Amp: Bi-wired crossover & terminal plate; Acoustics - 5.1 Mixing monitor system; Desc - Includes stands, \$9,350

**NewAudio Spatial 1M** (Standard Series) 2-way Fullrange; Near field, 60Hz-20kHz; Cont. Power - 55w (200w peak); Acoustics - 6-20kHz; Diffuse. 2.7-6kHz; Omnidirectional; Desc - MDF cabinet w/ anodised aluminium reflector, Terminal plate available for active conversion \$1,749

**NewAudio Spatial 1mM 5.1** (Standard Series) 5 monitors/1 sub., 35Hz-20kHz; Acoustics - 5.1 Mixing monitor system; Desc - Fly arrangement available, \$5,415

**NewAudio Xenica** (Decadence Series) Dual 2-way Fullrange; Midfield, 60Hz-20kHz; Bi-Amp: Bi-wired crossover & terminal plate; Cont. Power - 110w (400w peak); Acoustics - 6-20kHz; Diffuse. 1.8-6kHz; Omnidirectional; Desc - MDF cabinet w/ anodised aluminium reflector, Terminal plate available for active conversion \$3,498

**Phonic P 28** Passive studio sub-w, Flat: 30Hz-88kHz; Cont. Power - 225w, 92dB SPL, 1W/1M; Acoustics - 9" Subwoofer; Desc -, Bi-wiring 5-way binding post \$750ea

**Phonic P 5** Passive 2-way, Flat: 70Hz-20kHz; Cont. Power - 100w, 87dB SPL, 1W/1M; Acoustics - 5" Woofer, 1" silk dome tweeter; Desc -, Bi-wiring; 5-way binding post \$550pr

**Phonic P 6** Passive 2-way, Flat: 55Hz-20kHz; Cont. Power - 150w, 88dB SPL, 1W/1M; Acoustics - 7" Woofer, 1" silk dome tweeter; Desc -, Bi-wiring; 5-way binding post \$599pr

**Phonic P 8** Passive 2-way, Flat: 45Hz-22kHz; Cont. Power - 160w, 90dB SPL, 1W/1M; Acoustics - 9" Woofer, 1" silk dome tweeter; Desc -, Bi-amp'd available: 150 & 75w \$799pr

**Roland RSM-90** 2-way Passive, 62Hz-20kHz; Bi-Amp: External; Cont. Power - 90w (270w peak); Acoustics - Near field monitor; Desc - Ported bass reflex cabinet; 11kg, Custom crossover & dual front bass ports \$1,390

**Samson Resolv65** 2-way Fullrange, (not available as yet); Cont. Power - 75w LF & 25w HF; Acoustics - High definition, accurate sound; Desc - Ported tuned cabinet, 6.5" woofer, 1" titanium tweeter \$599

**Soundcraft Absolute Two** (Absolute Series) 2-way Fullrange; Near field, 45Hz-20kHz +2/-3 dB; Bi-Amp: Bi-wired; Cont. Power - 100w; Acoustics - Wide controlled dispers; HD Linear phase design; Desc - (HxWxD): 395x235x297mm; 7kg, Sens: 90dB; Imp: 8Ω; 6.5" LF Driver \$1,045

**Soundcraft Absolute Zero** (Absolute Series) 2-way Fullrange; Near field, 55Hz-18Hz +1/-3dB; Cont. Power - 95w; Acoustics - Wide controlled dispers; HD Linear phase design; Desc - (HxWxD): 320 x 230 x 290mm; 11kg/pair, Sens: 89dB; Crossover: 2.5kHz; Imp: 8Ω \$835

<< **Tannoy Reveal 5.1** Near field, 65Hz-20kHz; Cont. Power - 100w; Acoustics - Detailed dynamic sound w/ wide, flat freq. resp.; Desc - Red satin finish front, grey sides and back, Shielded near field monitoring for audio engineers \$900

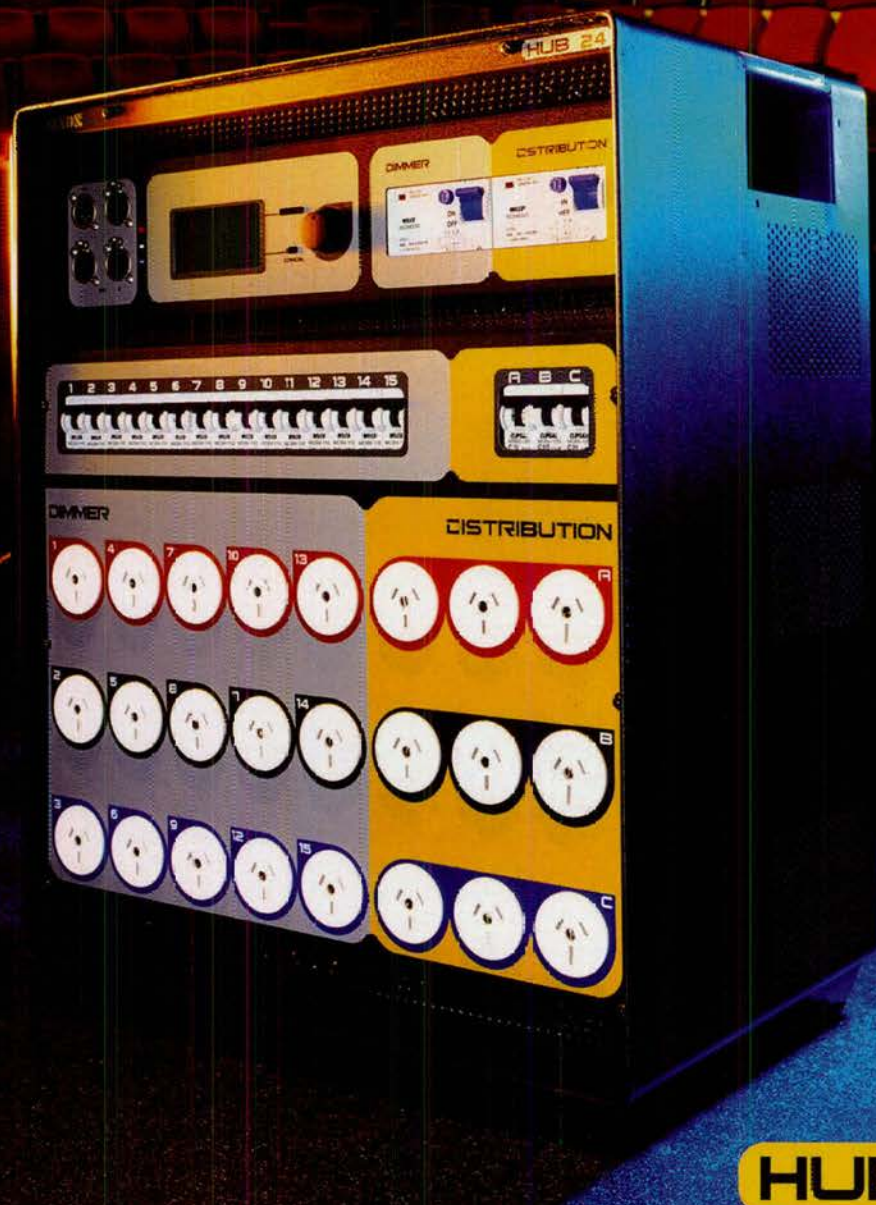




JANDS Hub 24 represents an up to date response to the needs of the modern lighting professional. HUB 24 recognises the incorporation of moving light technology at all levels of the market and the desire for an updated approach to the core job of dimming incandescent loads.

The Hub 24 offers the user savings in space, weight, acoustic noise, safety and set up time unmatched by conventional modular dimming and distribution systems.

# REINVENTING LIGHTING CONTROL



**JANDS**

**HUB 24**

audio processing technology of TC Electronic. AIR Series monitors feature extensive on-board digital processing, including Parametric EQ, Bass Management, Preset Storage/Recall, Level Alignment, and Programmable Reference Levels. AIR Monitors are designed to be networked to provide a complete, centrally-controllable monitoring solution for all Stereo and Surround Sound applications.

Unlike 'prosumer' nearfield monitors that are designed to 'flatter' the mix, **Eastern Acoustic Works** MS Series of two- and three-way nearfield monitor systems combine the accuracy of reference studio and production monitors with the rugged enclosures and high power handling capabilities of sound reinforcement systems. As optimized monitors, they provide reference-quality flat, full-range on-axis response, and linear power response. For sound reinforcement applications, they provide high output sound over a wide listening area. All MS Series systems are available as mirror-imaged left/right pairs for accurate audio imaging in critical listening environments.

The **EMES MODU-MO** concept, short for MODUlar - MOnitoring, is designed to provide a flexible solution in monitoring for today's demanding creative music/audio industry applications. In the past, several types of loud speaker systems were required for different applications and environments. With the EMES MODU-MO system, you are free to choose the acoustical principal you prefer: Coaxial, D'Appolito One + One, or ESE based configurations. Once you have chosen your favorite 2-way EMES near field configuration, simply add one or two EMES AMBER Sub-Units and you have an instant 3-way system with extended low end and output handling.

**Genelec's** new 7000 Series active subwoofers are powerful low frequency loudspeakers, and incorporate all amplifier and crossover electronics needed to match Genelec's active monitors and line-level signal sources. The integrated power amplifier features active crossover filters and driver overload protection circuits, and there is an additional bass management unit with six signal input/output channels, LFE input and summed signal output connectors. This provides great flexibility and easy connection to both Surround Sound and Stereo systems. The series feature Genelec's Laminar Spiral Enclosure (LSE), a bass reflex cabinet made of rolled sheet metal into a spiral shape, then clamped between thick MDF side panels. This facilitates excellent

### UNPOWERED MONITORS (continued)

**Monitor (series) configuration; freq resp; Continuous Power rating; Acoustic features; Description; Price**

**Tannoy Reveal X 5.1 Centre**, 65Hz-20kHz; Cont. Power - 150w; Acoustics - Ideally suited to monitor centre presence; Desc - Red satin finish front, grey sides & back, Dedicated centre channel for 5.1 mixing \$825

**Tannoy System 1000** Near field, 45Hz-20kHz; Cont. Power - 200w; Acoustics - Unfatiguing smooth & natural sound; Desc - High density particle board, Designed to produce freq. from a single point \$3,225

**Tannoy System 1200** Near field, 40Hz-20kHz; Cont. Power - 350w; Acoustics - Delivers a realistic soundstage; Desc - High density particle board, Capable of high vol. levels without compression \$4,500

>> **Yorkville YSM-1i** (Studio monitor Series) 2-way fullrange for near field, 40Hz-20kHz; Cont. Power - 70 watts prog.; Acoustics - 12dB/Oct LP filter, 6dB HP filter; X'over: 2.5kHz; Desc - Attractive charcoal grey Vinyl finish, Dual magnet on woofer & tweeter; 8kg \$795

### Powered Monitors

**Alesis M1 Active** (Monitor One Mk3 Series) 2-way; Active; 6.5" & 1"; Near field, 38 Hz-23.5 kHz (-10dB point); Bi-Amp: Yes; Cont. Power - LF amp: 75w; HF amp: 25w; Acoustics - Time alignment; 1500Hz crossover point; Desc - Shielded; Combined XLR & 1/4" connectors, Great specs. at a budget price \$1,499

**ATC Active 10** Active 2-way, 45Hz-22kHz; Bi-Amp: Active crossover; Cont. Power - 50w + 200w amps; Acoustics - Legendary ATC accuracy and detail; Desc - Dual amps w/ grounded source output stages, Stereo or 5.1 configurations (Sub available) \$3,995

**ATC SCM20A Pro** Active 2-way, 60Hz-20kHz; Bi-Amp: Active crossover; Cont. Power - 50w + 250w amps; Acoustics - Legendary ATC accuracy and detail; Desc - Dual amps w/ grounded source output stages, Stereo or 5.1 configurations (Sub available) \$12,995

**ATC SCM50-300A** Active 3-way, From 25Hz-20kHz; Bi-Amp: Active crossover; Cont. Power - from 550+200+100w amps; Acoustics - Legendary ATC accuracy and detail; Desc - Quad amps w/ grounded source output stages, Stereo or 5.1 configurations (Sub available) \$23,995 to \$74,995

**ATC T16** Active 2-way, 62Hz-20kHz; Bi-Amp: Active crossover; Cont. Power - 50w + 200w amps; Acoustics - Legendary ATC accuracy and detail; Desc - Dual amps w/ grounded source output stages, Stereo or 5.1 configurations (Sub available) \$6,995

**Audix PH3** (Power House Series) Near field w/- 12VDC adapter., 100-20k (-10dB); Cont. Power - Max Pwr Output/Channel 20W; Acoustics - 3.5" Woofer + 0.75" Dome tweeter; Desc - 3.5" + 0.75"; Shielded; Composite; 4.7 x 7.5 x 4.7", Ideal for computer workstations \$595

**Audix PH5** (Power House Series) Near field w/- internal power supply, 75-20k (-10dB); Cont. Power - Max Pwr Output/Channel 25W; Desc - Shielded; ABS composite; 6.3 x 9.3 x 6.5", Ideal for home recording, music playback \$895

<< **Behringer Australia B2031** (Series) Active 2-way, 50Hz-21kHz; Bi-Amp; Cont. Power - 25w program; Acoustics - Mute low+high; Controlled dispersion pattern; Desc - E1 MDF cabinet, 4th order Linkwitz-Riley filters, Switchable low/high freq., limiter, power mode \$1,199

**Dynaudio Acoustics AIR 6** (AIR Series) 2-way "Networkable" active Near field, 33Hz-22kHz; Bi-Amp: Internal; Cont. Power - 2 x 200w amplifiers; Acoustics - Outstanding precision, imaging & flexibility; Desc - Dual PWM amps, Esotec 1.1" Tweeter/6.5" Woofer, Networkable; Digital Dynamics: EQ, Delay, Presets \$7,350

**Dynaudio Acoustics BM15A** (BM Series) 2-way Fullrange active; near/midfield, 30Hz-21kHz; Bi-Amp: Internal; Cont. Power - 100w + 200w amplifiers; Acoustics - High SPL capacity w/ extended bass response.; Desc - Dual MOSFET amps, Esotec tweeter/9.0" Woofer, Advanced system management & protection \$6,850

**Dynaudio Acoustics BM6A** (BM Series) 2-way Fullrange active; Near field, 41Hz-21kHz; Bi-Amp: Internal; Cont. Power - 2 x 100w amplifiers; Acoustics - Superb blend of accuracy, high output & small size; Desc - Dual MOSFET amps, Esotec tweeter/6.5" Woofer, Extensive protect systems; HF limiter; HF&LF trims \$4,995

**Dynaudio Acoustics BX30A** Active subwoofer, 22Hz-80/95/120Hz; Bi-Amp: Dual balanced I/O's; Cont. Power - 130w amplifier module; Acoustics - Selectable LP & subsonic filters; Phase adjustment; Desc - MOSFET Amp: 12" Bass Driver w/- 4" Voice coil, Logic-controlled management & protect system \$5,650

**Emes Emes-Amber** (Modu-Mo Series) Subwoofer, 38Hz-200Hz; Bi-Amp: 2 x 100w amp/Internal Crossover; Cont. Power - 2 \* 160w; Desc - 2x 140w amplifiers, Variable phase 30-180 degrees \$1,999

**Emes Emes-Black** (Modu-Mo Series) 2-way; Near field, 43Hz-20kHz; Bi-Amp: 2 x 100w amp/Internal Crossover; Cont. Power - 2 x 120W; Desc - 2x 120w amplifiers/ matched drivers, Small size; High powered; Amazing imaging \$2,899

**Emes Emes-Pink** (Modu-Mo Series) 2-way; Near field, 58Hz-20kHz; Bi-Amp: 2 x 80w amp/Internal Crossover; Cont. Power - 2 x 80w LF/HF; Desc - 2x 80w amplifiers/ matched drivers, Coaxial drivers; High powered; Amazing imaging \$1,999

**Emes Emes-Violet** (Modu-Mo Series) 2-way; Near field, 48Hz-20kHz; Bi-Amp: 2 x 140w amp/Internal Crossover; Cont. Power - 120w LF/HF; Desc - 2x 120w amplifiers/ matched drivers, High powered; Amazing imaging \$4,399

**Genelec 1029A** 2-way; Near field; 5"/3/4" metal dome, 68Hz-20kHz (-3dB); Cont. Power - Peak SPL: 111dB; 1m; Acoustics - Crossover freq.:3.3 kHz; Desc - Shielded; Aluminium cabinet 247 x 151 x 191mm; 6kg, TEC award winner \$1,950

**Genelec 1030A** 2-way; Near field; 6.5"/3/4" metal dome, 52Hz-20kHz (-3dB); Cont. Power - Peak SPL:



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This is what the Sydney Morning Herald's 'The Guide' (Sept 16-22, 2002) said about **Legend Acoustics'** Joey 2 monitors: 'Cds that had been badly recorded ...revealed just where the original engineers had erred with microphone placement, or by adding electronic trickery. On well recorded discs, the sound produced by the Joey 2s was outstandingly good. Bass response was exceptional ...and across the midrange where it was precise and unfailingly accurate.' These monitors are also suitable for pro-studio environments because they are solidly constructed and fully shielded-and they are Australian made.

The Spatial One from **NewAudio** are the near and mid-field monitors that are creating new rules for sound editing rooms! Spatial One has the revolutionary diffuse tweeter that dominates a room's acoustics, which means that even a small untreated room in a large industrial complex can be turned into an editing suite with enough accuracy to mix the most complex of jobs. The Xenica model has two diffuse tweeters and two woofers, doubling the power and focusing the energy into the horizontal plane thus delivering more power at the listening position suitable for larger rooms. They are Australian made.

**POWERED MONITORS (continued)**

**Monitor (series) configuration; freq resp; Bi-Amp; Continuous Power rating; Acoustic features; Description; Price**

115dB/1m; Acoustics - Broadband system: 80w LF, 50w HF.; Desc - Magnetic shielding 312 x 200 x 240mm; 7.6kg, TEC award winner \$4,620

**Genelec 1031A** 2-way; Near field; 8"/1" metal dome, 47Hz-22kHz (-3dB); Cont. Power - Peak SPL: 120dB/1m; Acoustics - Crossover freq.: 2.2 kHz; 120w amp both; Desc - Magnetic shielding; 393 x 250 x 290mm; 12.7kg, Ideal for small spaces, OB vans, post- suites \$5,690

**Genelec 1032A** 2-way; Near field & main; 10"/1", 40Hz-22kHz (-3dB); Cont. Power - Peak SPL: 124dB/1m; Acoustics - High output & extended freq. resp.; Desc - Magnetic shielding; 495 x 320 x 290mm; 21.7kg, \$6,950

**Hafler TRM10** Subwoofer; 10" sub, 27Hz-110Hz; Cont. Power - 200w; Acoustics - 6th Order vented; Desc - Trans-ana, rear ported, Fullrange thru, adjust; Phase & x-over \$1,899

**Hafler TRM12** Subwoofer; 12" sub, 25Hz-110Hz; Cont. Power - 200w; Acoustics - 6th Order vented; Desc - Trans-ana, rear ported, Fullrange thru, adjust; Phase & x-over \$1,999

**Hafler TRM6** 2-way Near field; 6", 55Hz-21kHz; Cont. Power - 50w LF; 33w HF; Acoustics - Bass/treble shelving; Desc - Trans-nova, rear ported, Linkwitz Riley X-over; Exponential waveguide \$2,995

**Hafler TRM8** 2-way Near field; 8", 45Hz-21kHz; Cont. Power - 150w LF; 70w HF; Acoustics - Bass/treble shelving; Desc - Trans-nova, rear ported, Linkwitz Riley X-over; Exponential waveguide \$3,995

**HHB CIRCLE3A** (CIRCLE Series) 2-way Fullrange; Near field, 70Hz-20kHz; Bi-Amp: Dual internal; Cont. Power - 60w bass/30w tweeter (program); Acoustics - High quality sound reproduction; Desc - Injection moulded synthetic cone, Magnetically shielded \$1,999

**HHB CIRCLE5.1** (CIRCLE Series) 5.1 Fullrange and sub; Midfield, 33Hz-120Hz; Bi-Amp: Internal; Cont. Power - 160w sub/140w bass/70w tweeter (program); Acoustics - 12" Active sub. w/ 5 x CIRCLE5A satellites; Desc - Includes 5 channel active filtering, Magnetically shielded \$10,899

**HHB CIRCLE5A** (CIRCLE Series) 2-way Fullrange; Midfield, 48Hz-20kHz; Bi-Amp: Dual internal; Cont. Power - 140w bass/70w tweeter (program); Acoustics - Exceptionally accurate, highly detailed; Desc - Injection moulded synthetic cone, Magnetically shielded \$3,299

**JBL LSR12P** (LSR Series) Powered Sub; Midfield, 25Hz-110Hz; Cont. Power - 250w; Acoustics - 12" Neodymium woofer, 2" voice coil; Desc - Class A-B; (HxWxD): 635 x 394 x 305mm; 22.7kg, Sens: 96dB; Crossover: 80 Hz; Imp: 2Ω \$7,390

**JBL LSR25P** (LSR Series) 2-way; Near field, 70Hz-20kHz; Bi-Amp: Yes; Cont. Power - LF: 80w HF: 40w; Acoustics - 5.25" woof, 1" tweet, LF align; 80Hz H/Pass filter; Desc - (HxWxD): 269 x 173 x 241mm; 7.7kg, Crossover: 2.3kHz; LF 8Ω, HF 4Ω; VIA 0-26dB \$2,590

**JBL LSR28P** (LSR Series) 2-way; Midfield, 50Hz-20kHz; Bi-Amp: Yes; Cont. Power - LF: 250w HF: 120w; Acoustics - 8" woofer, differential drive, 1" tweeter; Desc - (HxWxD): 406 x 330 x 325mm; 20.5kg, Sens: 96dB; Crossover: 1.7kHz; Imp: LF/HF 2/4Ω \$3,295

**KRK V4** (V Series) 2-way; Direct field, 65Hz-20kHz; Bi-Amp: Bi-amplified; Cont. Power - RMS 30w LF/15w HF; Acoustics - 4" Woven Kevlar LF/1" Silk dome HF; Desc - Thermal O/L protection; MDF coated in Zolotone, Magnetic shielding; 1 year warranty \$1,998

**KRK V6** (V Series) 2-way; Direct field, 58Hz-22kHz; Bi-Amp: Bi-amplified; Cont. Power - RMS 60w LF/30w HF; Acoustics - 6" Polyvinyl LF/1" Silk dome HF; Desc - Thermal O/L protection; MDF coated in Zolotone, Magnetic shielding; 1 year warranty \$2,798

**KRK V8** (V Series) 2-way; Direct field, 47Hz-22kHz; Bi-Amp: Bi-amplified; Cont. Power - RMS 120w LF/60w HF; Acoustics - 8" Woven Kevlar LF/1" Silk dome; Desc - Thermal O/L protection; MDF coated in Zolotone, Magnetic shielding; 1 year warranty \$3,998

**KRK V88** (V Series) 2-way; Direct field, 39Hz-23kHz; Bi-Amp: Bi-amplified; Cont. Power - RMS 160w LF/60w HF; Acoustics - Dual 8" woven Kevlar LF/1" Polymer dome HF; Desc - Thermal O/L protection; MDF coated in Zolotone, Magnetic shielding; 1 year warranty \$4,998

**Mackie Design HR624** Active 2-way, 52Hz-20Hz +-1.5dB; Bi-Amp: Built-in active technology; Cont. Power - 140w program; Acoustics - 3-Position acoustic space switch; Desc - 2 FR Series amps; HF 40w; LF 100w, Linkwitz-Riley 24dB/octave crossover \$3,795

**Mackie Design HR824** Active 2-way, 39Hz-22kHz +-1.5 dB; Bi-Amp: Built-in active technology; Cont. Power - 250w program; Acoustics - 3-Position acoustic space switch; Desc - 2 FR Series amps; HF 100w; LF 150w, Linkwitz-Riley 24dB/octave crossover \$4,495

**Mackie Design HRS120** Active 400w Subwoofer, 21Hz-150Hz +-1.5dB; Bi-Amp: Built-in active technology; Cont. Power - 400w program; Acoustics - Servo loop woofer technology; Desc - 400w; 8 ? load, 12" RCF transducer; 12" Passive radiator \$4,495

**M-Audio SP-5B** 2-way Bi-amped; 5" LF & 3/4" silk dome; Studio Reference, 48Hz-22kHz; Bi-Amp: Yes; Cont. Power - 75w power; Acoustics - Sub-frequency port delivers LF under 30Hz; Desc - Polypropylene woofer & swivel-mounted tweeter, Backed by 75 watts of power, these monitors scream \$1,099

**Meyer HD-1 High Definition Audio Monitor** Active 2-way, 32Hz-22kHz; Cont. Power - LF 150w (burst) HF 75w (burst); Acoustics - +/- 1dB from 40Hz-20kHz; 120dB peak/1m; Desc - Complementary MOSFET; Class A/AB, Individually factory-aligned \$10,800

**Meyer X-10 High Resolution Linear Control Room Monitor** Active 2-way, 18Hz-20kHz; Cont. Power - LF 1200w (burst) HF 620w (burst); Acoustics - +/- 2dB from 23Hz-17kHz; 136dB peak/1m; Desc - Complementary MOSFET; Class AB/H, PSAC - Pressure Sensing Active Control From \$23,500

**Nagisa LA-10** Active 2-way; Near field; Acoustics - Accurate, low fatigue, near field monitor; Bal XLR input \$3,806



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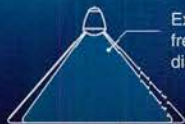
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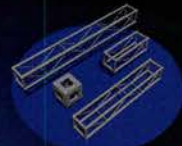
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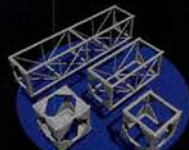
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**NHT Pro** offers a range of products which assure a consistent, accurate listening experience when monitoring; from the compact portable M-00 mini-monitor to the respected A-20 reference system, every NHTPro monitor offers balanced frequency response, high resolution, and sonic neutrality. Designed with high quality low-distortion electronics and practical, ergonomic controls for matching the monitors to the rooms in which you use them, NHT systems deliver trustworthy repeatable results in mixing, editing, and mastering work.

**Samson Resolv65** monitors sound full and balanced with an uncompromised transparent midrange, leaving room to accurately mix vocals, snare hits and reverb trails. Taking care of the low-end is the Resolv120a powered subwoofer, where a powerful 120 watt low frequency amplifier drives a heavy-duty 10" transducer; reproducing tones between 40-180 Hz.

**Tannoy Professional** has launched the first of a new generation of time-aligned, 3-way active studio monitors called **Ellipse 8**, and feature Tannoy Wideband Technology. Designed for high quality, accurate nearfield monitoring, the loudspeakers are aimed at music, broadcast and post-production facilities as well as AV and mobile recording applications. Housed in a striking elliptical cabinet, Tannoy's **Ellipse 8** loudspeaker combines 8" Dual Concentric LF and HF drivers with a SuperTweeter drive unit to produce a frequency response extending above 50kHz for monitoring of wideband programme material.

The **Sirocco Pro** is a unique integrated active pro-audio speaker system from **VideoLogic**. Using exclusively Audax cones, the bass/mid frequency drivers are 5.25" High Definition Aerogel (HDA), while the tweeters are Ferro-fluid cooled 25mm textile dome units with high energy neodymium magnets. The subwoofer is an 8" HDA drive unit, and all are enclosed in acoustically designed solid MDF cabinets. The crossover is at the pre-amp stage, eliminating signal loss normally associated when crossovers are located at speaker units. The amplifier is a high performance, fully active design with two independent amplifiers per satellite, plus two bridged amplifiers for the subwoofer. Frequency response 32 Hz - 22kHz.

## POWERED MONITORS

Monitor (series) configuration; freq resp; Bi-Amp; Continuous Power rating; Acoustic features; Description; Price

**NHT Pro A-20** 2-way Active system, 40Hz-20kHz; Bi-Amp: External 250w/Ch. amp (2RU); Cont. Power - Peak output: 117dB; Acoustics - Flagship model; Pristine reference; Desc - Fluid-cooled 1" tweeter; 6.5" woofer w/ cast frame, Ideal for recording, editing & mastering \$3,900

**NHT Pro M/S 5.1** 5.1 Active system, 27Hz-20kHz.; Bi-Amp: External: Each w/ own amp; Cont. Power - System: 1750w RMS; Peak 117dB; Acoustics - All components sonically matched & integrated; Desc - 2 Pairs A-20s; 1 Pair B-20 subs + C-20 centre, Used by leading pro-audio/post- facilities \$4,200

**NHT Pro M-00** 2-way Active; Near field or mono, 5.1, commercial, 80Hz-20kHz; Bi-Amp: Yes; Cont. Power - 111dB peak SPL/1m; Acoustics - Combines power, bass response & accuracy; Desc - 4.5" Paper; 1" Soft-dome; Cast metal cab.; Shielded, Flexible inputs; Sold individually for diff. uses \$750ea

**NHT Pro S-00** Active subwoofer; 8" woofer, 39Hz-110Hz; Bi-Amp: 125w amp.; Cont. Power - Peak output: 108 dB (60Hz); Desc - Compact; One-cubic-foot subwoofer; MDF, Tough powder-coat finish \$750

**Phonic P 28A** Active subwoofer, Flat: 30Hz-88kHz; Bi-Amp: Single amp; Cont. Power - 225w, 92dB SPL, 1W/1M; Acoustics - As P28; built-in 225w power amp; overload; Desc - Magnetically shielded, Phase alignment & bass roll-off \$1,350ea

**Phonic P 5A** Active 2-way, Flat: 70Hz-20kHz; Bi-Amp: Bi-amplified; Cont. Power - 100w, 87dB SPL, 1W/1M; Acoustics - As per P5; compensation circuitry; overload; Desc - Front bi-colour indicator (on/clip), XLR&1/4" jack; Magnetically shielded \$999

**Phonic P 6A** Active 2-way, Flat: 55Hz-20kHz; Bi-Amp: Bi-amplified; Cont. Power - 150w, 88dB SPL, 1W/1M; Acoustics - As per P6; compensation circuitry; overload; Desc - Front bi-colour indicator (on/clip), XLR&1/4" jack; Magnetically shielded \$1,099

**Phonic PPM 3.5** Monitor package: 2x3.5" & 1x5.25"; Cont. Power - 5w (satellite) 15w (subwoofer); Acoustics - 24dB/oct slope filter; 100Hz crossover; Desc -, PPM 4.8 available: 2x4" plus one 6.5" \$550

**Roland DS-30A** 2-way Active, 78Hz-20kHz; Bi-Amp: Internal; Cont. Power - 30w; Acoustics - 24bit Digital reference monitor; Desc - Ported bass reflex cabinet; 6.1kg, 24/96 coax/opt & balanced XLR/TRS analogue inputs \$1,390

**Roland DS-50A** 2-way Active, 68Hz-22kHz; Bi-Amp: Internal; Cont. Power - 50w; Acoustics - 24bit Digital reference monitor; Desc - Ported bass reflex cabinet; 8kg, 24/96 coax/opt & balanced XLR/TRS analogue inputs \$1,990

**Roland DS-90A** 2-way Active, 48Hz-20kHz; Bi-Amp: Internal; Cont. Power - 90w; Acoustics - 24bit Digital reference monitor; Desc - Ported bass reflex cabinet; 15kg, 24 bit coax/opt & balanced XLR/TRS analogue inputs \$3,190

**Samson Resolv120A** Active subwoofer, 40-180 Hz; Cont. Power - 120w; Acoustics - Powerful 120w LF subwoofer; Desc - Ported tuned cabinet, 10" driver; Active crossover; 120watts \$599

**Samson Resolv65A** 2-way Fullrange, (not available as yet); Cont. Power - 75w LF & 25w HF; Acoustics - High definition, accurate sound; Desc- Ported tuned cabinet, Dual power amp; 6.5" woofer, 1" titanium tweeter \$899

**Tannoy Ellipse 8** Studio monitoring, 40Hz-50kHz; Bi-Amp: Tri-amped: LF: 150w/HF: 150w/ST: 30w; Cont. Power - 150w; Acoustics - EQ & XLR balanced input; Natural sound; Desc - Unique cabinet shape; Laminated Birch, Dual concentric technology; Extended HF bandwidth \$6,485

>> **Tannoy Reveal Active** Studio monitoring, 62Hz-20kHz; Bi-Amp: Internal; Cont. Power - 100w; Acoustics - Detailed dynamic sound w/ wide, flat freq. resp.; Desc - Azure blue; High density particle board, Flat response monitors for professional studios \$2,150

**Tannoy Sub 15 5.1** Studio monitoring, 25Hz-500kHz; Cont. Power - 100w; Acoustics - Provides a complete solution for 5.1 monitoring; Desc - 6 channels of amplification & user switching, Amp powers all 4 reveals & 1 reveal X \$2,800

**Tannoy System 800A** Studio monitoring, 44Hz-20kHz; Bi-Amp: internal; Cont. Power - 180w; Acoustics - Unique cabinet for optimum acoustic performance; Desc - 2 x 90W amps & electronic crossovers, 8" Driver for extended bass/high monitoring levels \$4,820

**VideoLogic Sirocco Pro** As for Spirit above, 35 Hz-20kHz; Bi-Amp: Fully bi-amped & bi-wired; Cont. Power - 100w RMS; Acoustics - Delivers over 110dB SPL; Desc - Fully active amp w/ spike protection, Integrated 24 bit 96kHz DAC; 2 year warranty \$2,095

**VideoLogic Sirocco Spirit** Fully bi-amped w/ X'over in pre-amp, 45Hz-20kHz; Bi-Amp: Fully bi-amped & bi-wired; Cont. Power - 50w RMS; Acoustics - Accurate phase & frequency response; Desc - Pro-audio construction; Tuned MDF cabinets, \$599

**Yamaha MSP10** Powered bi-amped near/mid field, 40Hz-40kHz; Bi-Amp: Active; Cont. Power - 120+60w; Acoustics - 3-Position low & Hi EQ trim; Desc - Solid & magnetically shielded; 20kg, Bal. & unbal. inputs + "Waveguide" technology \$3,190

**Yamaha MSP3** Powered 2-way near field, 65Hz-22kHz; Cont. Power - 20w; Acoustics - Hi & Low EQ & 2 line inputs with sep. levels; Desc - Solid, compact & magnetically shielded; 4.4kg, Bal. & unbal. inputs + "Waveguide" technology \$790

<< **Yamaha MSP5** Powered bi-amped near field, 50Hz-40kHz; Cont Power - 40+27w; Acoustics - 7-Position EQ & 2 line inputs with sep. levels; Desc - Solid, compact & magnetically shielded; 7.5kg, Bal/unbal inputs + "Waveguide" technology \$1,390

**Yamaha SW10** Powered subwoofer, 25Hz-150Hz; Cont. Power - 180w; Acoustics - Variable LPF; Volume + phase switc; Desc - Solid & magnetically shielded; 26kg, Stereo balanced inputs & "thru" outputs \$1795ea

**Yorkville YSM-1iP** Active 2-way, 40Hz-20kHz; Bi-Amp: Bi-amp operation only; Cont. Power - Power: HF 30w; LF 85w; 115w total prog.; Acoustics - Environ. processor w/ 4 dip switches; Desc - Limiter on/off switch; Input trim (+9/-6 dB), Front mounted LED Indicators \$1,795



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John Raggett

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0418 884 427

## STUDIO NEWS

### Bush Traks Recording Studio

Latest Project - Bush Traks is changing hands, but it's business as usual with Dave Highest at the console.

### Crystal Grid Studio

New Equipment - Logic Control makes things faster, easier & more fun, LCD monitors take the strain off the eyes, Data projector makes movies big  
Latest Project - Currently working on multiple 5:1 soundtracks for George Greenough's latest film "Dolphin Glide" an amazing underwater adventure from the point of view of a dolphin. (post mastering in Hollywood).

### Megaphon Studios

New Equipment - New Pro Tools rig.  
Latest Project - As well as completing renovations and painting around the studio, renowned Sydney producer-engineer-programmer Phil McKellar has recently moved his Pro-Tools rig into the new production room at Megaphon. This production room was originally used as a third recording room, but has been renovated to facilitate Phil's set up and act as a secondary control room to the main recording room. We're delighted to have him around as a more permanent fixture about the studio. Phil's credits include Silverchair, The Cruel Sea, Grinspoon, and Spiderbait.

### Eargasm

A new music production facility has opened its doors in the heart of beautiful downtown Kings Cross. Owned and operated by Craig Porteils and Mark Beckhaus, Eargasm has only been open a couple of months but already they've produced and recorded the new album for Diesel (with the single Getta Kick (continued over)

## CHARTS



### Selwyn

#### Rich Girl

Produced by Paul Begaud for PJB Productions, Engineered by Paul Begaud and Tom Deeley at Sony Music Studios, Sydney. Mixed by Neil Baldock at Revolver Studios, Auckland. Mastered by Chris Gehringer at Sterling Sound, NYC.

NSW

ARTIST	PRODUCER	ENGINEER	SESSION
<b>A# Sharp</b> +61 2 9153 9988 Jeff Cripps (jeff@asharp.com.au) www.asharp.com.au			
D4	Jeff Cripps	Jeff Cripps	Soundtrack
Sharyn Lee	Jeff Cripps	Jeff Cripps	Album
<b>Post for Film and Television</b>			
The Crop	Jeff Cripps	Jeff Cripps	Movie Score
Garage Days	Jeff Cripps	Jeff Cripps	Movie Score
Up Close And Dangerous	Jeff Cripps	Jeff Cripps	Movie Score
<b>Bush Traks Recording Studio</b> +61 2 66891290 Dave Highest (dave@yumdigital.com) www.bushtraks.com			
Airconditioned multitrack digital studio			
Asia Hutton	B. Lee/D. Highest	Dave Highest	Album
Durga Babies	Turner/Tonkin/Highest	Dave Highest	Album
<b>Crystal Grid Studio</b> +61 2 6685 5690 Tone Wandaller (tonegrid@optusnet.com.au) creative beach front environment, loads of new & old synths & musicians. 96 track logic audio system. film soundtracks, artist albums, remixes.			
Charlie McMahon / Gondwana	Charlie & Tone	Tone	"Boneman" Album
Bharti	Bharti & Tone	Tone	"Beloved" Album
Jez	Jez & Tone	Tone	"Jez" Album
Cleis Pearce	Cleis & Tone	Tone	"Sweet Earth" Album
Dorje	Dorje & Tone	Tone	Meditation Technique Albums
<b>Post for Film and Television</b>			
Dolphin Glide	Tone	Tone	Score
Yoga For Surfing	Tone	Tone	Score
Gong	Daavid Allen	Tone	Lip Sync Overdubs For Live DVD
<b>Damien Gerard Sound Studios</b> +61 2 9555 1710 Marshall Cullen (dgss@optusnet.com.au) www.damiengerard.com 24 track with pro-tools, large live rooms. Red Stairs pro-tools facility with vocal booth ideal for voice over, mixing, mastering.			
Elephant Tracks	William Bowden		Mastering
Choirboys	Mark Gable	Russell Pilling	Album Tracking
Monstrous Blues	Marshall Cullen	Russell Pilling	Album
<b>Post for Film and Television</b>			
B.E.L.T	Leslie Mcfaddon	Kristian	6 Part Audio Book
<b>Eargasm</b> +61 2 9356 2844 Mark Beckhaus (info@eargasm.com.au) www.eargasm.com.au Full Pro Tools equipped. Specialising on in-house productions by producer/engineer Craig Porteils.			
Diesel	Craig Porteils	Craig Porteils	Album
David Campbell	Craig Porteils	Craig Porteils	Album
30 Odd Foot Of Grunts	Craig Porteils	Album Tracks	
Omc	Craig Porteils	Craig Porteils	Album Tracks
Hannah	Craig Porteils	Craig Porteils	Single
<b>Feral Studios</b> +61 2 6299 3224 Jon Robertson (replicate@austarmetro.com.au) 32 track recording and digital mastering			
Mr Fistar	Band	Jon Robertson	Demos
Kandi Doz It	Jon Robertson	Jon Robertson	Album
Marmamduke	Jon Robertson	Jon Robertson	E p
<b>Megaphon Studios</b> +61 2 9550 6576 Shane Fahey (megaphonstudios@bigpond.com) www.megaphon.com.au 2" 24 track analogue or digital recording, Pro Tools, great sounding rooms, beautiful views, pretty girls, relaxed environment.			
78 Saab	78 Saab	Tim Whitten	Album
Chris Abrahams And Melanie Oxley	Chris & Mel	Shane Fahey	Album
Matt Handley	Matt Handley	Dave Trump	E p
Big Heavy Stuff	Big Heavy Stuff	Wayne Connolly	Album
Durango	Durango	Steve Mcmillan	Album
<b>Milkbar Recording Studios</b> +61 2 9516 4559 David Sykes (info@milkbarstudios.tv) www.milkbarstudios.tv One stop shop for all your multiformat, surround sound, recording and mixing requirements			
Olivia Newton John	Charles Fisher	Tony Wall	Album
Midnight Oil	Alan Simone	Brent Clark	Compilation Album
Cinema	Dave Leslie/Band	Mick Seage	Single And Demos
Faker	Greg Wales	Greg Wales	Single
<b>Post for Film and Television</b>			
Sugar And Spice Kids (TV)	Sammy Kannis/Paul Rodger	Paul Rodger	Theme And Soundtrack
<b>Nutown Studios</b> +61 2 9516 3306 Greg Hopping (nutown@yahoo.com) Digital / Analogue, recording, production and programing suites.			
Souther Outpost	Sofie Loizou	Sofie Loizou	Single
Senani	Sofie Loizou	Sofie Loizou	Single
Kell	Greg Hopping	Greg Hopping	Album
<b>Shoestring Multimedia</b> +61 2 66832295 Paul Shaw (pshaw@lis.net.au) http://www.lis.net.au/~pshaw Budget multimedia production and audio recording studio situated near Lismore, Northern NSW. Hybrid analogue-ADAT-hard disk recording.			
Dennis Dryden	Paul Shaw	Paul Shaw	Demo Album
Black River Cattle Equipment Co	Paul Shaw	Paul Shaw	Audio For Web Site
<b>Studios 301</b> +61 2 9698 5888 Steve De Fina (steved@301.com.au) www.studios301.com.au Recording and mixing studios for all genres of music			
2bl (Band From Japan)	Rob Feaster	Rob Feaster	Album Tracking And Mastering
David Campbell	Mark Lizotte	Craig Portiels	Album Tracking And Mixing
A Long Way To The Top	Mark Opitz	Mark Opitz	5.1 Mixes
<b>Post for Film and Television</b>			
Night Of The Long Day	Richard Lush	Richard Lush	Film Score



## STUDIO NEWS

released but its still gotta be quite right. Its a total Record, Mix, Master and Produce job. Same goes for Insomniacs Dream the band has being in for about six months and the project is nearing completion with the final touches been added to mixes before mastering begins. Anyone interested in checking the studio out is more than welcome to book in for a look around.

### Studio 52 Recordings

New Equipment - Studio 52 has purchased four Alesis HD24 Hard Disk Recorders and also influenced the supply of two more units to Troy Horse studios in Sydney & Brisbane. We are now running these new recorders from Alesis (major replacement of previous ADAT recorder technology) in each of our three studios. In studio C we are running two units combined for 48 tracks. We are using the existing A/D converters supplied in the unit which are remarkably good (infact better than most) straight out of the box. They are amazingly simple to use: everyone should be using these as an alternative to any previous tape based format and should have them in tandem with any computer based system for back ups, transfers for an easy final mixing format rather than using something like a Sony 48 track recorder (incredibly cheaper option) and for easy transfer to other studios as they use removable drive caddies. They are incredibly easy to use and setup offering 24 in/out balanced TRS connections or lightpipe as standard. When it comes to tracking bands or lots of tracks simultaneously they are fantastic - no lag time, no computer crashes or lack of grunt and no issues with latency. Just arm all 24 tracks and hit record and they go until you hit stop - Easy. They sound great and take up about 1/50th of the space of your old 2" recorder.

### Toyland Recording Studio

New Equip - Studio projects VTB1 valve mic pre amp, Telefunken V72 pre amp

### Westforce Recording Studio's

New Equipment - Newest edition to the stuio was protools system and new outboard compressors.

Latest Project - Latest project is recording and mastering Giedi Prime,a great band that rocks and cant be pigeon holed..

### Pandamonium Records

New Equip - Mackie HR824 Monitors  
Latest Project - Pandamonium is a label specialising in indie/electronic/rock sounds and is distributed through MGM. The studio has become one of the most popular studios in North Queensland.

VIC

ARTIST	PRODUCER	ENGINEER	SESSION
<b>True Form Recording</b> +61 3 9391 0907	Neil Gray (trueform87@hotmail.com)	24 Track Digital,Classic Analogue	
Console and OutBoard,Est.15yrs.			
Soundscape	Dean/Band	Dean Fisher	Demos
The Go Set	Dean/Band	Dean Fisher	Demos
Sexual Chocolate	Neil/Band	Neil Gray	Demo
Saphire	Vinay Samuel	Neil Gray	Album

<b>Westforce Recording Studio's</b> +61 3 9391 1817	Renato Parcesepe (westforcerecords@hotmail.com)	24 track	
analogue and mastering suite with protools and outboard gear..			
Giedi Prime	Renato/Giede Prime	Renato	Album
Divided Soul	Renato/Divided Soul	Renato	Demo
King Delamare	Renato/Delamare	Renato	Demo
Akoonah	Renato/Akoonah	Renato	E.P
Undawait	Renato/Undawait	Renato	E.P

<b>Pandamonium Records</b> +61 7 4051 3386	Todd Macalpine (studio@pandamonium.com.au)	www.pandamonium.com.au	
Hard Disc based facility specialising in band recordings at reasonable rates. Great sounding large live room.			
Killer Bees	Bob Vidler/Todd Macalpine	Todd Macalpine	Album
Mains	Todd Macalpine	Todd Macalpine	Overdubs
The Unknown	Greg Anderson	Greg Anderson	Demo

<b>Select Sound/Coral Sea Studios</b> +61 7 4031 1760	J. Wexler (selectsound@austarnet.com.au)	Cairns' only acoustically	
designed studio, full digital and analogue recording with the most advanced gear. Award winning staff.			
Andrew Namok	Brett Tyrell	Nigel Pegrum	Album "One Generation"
Rubina Uimiia	Win Television	Nigel Pegrum	Jingle

<b>Taramalin Sound</b> +61 7 3208 9736	Allan Lahey (allan@taramalin.com.au)	www.taramalin.com.au	32 track DA98
16 track analogue tape Tascam, MSR 16 Pro Tools 001, Pro tools AM III, 40 chanelTascam M5000 inline			
The Awaking Life	A Lahey	A Lahey	E p
Chisholm College	A Lahey	A Lahey	E p
Gerianne Rudd	Gerianr Rudd	A Lahey	Album
Ben Kerswell Project	Benkerswell	A Lahey	E p
Gordon Mc Dowell	Everyone	D Olsen	Album

### Post for Film and Television

Jennifers Story	A Lahey	A Lahey	Video Clip
The Awaking Life	A Lahey	A Lahey	Video Clip

<b>Disk-Edits Pty Ltd</b> +61 8 8340 1377	Carlie (sales@disk-edits.com.au)	disk-edits.com.au	Audio Mastering & Post
Scala 2002 Compilation	Various Artist	Peter Kolomitsev	Album Mastering/Cd Manufacturing
Delta - Paperweight	Delta	Peter Kolomitsev	Mastering For Vinyl
Brillig - Nervous Tissue	Brillig	Neville Clark	Album Mastering/Cd
Manufacturing			
Eric Bogle	Eric Bogle	Neville Clark	Album Mastering
Tamarisque	Tamarisque	Neville Clark	Album Mastering/Cd Manuf.

### Post for Film and Television

Blowdry	Oasis DVD	Peter Kolomitsev	DVD Audio Preparation
Liberty Stands Still	Oasis DVD	Peter Kolomitsev	DVD Audio Preparation
Lantana(Italian Release)	Oasis DVD	Neville Clark	DVD Audio Preparation
Critical Mass	Oasis DVD	Peter Kolomitsev	DVD Audio Preparation
Chasing Holden	Oasis DVD	Peter Kolomitsev	DVD Audio Preparation

**Blaam Studios** +61 8 9371 5447 Ben Chase (blaam@blaam.com) www.blaam.com Fully digital facility with classic analog interfaces. Thousands of sounds and processes. Production and mixing to broadcast level.

Samantha Jay	Ben Chase	Ben Chase	Preproduction/Forthcoming Release
Spencer Tracy	Ben Chase		Beats And Vocal Editing
Paul Black	Ben Chase	Ben Chase	Programming And Arrangements

### Post for Film and Television

Gifted Thumbs	Peter Templeman	Ben Chase	Composition & Addit. Sound Design
Abandon	Julian Angus	Ben Chase	Composition & Addit. Sound Design

**Pocket Universe** +61 8 9272 2118 Erik Kowarski (erik@perthwa.com) pocketuniverse.perthwa.com Friendly, low-stress recording room (trio max.) with high end mic's and preamps. Pro Tools since 1995. Specialising in acoustic/ folk.

Brendan Woods "Cashman's Diary"	Erik Kowarski	Erik Kowarski	Album
Sean Roche "Thank You For The Days"	Sean Roche	Erik Kowarski	Album
Foster's Best- Aust. Pub Songs Vol. 2	Erik Kowarski	Erik Kowarski	Album
Kilkenny's Best- Irish Pub Songs	Erik Kowarski	Erik Kowarski	Album
Mort Hansen- Abodijeri	Erik Kowarski	Erik Kowarski	Album

**Satellite Recording Studio** +61 8 9470 4003 Darren Halifax (darren@satelliterecording.com) www.satelliterecording.com Acoustically purpose built recording facility. Pro Tools.

Riverview Church	Andrew Bolt	Darren Halifax	TV Show.
Michele Roget	Alfredo Mallabello	Darren Halifax	Album
Explosive Jazz	Fran Brereton	Darren Halifax	Sound For Stage Show
The Dave Mann Collective	Dave Mann	Darren Halifax	Album
Judy Templeman	Darren Halifax	Darren Halifax	Album

<b>The Soniclab</b> +61 8 9375 3902	Mark Whitehouse (info@procopy.com.au)	www.procopy.com.au	Sonic Solutions Audio
Mastering Facility, DVD Authoring & Video Edit Suite			
John Septimus Roe	Jangoo Chapkana	Mark Whitehouse	Live Album Record/Master
Waso	Ken Walther	Mark Whitehouse	Lotto Soundtrack

# TRACKING GUIDE

ARTIST	PRODUCER	ENGINEER	SESSION
Craig Turnbull Post for Film and Television	Mark Whitehouse	Mark Whitehouse	Cd Set Mastering
Scittech Virtual Sync. Perth College - Music Concert	Mark Sadler Eva Bett Xuyen Do	Liam Collins Xuyen Do Video Post	DVD Authoring Video Post

Witzend Studio's +61 8 9336 1888 Alan Dawson (witzend@highway1.com.au) 16 Trk Analog + 24 Trk Digital, automated console.			
Rotunda	Martin Gambe	Alan Dawson	Album
Bayou Brothers	Alan Dawson	Alan Dawson	Album
King Wasabi	Martin Moon	Alan Dawson	Album
Yvonne Kenny	Alan Dawson	Alan Dawson	Mastering
Sharon Bailly	Sharon Bailly	Alan Dawson	Album

WA

## STUDIO NEWS

### Taramalin Sound

**New Equipment** - A new microphonelead and a second hand monitor for video editing. Funny guys? Latest Project - Taramalin Sound now produce video clips. And what a lot of fun it is.

### Blaam Studios

**New Equipment** - Lucid GenX-96 - house digital word clock master. Happy as Larry. G4 DP 800. OSX rocks  
**Latest Project** - Short film "Gifted Thumbs" has already been getting great reactions from the local film industry. Presenting a perfect match between music and vision. Look out for it.

### Pocket Universe

**New Equipment** - Avalon AD 2022 dual channel Class A mic. preamp  
**Latest Project** - CD's underway: Margaret & Geoff Morgan (Australian Folk), Dave Ralph (Celtic Fiddle), Bread & Purposes/Barbara Lipple (companion to poetry book release).

### The Soniclab

**New Equipment** - AVID Video Editing system



## Kool Skools 40+ albums a year!

The project is coordinated nationally by Studio 52 Recordings in Melbourne. Currently three other studios are sub-contracted to deliver the project in other states, these include Fat Trax studios in Adelaide, Troy Horse in Alexandria, Sydney and Troy Horse's new studio in Shaunclyffe, Brisbane.

Each school gets 3 days in the studio to record a full

Forty school albums have been recorded this year as part of a major youth music project called Kool Skools.

album of material. This is a pretty tight schedule but to aid the process all the amps, keyboards and drum kits are supplied so no time is lost with setup. All the music has to be contemporary and at least 50% must be original by the students. With several hundred young bands recorded and encouraged each year, it is natural that the project is starting to have a bit of a spin off into the music industry and some of the acts are being discovered and picked up by the major record companies.

### Any Studios looking for work each year?

Studio 52 is keen to find new studios who can open the project in Perth, the NT, Canberra and Tasmania over the next 2yrs. A new studio in Adelaide is also needed to take over the project in 2003. Studios who are interested should contact the national coordinator, Paul Higgins at Studio 52 by calling 03-9417-7707 or emailing him at paul@studio52.com.au. More information is also available at [www.koolskools.com.au](http://www.koolskools.com.au)

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This month's market report looks specifically at lighting used by the entertainment industry for "Outdoor" applications. Some of these devices can be used for architectural installations, and some are temporary.

Where possible, the IP rating of the device is included so you can see just how 'weatherproof' the item is. On Page 64, we have printed a description of what the IP Rating means.

### Outdoor Lighting - No DMX Control

**Brand Item; Intended Purpose; Description; Accessories; Other Features; IP Rating (if applicable); Lamp; Price**

>> **Clay Paky Architectural VIP 150 PFC** Image, Gobo & Texture Projection; Description - Compact image projector; Acc - Extensive range; Extremely versatile projection system; IP20/ IP44 with Rainshield; Lamp - HQI-T 150; 200w \$1,549 incl lamp

**Clay Paky Architectural VIP 300** Image, Gobo & Texture Projection; Description - Compact image projector; Acc - Extensive range; Extremely versatile projection system; IP20/ IP44 with Rainshield; Lamp - HTI300w/DEL; 800w \$1,629 incl lamp

**Clay Paky Architectural VIP DIA** Transparency, Image, Gobo & Texture Projection; Description - Compact image projector; Acc - Extensive range; Moving, rotating & changing transparencies; IP20/ IP44 with Rainshield; Lamp - HTI300w/DEL; 800w \$1,899 incl lamp



**Flying Planet Balloon 1.8m** Helium filled lighting balloon for glare free outdoor lighting; Description - Compacts to less than 30x30x30cm for transport; Acc - 2x800w halogen lamps (optional MSD250); Includes 10m of tie down rope and repair kit; IP66; Lamp - P2/20; 7A \$4,276

**Flying Planet Balloon 2.5m** Helium filled lighting balloon for glare free outdoor lighting; Description - Compacts to less than 30x30x30cm for transport; Acc - 3x800w halogen or 1 x 575w MSR options; Includes 10m of tie down rope and repair kit; IP66; Lamp - P2/20; 10A \$7,146

**Flying Planet Balloon 2m** Helium filled lighting balloon for glare free outdoor lighting; Description - 2m diameter when inflated.; Acc - 3x800w halogen or 1 x 575w MSR options; Includes 10m of tie down rope and repair kit; IP66; Lamp - P2/20; 10A \$5,710

**Flying Planet Balloon 3m** Helium filled lighting balloon for glare free outdoor lighting; Description - 3m diameter when inflated.; Acc - 1500w strobe lamp; Includes 10m of tie down rope and repair kit; IP66; Lamp - N/A; 8A \$13,340

>> **Kupo Architectural Exterior CDM Par** Most outdoor installed & production applications; Description - Ultra compact die-cast aluminium housing; Acc - Barndoors; Colour frame supplied; IP 55; Lamp - CDM-TP 150; 150 w \$899 incl lamp



<< **Kupo Architectural Exterior Par 64** Most outdoor installed & production applications; Description - Ultra compact die-cast aluminium housing; Acc - Barndoors; Colour frame supplied; IP 55; Lamp - any Par 64; 1000 w \$449



**Kupo Architectural Exterior Par 64 - with lamp rotation** Most outdoor installed & production applications; Description - Ultra compact die-cast aluminium housing; Acc - Barndoors; Colour frame supplied; IP 55; Lamp - any Par 64; 1000 w \$499

**Space Cannon BAT150** Compact outdoor architectural spot/flood light (150/250/400w); Description - Stylish diecast aluminium housing 336 x 300 x 420mm, 13kg; Acc - Uses interchangeable lens for beam angle from 5 to 80 degrees; No IR or UV transmission, convection cooled, 8000hr lamp life; IP65; Lamp - CDM150T 150w/830; 1A \$1,748

**Space Cannon Focus 1200 XS** Outdoor architectural spot/flood light with up to 200m range; Description - Diecast aluminium housing, 450x440x465mm, 30kg; Acc - Uses interchangeable lens for beam angle from 5 to 80 degrees; IP55; Lamp - MSR/HSR 1200w; 8A \$3,282

**Space Cannon HeliGarden** Garden lighting column with side and top light emission; Description - Column 1.2m tall x 30cm diameter, optional reflector adds 20cm; Acc - Colour filters in White, Green, Blue, Magenta, Orange & Violet; Flicker free ballast, E27 lamp holder, 10,000 hr lamp life; IP65; Lamp - HQI-T 150; 1A T.B.A.

**Space Cannon NF4000** Large Xenon outdoor architectural spot/flood light (1000-

Brand	Distributor	Phone	Web	No DMX	Acc
Clay Paky Architectural	Show Technology Australia Pty Ltd	+61 2 9748 1122	www.showtech.com.au	3	3 2
Coemar	Coemar De Sisti Australia Pty Ltd	+61 3 9467 8666	www.cdaust.com.au	0	3 0
Con'Dome	Coemar De Sisti Australia Pty Ltd	+61 3 9467 8666	www.cdaust.com.au	0	3 18
Flying Planet	Coemar De Sisti Australia Pty Ltd	+61 3 9467 8666	www.cdaust.com.au	10	3 0
Griven IP65	ULA	1800 648 111	www.ula.com.au	0	12 0
Griven Outdoor	ULA	1800 648 111	www.ula.com.au	0	3 0
High End Systems	ULA	1800 648 111	www.ula.com.au	0	2 0
Kupo Architectural	Show Technology Australia Pty Ltd	+61 2 9748 1122	www.showtech.com.au	3	0 0
Martin Architectural	Show Technology Australia Pty Ltd	+61 2 9748 1122	www.showtech.com.au	0	4 3
Robe Show Lighting	ULA	1800 648 111	www.ula.com.au	0	1 0
SGM	ULA	1800 648 111	www.ula.com.au	0	0 1
Space Cannon	Coemar De Sisti Australia Pty Ltd	+61 3 9467 8666	www.cdaust.com.au	12	16 0
Studio Due Architectural	Show Technology Australia Pty Ltd	+61 2 9748 1122	www.showtech.com.au	0	3 0
TechArt	Coemar De Sisti Australia Pty Ltd	+61 3 9467 8666	www.cdaust.com.au	0	9 0

# the Pacific just got a whole lot brighter

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# OUTDOOR LIGHTING



Clay Paky Architectural VIP

## Outdoor Lighting - With DMX Control

**Brand Item; Intended Purpose; Description; Accessories; Other Features; IP Rating (if applicable); Lamp; Price**  
 7000w); Description - Stylish ABS plastic casing on aluminium chassis, 1200x350x350mm, 22kg; Acc - Includes electronic dimming and strobe functions; Capable of lighting high rise buildings (up to 40 storeys); IP55; Lamp - 4000w Xenon; 16A from \$27,775

## Outdoor Lighting - With DMX Control

**Clay Paky Architectural CP Colour 150E** Exterior Spot / wash; Description - Compact CMY wash luminaire; Acc - Lens & frosts 22 - 90 deg; Symmetric & assymetric distribution; DMX Ch - 4, to control - Colour, Intensity, Remote strike; IP65; Lamp - CDM-SA/T 150; 500VA \$3,999 incl lamp

**>> Clay Paky Architectural CP Colour 575** Exterior Spot / wash; Description - CMY Wash luminaire; Acc - Lens & frosts 22 - 90 deg; Symmetric & assymetric distribution; DMX Ch - 4, to control - Colour, Intensity, Remote strike; IP65; Lamp - HDS575; 1900VA \$5,999 incl lamp

**Clay Paky Architectural VIP 1200** Hi powered Image, Gobo & Texture Projection; Acc - DMX Controlled Gobo Holder, Rotator & Changer, Colour Changer, Dimmer, Shutter, Iris, Prism; DMX Ch - 3, to control - All; IP20/IP44 with outdoor cover; Lamp - HMI1200w/GS; 1500VA \$3,699

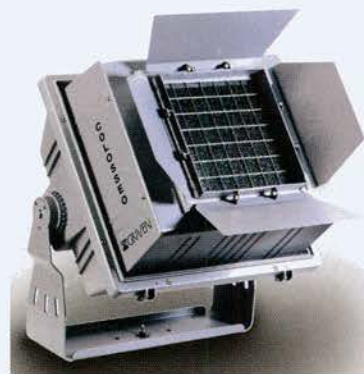
**Coemar Marina** Outdoor colour changing in salt water environments (eg. End of a pier); Description - Brushed s/ steel finish, 1200x800x900mm, 114kg; Acc - Four interchangeable diffusion filters for various beam angles; Full stainless steel outer housing to AISI-316 standard; DMX Ch - 5, to control - CMY colour mix + dimmer + Lamp On/Off; IP55; Lamp - 2 x MSD/HSD 1200w; 15A \$25,956



**Coemar Panorama Cyc 250** Compact, low cost outdoor colour changer with full CMY colour mix; Description - Stylish design with outer rubberised shell, 570x325x225mm, 19kg; Acc - Includes 4 interchangeable 'par' lenses to adjust beam angle; Optional DR1 (display replicator) for remote configuration; DMX Ch - 5, to control - CMY colour mix + dimmer + show playback + Lamp On/Off; IP44; Lamp - MSD/HSD 250w; 2A \$4,396

**Coemar Panorama Cyc 250 C** Compact, low cost outdoor colour changer; Description - Stylish design with outer rubberised shell, 570x325x225mm, 17.5kg; Acc - Includes 4 interchangeable 'par' lenses to adjust beam angle; Optional DR1 (display replicator) for remote configuration; DMX Ch - 2, to control - Colour wheel + show playback + Lamp On/Off; IP44; Lamp - MSD/HSD 250w; 2A \$3,120

**Coemar Panorama Power** High output, super efficient colour changing outdoor floodlight; Description - Anodised Aluminium casing, 1150x850x550mm, 47.5kg; Acc - Four interchangeable diffusion filters for various beam angles + barn-doors; TLT (twin lamp technology) allows Hi/Lo power mode & increased lamp life; DMX Ch - 5, to control - CMY colour mix - dimmer + Lamp On/Off; IP44; Lamp - 2 x MSD/HSD 575w; 8A \$12,496



**<< Griven IP65 Colesseo 1000** Massive 62deg beam angle, 1000W power for the ultimate coverage; Description - ; Acc - Optional wireless DMX; Price includes 6000hr lamp; DMX Ch - 3, to control - CMY, remote lamp; 65; Lamp - HQI1000; 6amps \$10,500

**Griven IP65 Pantheon 400** 58deg, 400W 6000hr lamp; Description - ; Acc - Optional wireless; Price includes 6000hr lamp; DMX Ch - 3, to control - CMY, remote lamp; 65; Lamp - HQI400; 2.5amps \$7,100

**Griven IP65 Risalto 150** 42deg beam for wide coverage in short throw applications; Description - ; Acc - optional narrow lens (19deg), Optional wireless DMX; Price includes 9000 hr lamp; DMX Ch - 1, to control - 8 dichroic colours; 65; Lamp - CDM150; .8amps \$2,600

**Griven IP65 Vesuvio 250** 58deg beam angle, small footprint high output projector; Description - ; Acc - Optional lens (17, 23, 68deg), Optional Wireless DMX; Price includes 6000hr lamp; DMX Ch - 3, to control - CMY, remote lamp; 65; Lamp - HQI250; 1.7amps \$6,400

**Griven Outdoor Kaliedo 575** Exterior Wash Light; Description - multiple units can be linked master/ slave; Acc - manual, pre-programmed or DMX control; stand-by function on black-out for lamp life extension and built in power saving system (33% reduction); DMX Ch - 5, to control - CMY, Shutter, Remote Lamp; 44; Lamp - MSD575; 4amps \$5,800

**Griven Outdoor Kolorado 1800** Exterior Wash Light; Description - multiple units can be linked master/

**Distributors were invited to write some additional material to support their brands. This is what they had to say:**

**Clay Paky Architectural**  
 VIP are the most widely used projectors in the market today. Clay Paky precision optics & image clarity, the best prices and an extensive dealer network Australia - wide make this product number one for installation and production applications of image, logo, graphic messaging and texture projection.

**Coemar**  
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**Con'Dome**  
 Con'Dome were the original inventors of the inflatable weatherproof dome. They can be used to protect conventional and intelligent moving lights, as well as speakers, data projectors and any other electronic equipment.

slave; Acc - manual, pre-programmed or DMX control; stand-by function on black-out for lamp life extension and built in power saving system (33% reduction);; DMX Ch - 5, to control - CMY, Shutter, Remote Lamp; 44; Lamp - MHD1800; 9amps \$9,000

**Griven Outdoor Kolorado 2500** Exterior Wash Light; Description - multiple units can be linked master/slave; Acc - manual, pre-programmed or DMX control; stand-by function on black-out for lamp life extension and built in power saving system (33% reduction);; DMX Ch - 5, to control - CMY, Shutter, Remote Lamp; 44; Lamp - HMD2500; 15amps \$11,200



<< **Griven Outdoor Kolorstream 2500** Exterior Wash Light long throw applications; Description - 12-38deg electronic control of beam angle; Acc - manual, pre-programmed or DMX control; stand-by function on black-out for lamp life extension and built in power saving system (33% reduction);; DMX Ch - 6, to control - CMY, Beam Control Shutter, Remote Lamp; 44; Lamp - HMI2500; 15amps \$11,990

**High End Systems EC-2 150** Exterior wash light, 22-29deg beam angle; Description - DMX or stand-a-lone operation (upto 32 programmes on board); Acc - Optional lens (18-25deg & 28-35deg); Fixture talkback as standard; DMX Ch - 8, to control - CMY, remote lamp, shutter; 66; Lamp - CDM150SA/T; 1.1amps \$-

>> **High End Systems EC-2 250** Exterior wash light, 22-29deg beam angle; Description - DMX or stand-a-lone operation (upto 32 programmes on board); Acc - Optional lens (18-25deg & 28-35deg); Fixture talkback as standard; DMX Ch - 8, to control - CMY, remote lamp, shutter; 66; Lamp - MSD250/2; 1.6amps \$-



**Martin Architectural CMY Fibresource**

Unique outdoor rate CMY colour mixing fibre optic light source; Description - ; Integral Real time clock & scene storage; DMX Ch - 7, to control - Colour mixing, intensity, lamp strike; IP 44; Lamp - CDM-SA/R 150; 150 \$2,995

<< **Martin Architectural Exterior 200** Exterior short throw wash luminaire; Description - Stylish, extruded aluminium design; Acc - Barndoor & snoot system, lenses 70,36,18 & 90 x 70 deg; Integral photo electric cell, real time clock & scene storage; DMX Ch - 5, to control - Colour mixing, intensity, lamp strike; IP65; Lamp - CDM-SA/T 150; 150 \$4,999

**Martin Architectural Exterior 600** High output & long throw wash luminaire; Description - Stylish, extruded aluminium design; Acc - Barndoor & snoot system, lenses 22-38, 18-25, 65 deg; Integral photo



Martin Architectural CMY Fibresource

**Flying Planet**

Flying Planet Helium lighting balloons are available for purchase, rental or leasing. Ideal for parties, road and construction work, rescue and a myriad of other uses

**Griven IP65**

The IP65 Series is the first complete range of exterior wash lights all certified to IP65, attractively finished in designer housings. All products in the range had built in programmes on board as well as DMX. A major feature is the use of 6000 hour lamps throughout, as is the option of wireless DMX

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## What the IP Rating means

### First Number:

#### Protection against solid objects

- 1 - Objects larger than 50 mm cannot get in.
- 2 - Objects larger than 12 mm cannot get in.
- 3 - Objects larger than 2.5 mm cannot get in.
- 4 - Objects larger than 1 mm cannot get in.
- 5 - Protected against dust but small amounts of dust can get in (dust resistant).
- 6 - Totally dust proof.

### Second number:

#### Protection from moisture

- 1 - Vertically falling drops of water cannot get in
- 2 - Water sprayed from up to 15° from vertical cannot get in.
- 3 - Water sprayed from up to 60° from vertical cannot get in.
- 4 - Water sprayed from any direction cannot get in (limited ingress permitted).
- 5 - Low pressure water jets from any direction cannot get in (limited ingress permitted).
- 6 - High pressure water jets from any direction cannot get in (limited ingress permitted).
- 7 - Suitable for immersion in up to 1m of water
- 8 - Suitable for prolonged immersion under pressure.

### Griven Outdoor

The Griven Outdoor Series of exterior washlights is unique in its depth and coverage - ranging from 150W Metal Halide to 4000W Xenon. Well respected, the products have been used extensively in Australia including for lighting of Sydney during the 2000 Olympics and Brisbane City for the Goodwill Games

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### Robe Show Lighting

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### Space Cannon

Space Cannon are without doubt the most popular Xenon searchlights in Australia. With over 120 units in rental companies alone, they are used on productions from the Sydney 2000 Olympics, down to local town fairs.

### Outdoor Lighting - With DMX Control

**Brand Item; Intended Purpose; Description; Accessories; Other Features; IP Rating (if applicable); Lamp; Price**

electric cell, real time clock & scene storage; DMX Ch - 9, to control - Colour mixing, intensity, lamp strike, zoom, spread; IP65; Lamp - HSD 575; 600 \$12,899

**Martin Architectural Exterior 600 Compact** High output & long throw wash luminaire; Description - Stylish, extruded aluminium design; Acc - Barndoor & snoot system, lenses 30,41 & 63 deg; Integral photo electric cell, real time clock & scene storage; DMX Ch - 5, to control - Colour mixing, intensity, lamp strike; IP65; Lamp - HSD 575; 600 \$9,499



<< **Robe Show Lighting Ecolor 250 XT** ; Description - Zoom 8-22deg Fresnel lens, convection cooled; Program via Infrared remote control (supplied) for DMX or standalone operation; DMX Ch - 6, to control - CMY, Remote Lamp, Dimmer/Shutter, Macros, Motor Speed; 67; Lamp - MSD250/2; 3.15amps \$5,100

**Space Cannon CAT150** Compact outdoor architectural spot/flood light with colour mix; Description - Stylish diecast aluminium housing 336 x 300 x 420mm, 13kg; Acc - Uses interchangeable lens for beam angle from 5 to 80 degrees; No IR or UV transmission, convection cooled, 8000hr lamp life; DMX Ch - 3, to control - CMY colour mix + dimmer; IP65; Lamp - CDM150T 150w/830; 1A \$6,475

**Space Cannon Easy 2000** Pan/Tilt searchlight with full DMX control; Description - Stylish ABS plastic casing on aluminium chassis, 1200x350x350mm, 22kg; Acc - Includes electronic dimming and strobe functions; Internal computer for stand alone and sync'd operation; DMX Ch - 8, to control - 16bit Pan/Tilt, dimmer, strobe, delay, sync, reset; IP55; Lamp - 2000w Xenon; 6A \$20,496

**Space Cannon Focus E** Medium sized outdoor architectural spot/flood light with colour mix; Description - Diecast aluminium housing, 450x440x465mm, 30kg; Acc - Uses interchangeable lens for beam angle from 5 to 80 degrees; Optional magnetic or electronic flicker free ballasts; DMX Ch - 6, to control - CMY colour mix, dimmer, sync, reset; IP65; Lamp - MSR575/700/1200w; 8A max from \$10,100

**Space Cannon IREOS Pro VHT 7000** Pan/Tilt CMY searchlight with full DMX control; Description - Stylish ABS plastic casing on aluminium chassis, 1600x650x750mm, 45kg; Acc - Full CMY colour mix, electronic dimming and strobe functions; Remote focus, zoom, flicker free 1 or 3 phase PSU; DMX Ch - 12, to control - CMY, Zoom, Focus, dimmer, strobe, boost, delay, sync; IP55; Lamp - 700w Xenon; 20A \$95,826

**Studio Due Architectural City Beam** High output narrow angle wash luminaire; Description - ; Acc - Diffusion Filter; 15-20 or 8-11 deg; DMX Ch - 7, to control - Colour mix, intensity, motor speed, beam angle & lamp strike; IP54; Lamp - 1200/1800 HSR; 1600/2000w \$7,999/TBA

**Studio Due Architectural City Colour** High output wide angle wash luminaire; Description - ; Acc - Barndoors; interchangeable reflectors; DMX Ch - 7, to control - Colour mix, intensity, motor speed & lamp strike; IP54; Lamp - 1800/2500HMD; 2000/3000w \$8,399/ 8,999

**Studio Due Architectural Mini City** Narrow angle CMY wash luminaire; Description - ; interchangeable reflectors 15 or 28 deg; DMX Ch - 7, to control - Colour mix, intensity, motor speed; IP 55; Lamp - CDM-SA/T 150; 1.1A \$2,999 incl lamp

>> **Studio Due Architectural MiniCity 250** Narrow angle CMY wash luminaire; Description - ; Remotely variable beam angle 15 -20 deg; DMX Ch - 6, to control - Colour mix intensity, motor speed, beam angle & lamp strike; IP66; Lamp - HSD 250; 350VA \$3,999 incl lamp

**TechArt ColourLED module** Potted module suitable for installation into a variety of existing housings; Description - Compact dimensions (75 x 18mm), less than 300g weight.; Acc - DMX controlled PSU with RGB colour mix control; Full RGB colour mix, very low power, no heat. 100,000 hr lamp life; DMX Ch - 3, to control - R/G/B intensity; IP66; Lamp - N/A; 20 watts \$750

**TechArt LinearLED** Linear strip LED colour changer for walls, coves and ledges; Description - 1000 x 30mm tube with clear perspex cover, 2kg; Acc - DMX controlled PSU with RGB colour mix control (Max 15 LinearLED modules); Full RGB colour mix, very low power, no heat. 100,000 hr lamp life; DMX Ch - 3, to control - R/G/B intensity; IP66; Lamp - N/A; 40 watts \$1,350

**TechArt MICA LED inground** Inground Decorative Uplighter; Description - Inground housing with stainless steel lens frame, 150mm frosted front glass; Acc - DMX controlled PSU with RGB colour mix control; Full RGB colour mix, very low power, no heat. 100,000 hr lamp life; DMX Ch - 3, to control - R/G/B intensity; IP68; Lamp - N/A; 20 watts \$1,400

**TechArt ParLED** Wall mounted outdoor flood/spot light; Description - Stylish aluminium diecast Par



housing, 140x80x80mm, 1.8kg; Acc - 4 interchangeable Par lenses for varying beam angles; Full RGB colour mix, very low power, no heat. 100,000 hr lamp life; DMX Ch - 3, to control - R/G/B intensity; IP66; Lamp - N/A; 20 watts \$950

**Outdoor Lighting Accessories**

**Brand Item; Intended Purpose; Description; Other Features; IP Rating (if applicable); Price**

**Clay Paky Architectural Outdoor Covering VIP 1200** Protection of VIP 1200; Description - Fits to exterior of projector; IP44 \$649

**Clay Paky Architectural Rainshield VIP300/DIA/150** Protection of VIP300/DIA/150; Description - Fits to pivot point of projectors; Allows in situ focus & accessory adjustment; IP 23 \$349

**Con'Dome Condome 70cm** Housing for 575/700w moving lights to convert to outdoor usage; Description - ABS plastic moulded 70cm diameter base with inflatable clear cover; Cover heights vary from 40cm to 1.6m; IP55 from \$2300

**Con'Dome Flydome 50cm** Housing for 250/400w moving lights to convert to outdoor usage; Description - Flightcase mounted 50cm diameter base with inflatable clear cover; Fan interlock turns off fixture if fan power fails; IP55 from \$3300

**Con'Dome Flydome 90cm** Housing for 1200w moving lights to convert to outdoor usage; Description - Flightcase mounted 90cm diameter base with inflatable clear cover; Unit packs down to less than 25cm for transport; IP55 from \$5500

**Con'Dome Upside Downdome** Hanging housing for moving lights to convert to outdoor usage; Description - ABS plastic moulded 76cm diameter base with inflatable clear cover; Various hanging clamp arrangements to suit 50mm pipe and trussing; IP55 from \$3600

**<< Martin Architectural King Dome 1600mm** Outdoor production usage of moving yoke luminaires; Description - ABS Base & PVC envelope; IP 44 \$3,098

**Martin Architectural King Dome 800mm** Outdoor production usage of moving yoke luminaires; Description - ABS Base & PVC envelope; IP 44 \$2,788

**Martin Architectural MAC Dome** Outdoor installation & production usage of moving mirror & yoke luminaires; Description - Steel & ABS construction; IP 44 \$3,999

**SGM Light Dome** Exterior dome housing for moving light; Description - Heat resistant polycarbonate dome with ABS body; \$5,300



Clay Paky Architectural Rainshield VIP300/DIA/150

**Studio Due Architectural**  
MiniCity is the original and most affordable colour mixing wash luminaire. City Colour is the production industry standard for colour wash applications and is in use in architectural applications washing the outside of buildings like Burswood Casino in Perth

**TechArt**  
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## OCEANIA

Continued from page 22

most of the major players in the region and had the dubious distinction of servicing my account when I was a Selecon dealer. I never did get those 2k followspots I ordered from him in 1985.....

Oceania have a good corporate culture, and it was fun to visit them in Auckland.

## THE MONITOR ENGINEER / KEYBOARD PLAYER

Paul Jeffery sings and plays keyboards. So how did Neil Finn come to hire him to play keyboards AND mix monitors on a tour of Europe midyear? This makes him the first monitor engineer we know of who can mix twelve concert sends PLUS jump onstage for seven songs. Presumably his pay scale reflects this!

Paul told me he did a few shows with Neil back in March last year, helping with the 'Band of Strangers' shows where amateurs auditioned and played with the band each night. The Europe festival tour followed, 'a fantastic opportunity' says Paul, who negotiated the time out with his family first. A very clever guy, who speaks in well modulated tones, Paul is also the technical wiz at Oceania, partially responsible for the design of their own amplifiers. They started building these back in the days when stiff import duties made it the most viable alternative.

The amplifiers consist of a common PSU and four vertically orientated modules of amplification. Two of the four modules consist of a tri-amp arrangement for powering 4 Floodlight High Cabinets. The other two modules in the rack consist of a quad amp arrangement powering 4 Floodlight Low Cabinets.

The design incorporates live heatsinks using a custom aluminium extrusion which is sliced to resemble a bed-of-nails design. When forced-air cooled, this arrangement provides for a highly efficient transfer of heat from the output devices.

Thus the whole amp rack contains more modules of more amplification than a rack of three or four stereo amps. A four module rack loaded with four modules of 8 provides 32 channels of amplification. Try doing THAT from one rack!

Sharing a power supply amongst the four modules of multi channel amplifiers makes complete sense.

Other things made at Oceania include a custom chain motor control box.

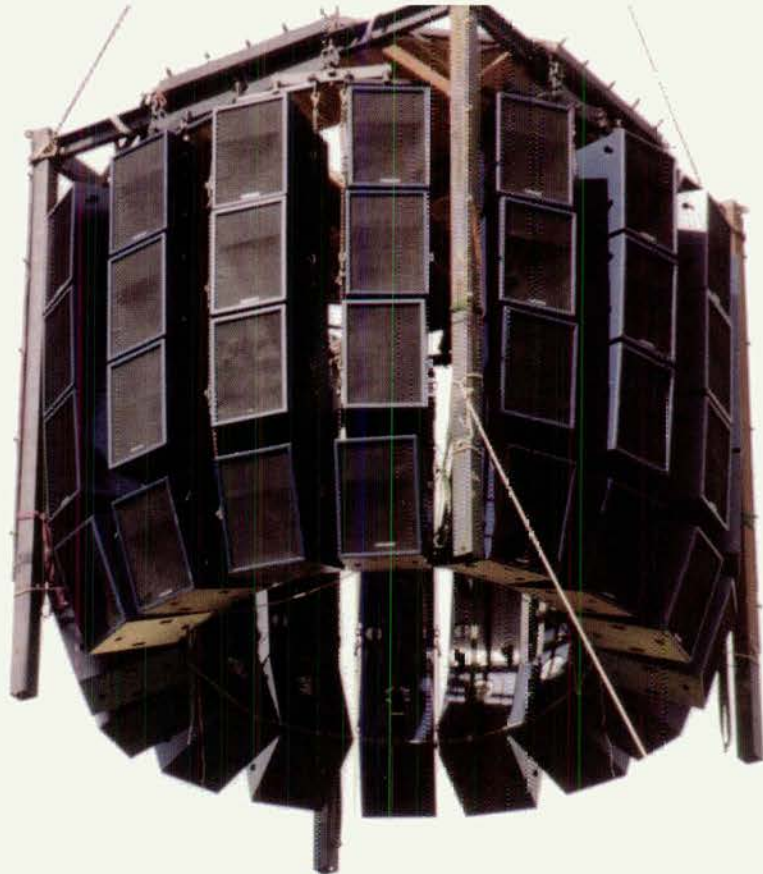
## WEDGES

Paul has his own wedge design too, based on JBL 2206 12" drivers plus 2447 high frequency drivers. The secret to a good 12" driver based wedge is rigidity, says Paul. To this end, Oceania curve the cabinet, using 5mm bendy ply that is laminated around a former, then epoxy bonded to a second layer. The 12" driver can then handle lower frequencies without letting go. A nice idea is the dual set of EP connectors, which allow the wedge to sit either as a left or a right hand oriented device, without having to carry matched pairs of left and right designed boxes. Plus, there is a pole hole in one end too, for those times you just need a punchy active compact 2 way box in the air. There is also a virtually identical 15" brother based around the JBL 2226 15" driver.



Check out their website, [www.oceania-audio.co.nz](http://www.oceania-audio.co.nz) for more info about what they do. Call Auckland - 64 9 849 3114 or Melbourne + 61 3 9362 0499.

'Where do you want the PA?' A menacing gaggle of Flashlight boxes advances through the air....



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## Coemar add Electronic Ballast to iSpot line

The implementation of electronic ballast technology has enabled the iSpot 575EB and iWash 575EB to embrace significant competitive advantages, including: greater lamp control; brighter light output; Zap-effect electronic strobing of the lamp; reduction of size and weight by up to 40%, and power consumption by up to 50%.

According to Fausto Orsatti, Coemar's technical director, the combination of electronic ballast and a superior optical path have resulted in the brightest and most lightweight fixtures in their class.

"The ballast incorporates PFC (power factor correction) which, along with the reduction to half power, makes this very efficient indeed — it's the complete 575.

The EB versions are comparable to fixtures drawing twice the current, producing light output comparable to 1200watt units."

- Contact Coemar De Sisti Australia Pty Ltd on +61 3 9467 8666 or go to [www.coaust.com.au](http://www.coaust.com.au)



*Robe rising.* This Czech company make moving lights for others, and - they say - are now intent on building their own ROBE brand. Here is their regional distributor, Cuono Biviano (ULA), with Mr. ROBE: Josef Valcmar and Luke Hall (from ULA's Melbourne branch) pictured in London at the PLASA trade show last month.

## New Addition to Selecon Pacific range



The Pacific MSR Dowser provides exact dimming of discharge light sources (MSR, MSB, CDM) used in the Selecon Pacific.

MSR / HSR are popular discharge light sources combining high light output with a colour temperature of 5600 - 5000K. The modular design of the Pacific ensures this light source in combination with the dowser can be used in all of the Pacific range providing new opportunities for the entertainment lighting designer.

With a black out response time of <0.5 second and a fade duration defined by your control console, the Pacific Dowser provides a fade profile designed to best match the response of a dimmed tungsten halogen lamp.

Control is via DMX 512 with a choice of 8 bit or 16 bit resolution for very long smooth fades. Already in use at Singapore's "Theatre on the Bay" complex, the Pacific Dowser is shipping now.

- Selecon +64 9481 0101, [www.seleconlight.com](http://www.seleconlight.com)



## Weather rated projector

Griven's PRO MOTION 1200 is the thing where high powered image projection outdoors is needed. It is IP 44 rated. I saw it at PLASA where it was shooting some nifty imagery. The 1200w HMI light source is fairly brutally efficient.

Australian agents ULA say the Pro-Motion will be a popular device in the growing outdoor and retail projection arena.

- [www.ula.com.au](http://www.ula.com.au)

# Connections

9 years strong. Since 1993

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## Features List

### Vision

November - Systems Control

### Lighting

November - Rigging

December - Lighting Control Desks

### Professional Audio

November - Digital automated mixing consoles

December - Big PA Boxes

• If you need to be in any of these, call us now!

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## Deadlines

General deadline: 15th of the month prior. Classified advertising deadline: 20th of the month prior. Features (Market Report) deadlines: 1st of the month prior. We go to print the last week of the month, and the magazine appears in the first ten days of the month. See [www.conpub.com.au](http://www.conpub.com.au) for updates.

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• US/Eur 11 issues A\$110.

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## DISPLAY Advertising rate guide

**MAIN SECTION DISPLAY ADVERTISEMENTS** inc GST \*Rates in Australian dollars.

Bookings by 15th month prior. Artwork by 18th of the month prior.

	Casual	5x	11x	Size to make artwork, notes
Full page colour	2337	2106	1912	A4, 297 x 210mm. Allow 3mm bleed. Keep text at least 10mm away from page edges so it doesn't get chopped!
* Inside front, back, page 3, 5, 6 & 11 extra				
Junior page	1502	1386	1271	130mm wide x 180mm tall.
Half page colour	1242	1145	1047	Horizontal: 180mm wide x 130mm tall. Vertical: 90mm wide x 270mm tall.
Third page colour	1050	984	917	Horizontal: 180mm wide x 90mm tall. Vertical: 60mm wide x 270mm tall.
Qtr page box, colour	754	698	650	90mm wide x 130mm tall.
Qtr page strip, colour	834	772	715	180mm wide x 55mm tall.
Qtr page box, mono	565	482	415	90mm wide x 130mm tall.

by Duncan Fry

## The sharp dressed men

Blues, beards and boogie

There comes a time in every sound guy's life when sooner or later you feel like a change. As I was sitting in front of yet another band I suddenly thought - Jeez, I've had a gutful; I'm going to sing and play in a band. I'll be the first to admit that I'm not the world's best guitarist or singer (my voice filled the club, and people could be seen leaving to make room for it) but I can get by, and hey, it's my PA system so who's going to stop me?

With two friends - Andy, a bass player, and Brett, a drummer, we had the basis for a power trio, and what better trio than a ZZ Top tribute band. Originally we were called The Sharp Dressed Men, but that was a bit subtle for our target audience, so we borrowed another song title and became LegZZ - Blues, beards and boogie. Colin from ARX agreed to mix for us. His heavy metal mix of the Pete Best Beatles cabaret band one night had assured him a place in mixing history, and we felt we'd be in good hands!

We styled ourselves on the Grand Old Men of the South look favoured by the lads on their Eliminator album. Custom made clothing was out of the financial question, so a quick trip to the Army disposals store netted us a couple of ex-Luftwaffe overcoats, which looked just the part. The only problem was that they were designed to keep out the cold of a sub-zero night in the Alps, not to be worn on stage under a mass of blazing par cans! I would regularly come off stage quite a few kilos lighter, and char-broiled to perfection.

Beards were another matter. None of us had real beards, so something fake was required. Enquiries into the price of genuine fake beards, the kind actors might wear, made us realise that a cheaper solution needed to be found.

And it was found in the form of the fluffy toilet seat cover material much favoured by Mr and Mrs Front Porch. Better still, we could buy it by the metre and cover the guitars and drums as well! After a couple of experiments we got the shape approximately correct, stapled on some elastic, and wow - instant Harley Davidson rider. Add the coat and a baseball cap, and from about 500 metres away the likeness was uncanny!

There was one other advantage in playing onstage with a fake beard. When you came offstage, without the beard and in normal clothes, no-one in the audience knew who you were. So if they had thought the band was piss-weak you could nod and agree.

For early gigs I used my Gibson Flying V, but it was (a) too valuable, and (b) the wrong shape. Luckily an ad in the Trading Post for an Ibanez Explorer caught my eye. I bought it for the replacement cost of the super hot output Seymour Duncan (no relation) pickups it had been fitted with. Now I had exactly the look, apart from one important point - it didn't spin, and what good was a ZZ Top tribute band without spinning guitars?

A trip to the NAMM show in LA the following January solved the problem in the form of a couple of Spins guitar straps. These legendary items were the real McCoy, and would let you spin the guitar as you played. I screwed it onto the back of the Explorer as per the instructions, and it really worked.

There was one vital piece of information, however, that the instructions didn't mention. **'Do not watch the guitar as it spins'** should have been printed in very large type at the top of the installation notes. The first time I used it on

stage I stepped back from the microphone, gave the guitar a good spin, and watched it as it came round and whacked me on the side of the head, causing me to lose my balance and fall back into the drums, much to everyone's amusement! And a smaller mention of sticking your gut out so the neck wouldn't get caught in your jeans would have helped, too.

We did a fair few parties and gigs around the pubs of Melbourne, and then one Friday I got a call from a friend who asked if we could do the Saturday night headline spot at the pub where he ran the PA, since the band that was booked had cancelled suddenly. It would cost us nothing for production and we'd get all the door take.

Sounded like a win-win situation to us, so we readily agreed.

When we turned up on the night we discovered that he had neglected to mention the fact that it was a reggae night, and we were there in the place of crowd favourites Jah Rasta and the Kingstoned Trio or something like that. The place was wall to wall full of dreadlocks and rainbow beanies, and the atmosphere was redolent with the tangy aroma of de 'erb, mon.

Quite what they made of us as we bounded out onstage, beards a-flyin' and guitars a-spinnin', I'll never know. Stunned silence greeted every song, and one rastaman down the front stared like a stunned mullet with his mouth open, glass of beer halfway to his mouth all through the set. When we finally ground to a halt he drained his glass in one long mouthful, came up to me, shook my hand and said "dat was truly righteous, mon," and then shuffled off home.

We felt we needed some merchandising, so I printed up about 25 t-shirts (black and XXL, of course - is there any other colour or size?) and at the next gig gave them to the girl on the door to sell. Halfway through the night Andy, who had the deep "How how how how" voice, told the audience they had to go down to the front and buy a t-shirt. There was a mass stampede down there, and in about thirty seconds they'd all been sold and there was a wall of black beer bellies cheering in front of us.

After we packed up at the end of the night, all three of us were walking back to the car park when we saw one of our fans asleep in the gutter, still wearing his LegZZ t-shirt, although covered in vomit and other stains! He woke up as we walked past, raised himself up on one elbow and yelled out "Hey, great gig, guys...uuurrrrrps" as he rolled over to continue recycling the night's alcohol intake.

A great gig for everyone, obviously.

Any tribute band stories to share? Email me! [dunk@dunkworld.com](mailto:dunk@dunkworld.com)



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