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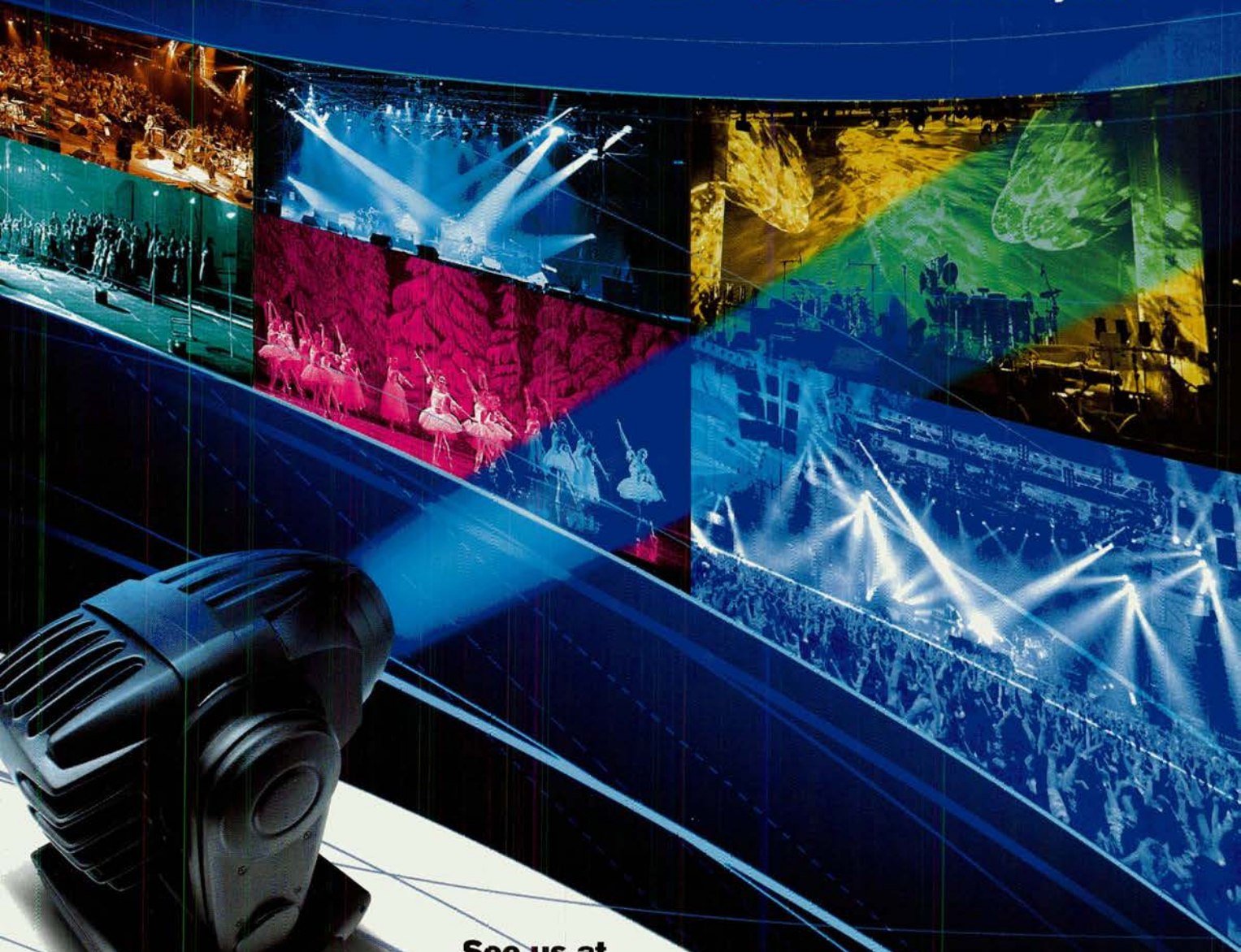
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- Feb - Digital Recorders, Dimmers
- Mar - Microphones Installation Projectors

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On the Cover...

This month's cover shot is of a speaker in the NEXO range. Take it from us, it is not easy to take an interesting picture of a box. Luckily, we used a talented photographer in Dario Gardiman +61 2 9698 0700



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24 TR / 24-bit / 96 KHZ DIGITAL STUDIO WORKSTATION VS-2480 **COSM** **R-BUS**

These days just about everyone is making digital recorders. But when it comes to recording workstations with truly professional features, there is one clear choice: the Roland VS-2480 24-track Digital Studio Workstation. This all-new V-Studio combines the reliability and convenience of Roland hardware with the flexibility and speed of computer-based systems via mouse-based operation and a VGA "Information Display" output. And with its 64-channel automated digital mixer and 17 motorized faders, it's easy to see why the VS-2480 is in a class all its own.

- 24-track digital recording workstation with up to 24-bit/96kHz sound quality
- "Drag-and-drop" mouse-based editing on the LCD; accepts optional ASCII keyboard
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Connections

The Asia/Pacific Professional Audio and Visual Technology Monthly **DECEMBER 2001**



Christian band rock at Blackstump

God market heats up as kids convert

Vendors grab for *The Book* as Churches spend up big on audio visual. Julius Grafton reports.....

Progressive Pentecostal, Anglican, Uniting and Baptist churches have found expansion comes fastest in youth circles, leading to unabated growth in concerts, events and church installations across the region.

Sydney's Hillsong congregation are building a new 3,500+ seat auditorium alongside their existing 1,200 seat church in the Hills district, with the audio contract hotly contested at presstime. Several vendors not known for affinity with the Pentecostal faith have been seen happy and clappy in the congregation of late, while others have attended services (Quote: "It's strange, but fun"), to validate the multi million dollar audio specification, which is said to be ambitious.

Churches of this kind have a heavy audio visual presence with song lyrics, baptisms, video segments and crowd reaction projected on screens. Large bands, choirs and multitrack recording of events requires complex sound systems, and lighting is integral.

Youth Alive held a sellout rally / concert at Sydney's Entertainment Centre last month,

while a three day Christian music festival called Blackstump ran in the fields of Cataract Scout Park south of Sydney. Lighting and audio for the 12 venues were supplied by Lots of Watts.

The main venue was the Big Top where the lighting was designed and operated by Paul Collison with Jeff Morgar, acting as the lighting system engineer & operator.

Spam-free eNews: Launched!

Connections has a new information service, delivered by email to those who CHOOSE to receive it. Called **Connect@Conpub**, our online newsletter will be distributed regularly ~ especially when hot news breaks.

It gives a preview of what will be in the coming month's magazine, ENTECH news, special offers from companies, jobs and other news. It costs nothing to join, and you can "opt-out" of the service at any time. To join, send an email to newconnect@conpub.com.au (no message required).

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'Singer' abuses crew as girl dies

Confirming what most people who work in the music business suspected, a Sydney court was told last month that a singer defied a request to stop the Sydney Big Day Out show where a teenager died.

US trash rock outfit Limp Bizkit were doing their set when **Jessica Michalik**, 15, was dragged under the crowd and later died.

A coroner was shown a clear photograph of band mouthpiece **Fred Durst** making an apparently rude gesture with his finger to a security guard who was motioning to him to stop the show.

The court also heard that Durst had been asked to stop playing at an earlier New Zealand show after the crowd spun out of control.

A witness said the Big Day Out production manager, **Matt Dougherty**, had asked Bizkit's production manager, **Chris Gratton**, to stop the music.

Mr Gratton allegedly told Mr Dougherty he would have to tell Durst himself.

The court heard that according to Mr Dougherty's statement to police, Durst then grabbed Mr Dougherty and dragged him on to the stage.

"[Durst] said to the crowd: 'Here are the authorities', and shoved a microphone into [Mr Dougherty's] face," the witness was reported as saying in the Sydney Morning Herald.

"But he said when Mr Dougherty took the microphone and asked the crowd to calm down, Durst poured water on him", the report concluded.

At presstime the court was attempting to get Durst to give evidence by video from the USA.

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Who is doing what?

ENTECH celebrates 30 years

How it all started - road daze and flicker wheels

By Colin Baldwin

For me, it all started when my friend Roger Hind asked me to bring along my collection of lights to his local Christian fellowship where a band was playing that Sunday afternoon. My lighting collection consisted of a red rotating beacon, a strobe light and 3 mirror-backed, coloured floods in a box.

The very next day I went out and spent my savings on a 3-channel chaser unit, mirror ball and a second strobe.

Back then, there wasn't a rock lighting industry as such. There were theatre shows and live concerts, but stage rock lighting had not yet evolved for live concerts in Oz. There were uni gigs, and high School dances.

During 1973 my equipment base started to expand. My humble array of lights included Strand Pattern 23's, 123's, colour and flicker wheels plus milk crates full of strobes, rotating beacons and cables.

Some years later, I purchased a Strand SP30 lighting desk (pictured), to which I added flash buttons and a pin matrix. I had Strand convert the last 10 channels of the desk into 'scene masters'. I remember how excited I was to have a desk that allowed me to not only control the lights on 2 presets, but also to be able to group combinations of lights into scene masters.

With 'flash' buttons on every preset channel and scene masters available for the first time, that lighting desk became an overnight hit with local lighting operators. The development of purpose-built rock lighting control systems had begun.

In 1974 Grahame (Yogi) Harrison walked into my office and asked me if I wanted to go on the road with a rock band called "Hush". I had met Grahame at school dances where Sydney band "Buffalo" were playing. He was extremely impressed with the fact that I had focused some of my lights on the band and actually flashed them in time with the music! He thought I would be perfect to light such a colourful new band as "Hush".

My first gig was at the Goulburn Hotel in Goulburn. I remember cursing Yogi and telling myself "what the hell have I got myself into". Up until now my new career consisted of setting up a modest number of lights at local school halls, having great fun operating the lights and showing off in front of girls and being home by 1.00am!

My world would never be the same again - 3 roadies and a truckload of equipment had to be lugged up 3 flights of stairs. The PA was provided by Ian McLean and consisted of two passive self-powered speaker boxes with 1 x

15inch speaker and a horn in each. Ian was definitely ahead of his time with a powered speaker box, remember this was only 1974! It was very minimal PA, with no effects or monitor speakers. We had lots of stage gear and my new lighting rig which consisted of eight Strand 500w Pattern 23 profiles (4 per side) and four Strand Pattern 123 fresnels.

These lights were mounted on fixed height stands, one either side of stage and one behind the drum kit. These were not push-up stands, but stands that were assembled on their side with the lights bolted to a T' bar and then stood up! It took two of us to get the lights off the ground! The control system was definitely unique - 2 sets of six clipsal style rocker switches mounted on a piece of plywood. One set of rocker switches for each set of lights! I think the colours were - Cinamoid 106 red, 132 blue, 101 yellow and 139 green.

After the gig finished and we had loaded out, I remember laying in my bed at about four in the morning totally exhausted, thinking 'this life is definitely not for me'...but then I focused on the buzz I got from operating lights for a band that has a hit single and I drifted off to sleep.

I spent the next 5 years working for Peter Rix Management - with Hush, Marcia Hines and Jon English. One of my numerous experiences was my first trip to Perth. John Brewster, Tony Rooke and I set of from Sydney for Perth in the old "Hush" truck across the Nullabor Plain. In those days the road across the Nullabor wasn't sealed, it was like driving on a corrugated iron roof. We had a spare can full of fuel, however the trip would prove to be a long one.

About 12 hours into the Nullabor we ran out of fuel, so we pulled over and after opening the back doors of the truck realised that the fuel can's lid had worked loose from the constant bumping of the road and the fuel had spread through our bags of clothes and the equipment! Brewster elected to stay with the truck and instructed T-Rooke and I





Tom Wisner's Studios 301 celebrated 75 years in Sydney recently, and added a new megabuck Neve console

AUDIO LEGEND DOES LAST GIG

Legendary rock audio company owner, **Ron Blackmore**, passed away at his home in Woolgoolga (Coffs Harbour) on Wednesday, November 28th 2001.

Blackmore owned the Artists Concert Tours (ACT) audio company in Melbourne in the 70's and caused Jands enormous competitive grief in the marketplace. Jands finally removed the threat by buying ACT in the 1980's and instituted a sale clause that forbade Ron from re-entering the market for five years. Ron wasn't too fussed and promptly bought the Emerald Beach Holiday Park in Coffs Harbour.

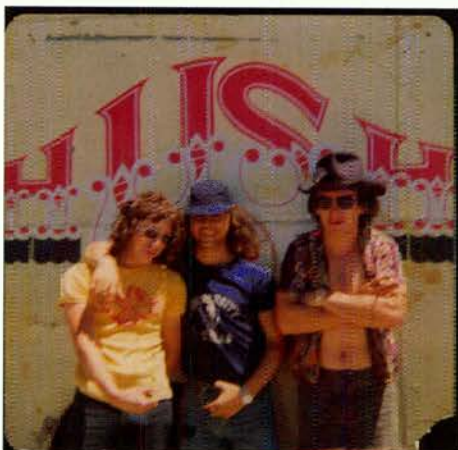
Ron sold the park in 1983 and bought a newspaper, The Advertiser, in Woolgoolga. Newspaper editor Warren McConnell confirmed that Ron had suffered heart problems for some years and was due for a transplant when his time finally ran out. He successfully bought and published other concerns including the Coffs Harbour Holiday Manual and was the founder of the local "Independent" newspaper.

A great raconteur with a huge sense of humour, Ron will be fondly remembered by road crews as being "bullet proof" and blessed with extraordinary luck and business acumen. His former competitors should raise a glass in his honour.

By Grahame Harrison

to hitch to the next servo or homestead.

At about 8pm we hailed down a road-train and caught a lift about an hour up the road. I remember the road-train driver telling us



Colin Baldwin with Tony Rooke and John Brewster

"just walk up that track a ways and you'll come across a place that has fuel". So off we went with torch and can in hand up this pitch black track. An hour later we came across a house in the middle of nowhere.

The scene seemed to me to be like something out of a Stephen King novel. Picture this - Australian Colonial house, amber light can in the kitchen with kitchen door open and the screen door banging slightly in the breeze, even a dog barking in the distance. Well this certainly gave both Tony and I the shivers.

We knocked on the kitchen doorframe for about 10 minutes - but nobody came. We sat in the yard for what seemed like an hour trying to figure out what we should do.

We decided to take a look around the rest of the property as our only alternative was to start back down the track to the highway and try and hitch a hike to another place. Tony Rooke noticed a fuel pump in a shed.

Please appreciate that both Tony Rooke and I were good souls and we would never consider stealing from another person - however, the situation seemed pretty grim, so we decided to fill our car and leave some money.

We arrived back at the highway as the sun began to come up. I was somewhat awe-struck by what was unfolding before my tired eyes. The early morning light started to illuminate what we could not see until now - there was absolutely nothing - not even a tree, just dirt for as far as we could see. That stark empty image still lives with me today. We managed to hail down a tour coach and arrived back at the truck to find that 'sleeping beauty Brewster' had fallen asleep and left the parking lights on, so the battery was flat! After emptying the can into the tank we hailed another road-train and asked the driver to give us a push start.

The Hush truck started up OK and we were on our way some 10 hours after we had run out of fuel. Fortunately we found a servo before the tank ran dry once again. However, when we tried to open the back doors of the truck and top-up the spare fuel can, we found that the road-train that gave us the push start, had bent the door bars, which could not be opened.

• Colin Baldwin and Grahame Harrison are assisting in staging a major retrospective at ENTECH, Sydney Feb 4 - 6. Got old pix or gear? email julius@conpub.com.au

This is THE reference catalogue of its kind. The 10th issue (above) has 128 pages crammed with gear. Call Pro Audio on +61 2 6247-5960 to get one.

Who is doing what?

New (free) Sound Production Course at TAFE

Did you know mainstream TAFE courses are virtually free? That's why North Sydney TAFE are bombarded with applicants for their new **Sound Production Certificate IV course** (7591).

North Sydney have a growing audio and production campus which offers commercial courses in microphone technique, a Fairlight course, and film and TV topics.

There is a strangeness about a course that is free, taught by the same people in the same studios where commercial courses are taught. But that is how the system works, and who is to complain about this?

The Sound Production course is offered at several TAFE colleges, but North Sydney's version differs due to running 18 weeks intensive, full time. Accelerated learning is in vogue. Other colleges offer the course part time, over one or two years.

The course includes modules on theory, sound reinforcement equipment, live sound, and a large chunk (105 hours) on Studio Recording.

There are entry requirements, so applicants need to hurry along. Go to www.tafensw.edu.au for more, or call +61 2 9942-0030.

Review: Personal Audio Assistant by Phonic

The Personal Audio Assistant – PAA1 is a small, hand-held device released by Phonic for technicians that want to make audio level measurements in the field.

The PAA1 is primarily a sound meter that can measure external SPL (in A-weighted, C-weighted or flat) as well as audio line levels (in dBu, dBV and Volts). The large display incorporates a real-time 31-band spectrum analyser as well as an overall level meter – depending on what you are measuring. Features on the display include the ability to show the peak level recorded for each frequency, as well as displaying the overall max SPL or line level recorded.

The unit comes with a removable sampling microphone, and has a line input, RS232 interface and a cable check interface socket.

A snap-shot of the measurements taken by the unit can be recorded in any of ten memory locations. The PAA1 can then calculate an average of any the ten memory locations, and record this to one of six further locations.

The ideal application of this would be to run



pink noise through a PA system and record the levels at various locations around the room. You could then average the result to see what your room EQ was currently like.

With a simple menu driven interface, all features of the unit are accessed via a small wheel on the side of the unit. Using the wheel is as familiar as using a common mouse. Simply push it in once to take an instant snapshot of the meter's readings and open up the menu. Then wheel to the desired menu setting, push it in again to activate the sub-menu and so on.

The user manual was helpful to initially learn the functions of the unit, but after that it was no longer required.

In addition, the unit can perform cable testing on standard balanced audio cables. Doing this requires an optional cable test adapter. As this was not supplied with the test unit, we could not play with this feature.

Another feature we could not test was the RS232 interface, which according to the manual allows the unit to upload recorded data to a PC.

The PAA1 is priced at \$795, and is distributed by CMC Music +61 2 9905 2511

Review: Boa Firewire DVD-RW / CD-RW

The Boa Firewire DVD-RW / CD-RW drive is the simplest to connect computer peripheral that we have ever tested. On the Mac G4 (which comes with a Firewire port), the unit was plugged in and instantly recognised. We burnt a few test CDs literally within minutes of opening the box (if only all computer products were like this!).

In PC world, we had to install a Firewire PCI card. Once the system had been re-booted ('plug and pray' seemed to have worked in this case), the drive was again recognised in the PC system.

According to our tests on both Mac and PC, DVD burning using this device is as simple as CD burning.

We burned a disc of 4485.70MB (the max on a 4.7GB disc is 4490MB) on the PC using "PrimoDVD" by Veritas. For start to finish, on

the fastest speed (x2), this disc took 58min 25sec – it took +2hrs to move the same data onto the computer via 100baseT Ethernet.



The actual DVD-RW drive is the Pioneer DVR-A03. With DVD-R disc available at less than \$25 each, this media could easily become widely adopted.

The unit comes with three different software/hardware configurations: \$1,605 (with Sonics "MyDVD", Cyberlinks "PowerDVD" & Veritas "PrimoDVD" all for PC and Toast Lite for Mac); \$1,665 (same PC software as above and a 2port PCI Firewire card), \$1,795 (same PC software as above and Toast Titanium full version).

Contact the Australian distributor Silicon Memory Technologies Pty Ltd +61 2 9417 7822 to find your nearest reseller. Special thanks to Ben Koch at the reseller Vital Peripheral Supplies who supplied us the drive to test - +61 2 9905 8797.



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Shure introduces WL51 cardioid subminiature lavalier mic



WL51 offers uniform polar pattern delivering great sound, low visibility Shure's latest addition to its line of subminiature lavalier microphones is the WL51 Series, a product group

comprising five new cardioid models. Designed expressly for television broadcast, houses of worship, theatre, and event production, the mic weighs only 34 grams, with a diameter of 5.8 mm. Each WL51 offering has a frequency response of 20 to 20 kHz, a dynamic range of 103 dB, maximum output of 138 dB SPL, and a low self-noise rating of 35 dB. The WL51 comes finished in either black or white and offers a choice of termination options including ten-ft. tinned leads or a five-ft. lead ending in a TA4F connector. The hardwired model (MC51B) is available only in black, with a five-ft. lead/TA4F connector and inline preamp.

Standard features included with all models are a swiveling lapel clip, dual-microphone tie clip, pin mount (vampire clip), magnet mount, and foam windscreen. The WL51 is sold separately, as well as with Shure UHF, UC, and LX wireless systems.

Complete information on the WL51 series may be found at the Shure website at www.shure.com/wl51.html.

Shure's WL51 is current recommended retail pricing is \$980.02

Distributed by Jands Electronics
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Bose Return to the Pro PA Market



Releasing the Panaray 802 Series III and the 402 Series II Loudspeakers

Bose have released two new speaker models, updating their highly successful 802 and 402 speakers. The upgrade makes key changes to the design, allowing the speaker to be permanently installed outdoors and perform in snow, sleet, rain, salt fog, severe cold, intense heat and humidity. The Mica reinforced polyethylene cabinet has a metal protective grill in front of the drivers. According to the specifications, the kevlar drivers



meet or exceed US Military Standard 810 for environmental durability.

Other updates include the use of two parallel Speakon type input connectors, fuse-less protection circuitry and increased speech intelligibility (using internal active equalisation).

The 802 is a 240W, full-range loudspeaker, and at 14kg is light enough to be suitable for either permanent or portable sound systems. The 402 is a 120W, full-range loudspeaker – weighing in at 7kg.

The new 802s and 402s can be used on the older Bose speaker controllers; however, a specialised EQ card is available for the Bose 1600VI & 1800VI amplifiers, which is specifically designed for the new models.

The RRP (inc gst) for the 802 Series III is \$1,499, the 402 Series II is \$799, the 1600VI amp is \$1,890, the 1800VI amp is \$2,243, and the EQ Card for the above is \$98.

Contact Bose on 1800 659 433 for your nearest supplier.

APPEARANCES CAN BE DECEIVING

NEW MARTIN BLACKLINES

Martin Audio have added three new speakers to their BlackLine range. Targeted at a wide cross section of portable and fixed installation applications, the new speakers are designed to provide high quality/high output performance from cabinets of small dimensions and physical appearance.

BlackLine F8 and F10 are both two-way passive trapezoidal speakers with an additional 45° angle to extend possible uses to foldback wedge applications. The F8 features a long-excursion 8" low frequency driver and the F10 a similar 10" driver.

Both units have a 1" HF compression driver mounted on a constant directivity 90° x 50° horn. The horn flare assembly can be easily rotated through 90° so that whether the application is FOH, stage monitor or a low profile installation speaker, for under balcony or night club dance floor, etc., the new BlackLines

Martin S12



provide the correct HF dispersion regardless of their vertical or horizontal orientation. Maximum SPL for the F8 is 119dB and for the F10 125dB. Both enclosures are provided with ten M8 inserts and four M5 bracket inserts for a variety of mount-

ing arrangements along with a top hat fitting for use with tripod or as a pole socket for mounting above a BlackLine subwoofer.

The third BlackLine is a matching subwoofer for use with F8's or F10's.

The S12 is a single 12" design front reflex loaded in a 55 litre cabinet capable of generating an SPL of up to 126dB peak between the frequencies 52-150Hz. Like the larger BlackLine S18 and S15, the S12 can operate in either passive add-on mode using its own internal switchable passive network or be used actively with a Martin M3 or DX1 controller. In the active mode, the Martin controllers provide crossover, EQ and limiter functions for the S12 and F8/F10 combination.

All BlackLine cabinets are manufactured from multi-laminate birch ply with tough punched steel grilles, Speakon inputs and textured black paint finish.

Retail price of the F8 is \$A1,495 (New Zealand \$NZ1,945), F10 \$A1,995 (\$NZ2,595) and S12 \$A1,995 (\$NZ2,595).

Martin Audio is distributed in Australia and New Zealand by Technical Audio Group:
+61 2 9810 5300 (NZ: +64 9 416 0190)



Martin F8

LOUD IS GOOD

(Preferably so loud that you can stun small animals and peel paint)

Active is better

(...assuming you've practiced a lot and are reasonably in tune)

the SRM450, SR1530 & SRS1500 ARE BOTH

SRM450



Active is not the same thing as powered. A powered speaker is just a passive speaker with an amplifier clamped on its back.

The high-current FR Series™ amplifiers in the SRM450 Active 2-way, SRS1500 Active 600 Watt Subwoofer and the new Active 3-Way Speaker System are tightly coupled to their transducers via sophisticated servo feedback circuitry for better control and higher output.

The SRM450 has redefined compact active speaker sound quality. Combine it with the bone-shaking SRS1500 Active Subwoofer and your system now threatens to violate strategic arms limitation treaties! Thanks to 600 watts of internal amplification, electronic equalisation and weapons-grade 15" LF transducer, it has the most bass output of any 'small' SR subwoofer.

You'll get tight response down to 35Hz at -10dB, at up to 127dB! A special 3" surround-wound voice coil dissipates heat and lets the SRS1500 crank all night at max volume.

Plus it has a built-in electronic crossover system so you can help out passive systems' low end to.

Hear the SRS1500/SRM450 combo at a Mackie Dealer today. Crank up the SR1530 Active 3-way system. Have a good listen and then start shoving your audience around.

SRS1500

SR1530



The SR1530 just looks like an SR Speaker. Actually it has a 3-way electronic crossover, three FR Series™ power amps with 500 total watts RMS delivered to the transducers, three parametric equalisers and an electronic time corrector...all built into the Mackie SR1530.

Combined with the Mackie SRS1500 Active 600-watt sub and you have the new **Rock Pig Rig** of choice! We challenge anyone to deliver a better-sounding, more portable, easier-to-setup system that produces over 2 Kilowatts for a price that was unheard of just a few years ago!



- 1-inch exit diameter compression driver with integrated phase plug
- Optimised Wavefront™ Horn properly blends HF and mids
- 6-inch midrange transducer with integrated phase plug
- 16-ply Baltic Birch trapezoidal enclosure with rugged resin end caps
- Weight balanced side handles plus top and bottom handles
- 15-inch LF transducer with heat-resistant Inside/Outside voice coil and high-flux magnetic circuit
- Inside: 3 FR Series™ amps with 500 total watts RMS delivered to transducers
- Inside: Phase accurate electronic crossover, electronic parametric EQ, time correction and phase alignment circuitry
- 600 watts of high-current FR Series amp power built in
- 15-inch transducer with 3" Inside/Outside wound voice coil
- Inside: time correction and phase alignment circuitry
- Built-in electronic crossover for active or passive systems
- Level and phase controls
- Less than 3 sq. ft. of stage space



- 600 watts of high-current FR Series amp power built in
- 15-inch transducer with 3" Inside/Outside wound voice coil
- Inside: time correction and phase alignment circuitry
- Built-in electronic crossover for active or passive systems
- Level and phase controls
- Less than 3 sq. ft. of stage space

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Technology Update

JANDS TO SHOW NEW CROWN AMPLIFIERS AT ENTECH



Crown Audio have launched their new Pulse Series of amplifiers. Three 2U models currently comprise the new range – the 2x1100, 2x650 and 4x300.

As indicated by their names, the Pulse lineup includes a two-channel amplifier delivering 1100 watts per side into four ohms (2x1100), another dual-channel model offering 650 watts per side (2x650) and a quad-channel amplifier supplying 300 watts to all four outputs (4x300).

The Pulse Series employs a switch mode power supply design, which dramatically reduces the overall amplifier weight by as

much as 70%. As a result, Crown's Pulse models can be run into their clip zones without their power supplies sagging, delivering consistent performance at all power levels, particularly in the sub bass.

Two massive heatsinks with front-venting variable-speed fans maintain cool operating conditions, providing better performance and higher reliability. Furthermore, the Pulse 2x1100, 2x650 and 4x300 each utilize an onboard microprocessor that continually monitors its operation and controls its protection systems.

The Pulse 4x300 packs almost the same power as the Pulse 2x650 but is divided into four channels. These channels can be bridged in pairs so that a 4x300W amplifier occupying just 2U of rack space can be used for four zones or two higher-power zones, or even for a tri-amp configuration where one channel handles the mid, another the high and a pair of channels bridged for the LF driver.

All Pulse models feature rear-panel XLR connectors for inputs. The Pulse 2x1100 and 2x650 sport both tamper-proof binding posts and Speakon outputs, while the 4x300 offers a choice of either binding posts or Speakon connectors.

Like all of Crown's amplifiers, Pulse products are backed by the manufacturer's industry-exclusive Three-year, No-fault, Fully Transferable Warranty. Crown's Pulse Series is priced from \$3,795. Also on display at ENTECH will be the cost-effective XLS Series of amplifiers from Crown. Features include selectable high-pass filter (30Hz/15Hz/Off) on each channel, enabling the amplifier to work more efficiently when not being used with full-range cabinets or subwoofers, while a pair of linear opto-coupler clip limiters helps protect loudspeakers from being overdriven.

The XLS 202, 402 and 602 are all housed in rugged, all-steel 3U chassis, and employ an efficient forced air fan to prevent excessive thermal buildup. Rear panel connections include two electronically balanced XLR inputs and touch-proof binding post outputs.

Crown's recommended retail pricing on the XLS Series starts from \$1,195.

Distributed by Jands Electronics Pty Ltd
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Bose[®] Panaray[®] 802[®] Series III Loudspeaker



For more information call
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pro.bose.com

Technology Update

COMMERCIAL
POWER FROM QSC

QSC have released three chunky 100volt line power amplifiers for distributed audio systems. Designed as a cost-effective solution specifically for sound contractors, the three new two channel models provide 300, 500 and 800w/ch with versatile loading options and a comprehensive feature set.

An extremely useful feature of the new amplifiers is the facility to drive 8 or 4ohm loads plus a distributed system on the same amplifier channel simultaneously. This enables a contractor to reduce the number of amplifier channels by allowing distributed speakers to be attached to the same amp as is powering the main sound system.

Housed in a 3RU chassis, all three models feature rear panel gain controls for tamper resistant operation with 2dB detents for quick and repeatable settings. Inputs include both XLR and detachable Euro-style connectors. Outputs include covered barrier strip connectors for safety agency compliance, and for added versatility, a DataPort V2 terminated with an HD-15 connector for use with DPV2-compatible signal processing accessories such as the XC-5 Crossover, SF-3 Subwoofer Filter, LF-3 Low Frequency Filter and the DSP-3 Digital Signal Processor with external power supply.

Selectable high-pass filters are included to protect speakers and prevent speaker transformer saturation. In addition, the ISA models provide protection circuitry including DC, infrasonic, thermal overload, RF and short circuit.

Pricing of the ISA300T is \$1,995. ISA500T \$2,395 & ISA800T \$3,195.

**QSC is distributed in Australia by
Technical Audio Group
+61 2 9510 5300**

Shure offers Limited Edition Beta 58 Vocal Artist UHF System



Said to combine the quality of the Beta 58A and the affordability of the T-Series, Shure recently announced the Beta Vocal Artist UHF. This competitively priced system is available for a limited time only.

The system offers good value with a transmitter range of up to 100m and the ability to use up to eight systems simultaneously. \$ 1,595

Jands Electronics +61 2 9582 0909

Meyer Sound debuts an ultra-compact loudspeaker

Meyer Sound have introduced the new MM-4 Ultra-Compact Wide Range Loudspeaker and its companion MM-4CEU Control Electronics Unit. The MM-4 is designed to deliver high fidelity, ultra-low distortion and high output capability in an extremely compact enclosure.

Suitable for a wide range of distributed and industrial sound applications, the MM-4 is the first product in Meyer Sound's new Industrial Series of loudspeakers. It uses 70-volt lines in typical distributed applications, but does not require a transformer. This dramatically reducing distortion and easing installation requirements.

The MM-4 comprises one 4-inch cone driver with a 16ohm voice coil mounted in a sealed enclosure. In distributed applications, the MM-4 connects directly to the 70V line, or through an optional L-pad, which controls the loudspeaker's output level. Drawing 300 watts peak from the line, the MM-4 produces 110 dB peak SPL. With a maximum of four MM-4's connected in parallel on the line, the system requires a direct drive power amplifier capable of 600 watts of stable, long-term output into 4-ohms.



When used with the companion MM-4CEU Control Electronics Unit, the MM-4's usable frequency response is 125 Hz to 15 kHz. The MM-4CEU is a two channel, single rack space unit that provides frequency and phase response correction circuitry tailored to the

MM-4 loudspeaker. Through a 'SpeakerSense' connection to the power amplifier output, the MM-4CEU also continuously monitors the power applied to the driver, activating integral peak and RMS limiters to protect the driver from over-exertion and overheating.

The MM-4CEU also incorporates 'MultiSense', a circuit that allows one MM-4CEU to monitor multiple amplifier channels at once and activate its protection circuits based upon the system branch with the highest signal level. MultiSense allows adjusting the levels of individual zones using the power amplifier level controls while protecting all of the MM-4s in the system.

MM4 will be available from December for \$550 (inc GST). The MM-4 CEU is priced at \$2,600 (inc GST).

**For more information, contact
Meyer Sound in Australia on 1800 4 MEYER.**

THE RANE SRM 66 GETS NEW ACCESSORIES

Rane's SRM 66 Splitter/Router/Mixer (6x6) is frequently used for room combining systems. The latest version of the SRM 66 now comes pre-programmed for two of the most commonly used applications — 3 and 4 room combining systems (older units may be updated by contacting Jands). For easy installation, Rane has created the RCP 3 and RCP 4 Remote Control Panels, which graphically represent combined and

uncombined rooms, making operation very intuitive.

The RCP 3 and RCP 4 fit in a standard 19" rack. Rane created the MRS 4 Memory Recall Switch which can be used to recall 4 memories in several Rane products including the RPM 26v, RPM 26i, RPE 228d and SRM 66 via 'radio-style' buttons.

**Rane is distributed by Jands Electronics
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Crisp Clear Sound Indoors or Out.

Known for faithful reproduction of the human voice and acoustic instruments in small-to-medium size venues, the 402 speaker is now even more durable outdoors. *Installed Anywhere*[™] speaker performance withstands snow, sleet, rain, severe cold, high heat, salt fog and humidity with no need for extra treatment.

Four patented 4½" full-range drivers per cabinet deliver exceptionally clear, natural sound.

Broad coverage from proprietary Articulated Array[®] speaker configuration.

Low profile and light weight make for easy portability from one job to the next.

Weather resistant design to ensure reliable performance indoors and outdoors.



For more information call
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Technology Update

New Signex Optical Accessories



Signex announces the release of a new range of Toslink-compatible optical accessories that includes patch cables, converters and adaptors.

Four types of patch cord cater for a wide range of applications and include the OCB type that features a haematite finish connector with a spring-loaded centre contact, OCF professional grade patch cord and OCE installation cable.

The OCX series is a range of converters enclosed in small metallised plastic boxes. The OCX01 converts a co-axial signal, such as SPDIF, into an optical signal; the OCX02 converts an optical signal into a co-axial signal and the OCX03 is a line driver that allows extension of

optical signal lines. Each unit requires an external 3V DC power supply and suitable AC power adaptors are available. OCX05 is a back-to-back coupler and OCX06 is a passive splitter that enables two destinations to be fed from a single source. There is also the UPM25 - a panel-mounting back-to-back coupler module designed for the Signex Universal Panel that can also be used in any standard unified body (D type) XLR cut-out. Pricing on these devices is expected to be available shortly.

Signex products are distributed
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Shure introduces the KSM27 studio mic



New large diaphragm condenser for project studios

Shure's new KSM27 microphone is a large-diaphragm, side-address cardioid model, offering an extended frequency response of 20 Hz - 20 kHz. The KSM27 is optimized for vocals, but capable of handling high-input SPLs to accommodate sound sources such as drums and guitar amplifiers. The KSM27 uses Class A, transformerless preamp circuitry, intended to virtually eliminate crossover distortion and bring improved linearity across its entire operating range.

To enhance low frequency and transient response while improving environmental stability, the mic has a one-inch ultra-thin Mylar diaphragm. This is supported by an internal shock mount to keep self-noise low at 14 dB (A-weighted).

The Shure KSM currently retails at \$999.
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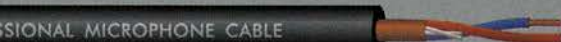
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Microphones do their best work with the best cables and the best cables result from the finest engineering. With the purest copper, extremely low conductor resistance and dense screens with high insulation resistance it's no wonder microphones love them! But for those very serious Bavarians from Klotz, reproduction quality is just the start. They believe that a cable should provide years and years of trouble free service. So they test them for dielectric strength with voltages in the kilovolt range, they build special apparatus to assess tensile strength and flexibility and they have custom ageing facilities with extreme temperature fluctuations. They leave no cable drum unturned!

So if you're considering mic cables, consider Klotz - your microphones would prefer it!



Professional Microphone Cable. MY206 (6.4mm OD, PVC Jacket, Spiral Copper Wound) \$A 2.25/Mtr (\$NZ 2.95/Mtr)



Super Flexible Heavy Duty Patch Cable. MY204 (4.6mm OD, PVC Jacket, Braided Shield) \$A 2.25/Mtr (\$NZ 2.95/Mtr)



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The Fastest Install Cable In The West. P01 (3.5mm OD, PVC Jacket, Foil Shield, Drain Wire) \$A 1.55/Mtr (\$NZ 2.00/Mtr)



Stereo Mics Prefer It! TP414 (3.4x7.0mm, PVC Jacket, Tinned Copper Spiral Shield) \$A 3.95/Mtr (\$NZ 5.15/Mtr)

Microphone cables are only one Bavarian speciality. Klotz also manufactures MultiCores and MultiCore/Stagebox Systems, Digital Patch and Digital MultiCores, Cables for Speaker, Video and Camera plus Hybrids (Signal+Power and Video+Audio).

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NEW PRODUCTS

Coemar release seven new lights

Coemar DeSisti Australia (CDA) have announced the release of several new additions their total range. The ProSpot moving yokes now include the ProSpot 150LX and the ProSpot 575LX. These two new compact moving yokes are designed to provide a host of professional features at an economical price. The 150LX is an

Coemar ProSpot 150LX



\$3,528

Coemar ProSpot 575LX



\$6,580

extremely compact single-armed moving yoke unit which features 6 gobos, motorised focusing, and Coemar's PPF recording and playback facility (an automated stand-alone operation function). The 575LX is a mid-sized moving yoke and utilises either a MSR/2 or MSD 575 lamp and offers a range of features including iris and motorised focusing.

Also new from Coemar are the Panorama Cyc250 and the Panorama Cyc250C. These two new compact, outdoor colour wash units are IP44-rated and utilise the MSD/HSD 250 series of lamps. Both units are constructed featuring a system of 4 snap-on lenses that can be quickly changed to alter the

Coemar Panorama Cyc250C



\$3,006

Coemar iCyc250



\$4,072

beam configuration, making a single unit able to deal efficiently with a variety of scenarios. The Cyc250 features Coemar's CMY colour mixing system, whilst the Cyc250C uses a colour wheel with a selection of rich, dichroic colours.

The new iCyc250 and ColourCyc250 LX are designed for applications requiring compact, intelligent colour wash facilities. Like the Panoramas, these fixtures feature 4 snap-on to alter the beam configuration as required. Using the MSD/HSD 250 series of lamps, the iCyc also features full CMY colour mixing and full on-board dimming, whilst the ColourCyc utilises a colour wheel with replaceable dichroic colours.

CDA are also announcing the long-awaited release of the new CF7WashZoomX.

Coemar CF7 WashZoomX



\$15,874

Coemar have released an update to the impressive CF7HEX (reviewed Connections April, 2001). The CF7WashZoomX uses a powerful zoom lens system and a range of filters to alter the beam output from maximum intensity to maximum evenness to maximum diffusion. The zoom range said to be "absolutely stunning".

Alongside the zoom facilities, Coemar's rich CMY colour mix system is included as well as a single dichroic colour wheel and colour correction filters. The unit weighs only 29kg.

More information is available from CDA on +61 3 9467 8666

ML3000

A VCA DESK FOR THE REAL WORLD



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Dual Functionality / GRP/Aux mode switches reverse the group fader and aux rotary master sections to allow you to choose any combination of up to 8 Aux sends and up to 4 subgroups on fader masters with inserts and full metering. A Centre Mode switch converts the 100mm C fader to an engineer's listen wedge control with insert.

Frames Available / 24+2, 32+2, 40+2

4 Audio Groups / Assigned from paired routing buttons and can form channel. Groups are routed to LCR[™] via a single button and two panning controls.

8 VCA Groups / Using a similar soft-controller system and the same CPU as the ML5000. Master View button allows checking of selected group assignments. High quality devices are fitted to mono and stereo input channels.

8 Auxiliary Sends / 5-8 with faders on masters. 7-8 can be configured as stereo pre/post face pair for i.e.m. Auxes 1-4 have rotary masters in Group Mode, and fader masters with inserts in aux mode. Auxes have balanced XLR outputs.

LCR[™] Panning / Available from channels and groups. Uses blend and pan controls to allow any signal positioning across the C and LR busses.

8x4 Matrix / Fed from the groups, LR and C busses. With inserts and external input. Matrix has VU meter access.

8 Mute Groups / Input channels have soft mutes and are part of the mute grouping and MIDI control. Set assignment is the same as ML3000.

4 Band EQ / 'Responsive' feel with separate controls for sweep and cut/boost on mid bands.

2 Dual Stereo Channels / Additional to the channel count, mixable A & B [TRS] inputs with gain, 4 band EQ and mono summing.

ML Mic Pre with swept HPF / Same extended frequency response through signal path as the ML5000. Swept 20- 400Hz HPF. Next pot law for smoother gain range.

Balanced XLR plus inserts / Gold plated connectors and inserts [TRS] on channels, fader masters & LCR.

PFL system / PFL overrides AFL. Led status indicators on mixerpod. Ideal for monitor mixing.

128 Snapshot memories / Show automation of VCA assignment / mute scenes via midi/RS232 using downloadable A&H Archiver/Snapshot Manager software.

Talkback / Talk to any of the fader master group/aux and LCR outputs via TB enable switches with led in each section. +48V and trim control for mic.

Engineer's Toolbox / Phones, wedge and local monitor controls, -20dB cut when TB active. Pink noise and oscillator, impedance balanced direct outs on channels, 2TB C, LR & C monitor selection with mono check. VU metering has built-in peak led. TB/OSC output [TRS].

Lamps / 3 XLR lamp sockets are provided.

Options / Internal jumpers to configure Aux1 to direct out, pre/post direct out, pre/post EQ / pre-insert for the pre-fader source. Isolate pre-fade from channel mute. Pre insert / post fade for 2 track recording source. One or two 24-channel sidecars may be added.

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Technology Update

HiPort Recessed Spot



The HiPort, the latest product from Selecon's growing Ardiis range of special-

ised lighting tools is a fully recessed framing and pattern projector, using the 150w or 70w CDM, CMH light source.

Delivering many of the features of a moving light including pattern projection, changing patterns, colour, changing

colour and beam shaping the HiPort design avoids the high cost of ownership associated with this technology. As a result of Selecon's optical design, the light output is described by Selecon as having "excellent light output in a high quality beam".

Designed for use in higher ambient light situations such as office lobbies, retail, atria, hotel function rooms and so on where current product either does not deliver the required light output or an entertainment style fitting is aesthetically unacceptable. The HiPort is available with 10°, 25° and 40° beam angles.

Full details are available on the Ardiis web site (www.ardiislight.com).

Selecon NZ +64 9 3601718.

Vari-Lite VL1000



Launched at LDI and coming to ENTECH

Vari-lite introduced the Vari-lite VL1000 ellipsoidal reflector spotlight at LDI 2001. The automated functions include CYM

colour mixing, a five position plus open indexing rotating gobo wheel, variable diffusion that can soften the image all the way out to a complete wash, and a zoom lens that ranges from 19 degrees to 36 degrees for normal imaging and a super zoom function that ranges to 70 degrees.

Vari-lite claim that the colour mixing system can go from the lightest pastels to fully saturated colours, and it has an accurate, repeatable and smooth pan and tilt mechanism.

The VL1000T uses a 1200W tungsten lamp to provide the consistent colour temperature of an incandescent source. The VL1000A, which uses a 575W arc source, produces even more output at a higher colour temperature.

Models VL1000TS and VL1000AS include an automated four blade shutter mechanism that provides control of all shutter functions popular in conventional ellipsoidal reflector spotlights.

Look for it at Entech 2002.

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Liquid Effects



What a blast! Show Technology has organised Clay Paky to make a 0.5rpm clockwise rotator and they are fitting it to the standard Opti 6" liquid effects wheels. Users will need to remove the outer rubber ring from the 6" wheel to ensure it doesn't bind on the VIP power rails.

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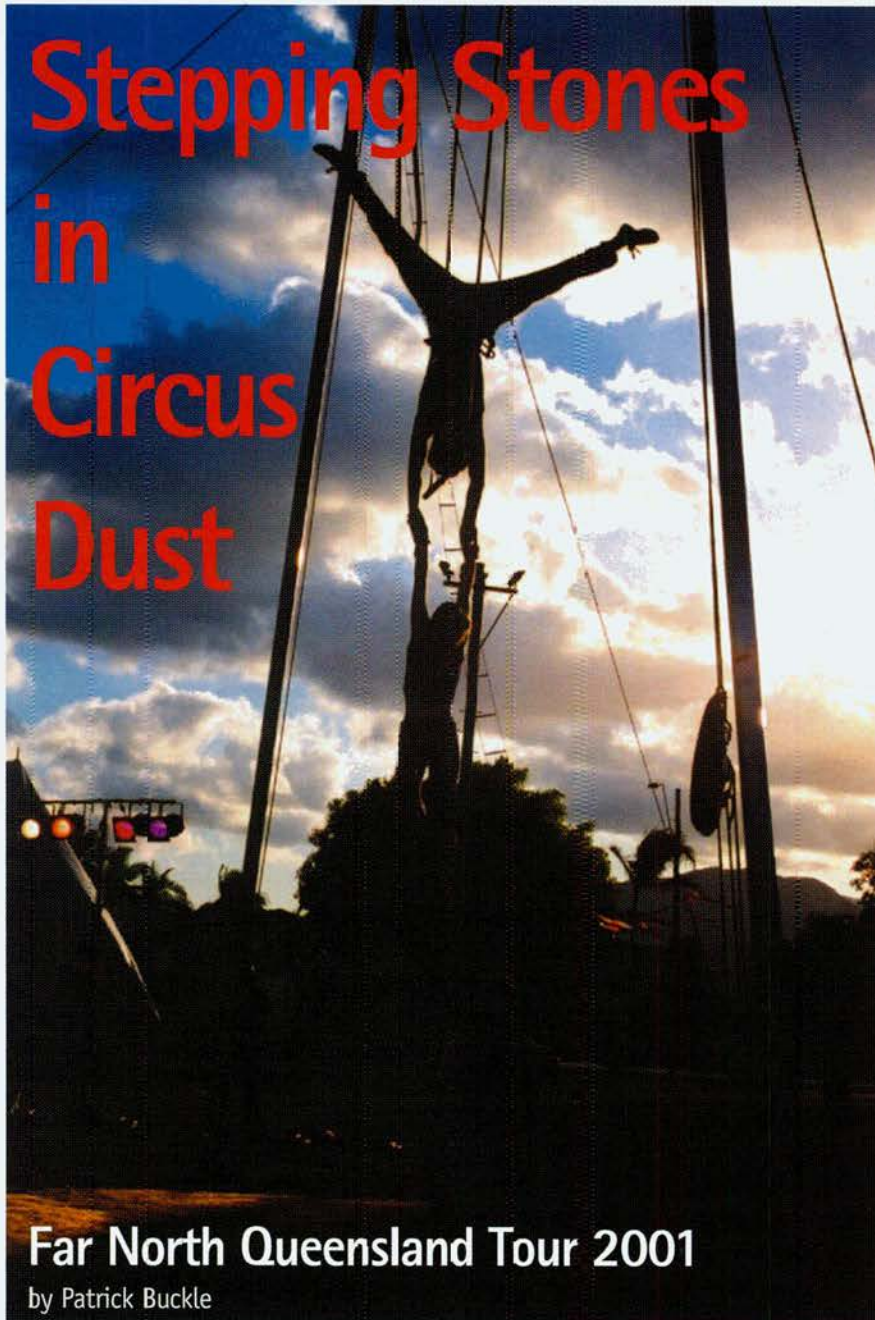
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Stepping Stones in Circus Dust

Far North Queensland Tour 2001

by Patrick Buckle

Touring with the Flying Fruit Fly Circus as they go through some of the more remote parts of this country can be a very testing time for the touring technician.

Patrick Buckle is back from far north Queensland, shrugged off the dust and sweat, and has penned for Connections this special report...

I recently completed a contract as Production Manager with the Flying Fruit Fly Circus, undertaking a rather unusual tour through far north Queensland. This tour involved six 4WD vehicles, one 3 tonne truck, 26 people and 5 communities in the Cape York region. We travelled to three aboriginal communities as well as Weipa and Cairns, spending approximately a week in each of these communities. Throughout the week we ran workshops in circus skills for the school students, culminating in a performance showcasing the new skills taught to the community children and the skills of the 10 Flying Fruit Fly performers.

The tour began in Albury, the home of the Flying Fruit Fly Circus, from where our 3t rental truck departed for Cairns carrying two new purpose built 8m aluminium aerial rigs and the

rest of the props and equipment. The lighting and audio equipment was picked up in Cairns, on hire from Premier AudioVisual, including a Par Can lighting rig, six ARX SP12's and miscellaneous other equipment. Needless to say, by the time we loaded up the 3t Pacific rental truck it was very full. Easier however than the ute and troopy that were originally on the drawing board to transport equipment.

First stop was Hopevale, an aboriginal community approximately 30mins drive north from Cooktown on the east coast of the Cape. As security companies are in short supply in the communities the production crew volunteered to sleep with the rigs to prevent equipment going missing. We had been warned that accommodation was limited in the communities, and were all prepared to swag it when needed. What was a surprise was waking up on our first morning to school kids running around on the school oval where we slept. Quite a surreal experience waking up half naked to an audience of 60 children and teachers. It was a little intimidating when you then had to make the morning walk across the oval to the shower and toilets (fully clothed by now).

Luckily our sleeping quarters were located on a raised platform which we had tarped up to provide shelter from the sun and occasional showers. Sleeping off the ground proved advantageous as we meet some of the local wildlife over the next few days and nights. First to visit was a group of horses, rather clumsy and nonchalant in their movements around the rig and our platform. Then there was Zippy, the big grey bull. Zippy had a reputation in town for being an aggressive animal. When we heard him grunting and walking down the street one night the local kids jumped the fence in an attempt to stay out of his way.

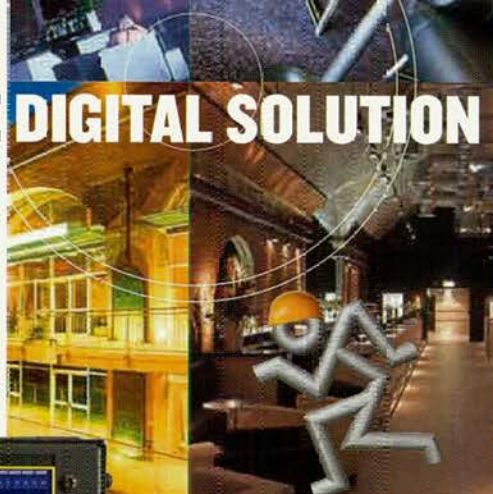
The Hopevale performance ran smoothly with easy access to 3-phase power. Unfortunately for us the rodeo was coming to town the following week. Unbeknown to us this involved the gradual covering of the school oval, on which our stage was located, with sand. Making a soft but unpleasant audience area with a layer of sand 15cm deep.

Next stop was the aboriginal community of Lockhart River. Lockhart River is north of Hopevale on the east coast but requires you to drive up the Peninsula Rd in the centre of the Cape. About 10kms out of Coen, our stop for the night, one of our vehicles came across a 3m python on the road. Unfortunately they decided to avoid the python, putting the vehicle into an uncontrollable fish tail. They managed to point the now out of control vehicle between 2 large anthills (hard as concrete) and a number of small trees, landing on the drivers side of the Nissan Patrol. Luckily no one was hurt but the vehicle was written off. The local police provided some useful advise to the driver suggesting that should we come across anymore wildlife we run the #!*@^% thing over.

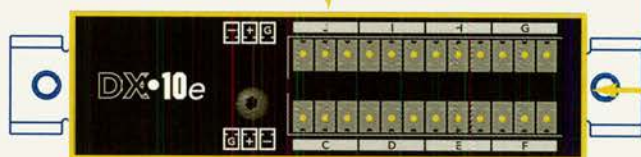
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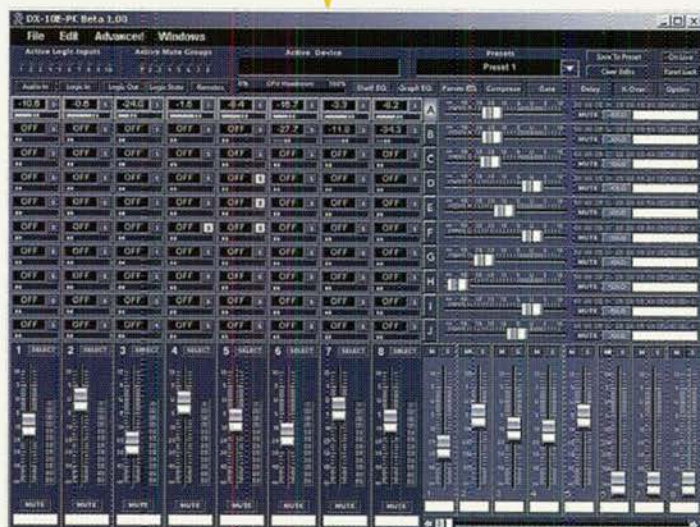
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Teaching the kids at Lockhart River

On arrival in Lockhart River I faced my first technical challenge. That was the lack of available power. After being told that I had access to a 3-phase power outlet with a run of over 100m to the performance area I arranged for extra cable and distribution to be barged up for the show. Unfortunately there was no 3-phase outlet, just room on the main distribution board at over 200m from the performance area. With options few and far between I removed the par cans from the equation and concentrated on getting the sound system up and running. Option one was to disconnect the hard wired 3 phase air conditioning units for the school and fit with a plug, or use one of the spare 15amp outlets. The school, and my production budget, were not going to accept the air conditioning option so I was left with the 15amp outlet. One problem with this option was the run - across the side of the school building, along a catenary wire to the palm tree, then along the basketball court fence and down to the performance area. All in all about 120m of cable that I wasn't going to even try and load up.

The performance ran without incident to rapturous applause from the audience and the "Crab Pit". The "Crab Pit" was located behind the stage and was renowned for trapping people for extended periods. Once you entered you couldn't leave without sitting down, having a chat and knocking back a cold one. This group of local tradesmen had positioned themselves and a slab of beer on the roof of the hut for the performance and loved every minute of it.

Lockhart sleeping arrangements were similar to those in Hopevale, only this time we slept on the ground. With warnings about each of the communities and the wildlife that strayed into the schools at night we were not surprised to see a herd of 5 cows and a bull wander onto the school oval one night. But again, we had heard stories about the bull here. Corrugation was his name. Regularly harassed by the local kids who would stand in front of him and play chicken, or grab his tail and avoid the wild kicks from his rear legs Corrugation had reason to be bad tempered. He was an angry beast to come across at night on the stroll to the toilets. We had also been told to stay away from the fence across the oval from us. Instructions from one of the teachers were "if you think of going there to find firewood or anything, don't". This was a Bora ground and site of numerous stories as told by the children. Fortunately we did not have any out of the ordinary experiences and considered ourselves lucky. This was a different story in Hopevale where one staff member who was staying in the local nursing home with the rest of the touring party experienced something very out of the ordinary. They were woken up one night with a slap on the face. Thinking nothing of it they went to sleep again. The following night they woke to the feeling of being strangled. After getting out of this grip they went to another room, only to hear

footsteps running around outside. On investigating there was no one to be seen. Scary or just bizarre?

From Lockhart River we visited Weipa, a bauxite mining town on the west coast of the pointy end of the Cape. Being a large mining town there was plenty of support from Comalco and as a result extra funds available to present a big show. We set up on a park that had been developed for the local Croc Eisteddfod. This site had a permanent raised concrete stage, plenty of 3phase power and GPO's located at several points around the site. Easier to set up for a performance than some outdoor venues in Sydney.

To our surprise the pre show parade had grown to a colourful extravaganza including 300 children from the local schools, 5 trucks (including the garbage truck) and a mobile stage with sound system. Just another small project for the production team to work on through the week. The Weipa show was a true night time performance with extra lights, dimmer rack and lighting desk purchased by the Primary School and shipped up from Brisbane. I was lucky enough to get this equipment off the plane (scrummaging through the air freight trolley) 4 hours before the tech began. It was all hands on deck to get the rig up and ready in time.

No wildlife to contend with in Weipa as we were located in the Single Person's Quarters. These were luxury compared to the previous couple of weeks but not something you would swing a cat around in. They also provided another incident. During a workshop a frantic staff member yelling "FIRE, FIRE," greeted me. They were referring to a fire that had started in the Pando's (ASM's) room. This provided us with a clue to what the continuous air raid alarm was, ringing loud from the top of the water tower. It turned out that the light over the bed had sparked a fire in the mattress, smoking out the surrounding rooms and left by the fire brigade with water pouring out the door and off the balcony. His personal items had fortunately been removed before the fire brigade got to the room.

Needless to say the show ran smoothly to an audience of approximately 2000 locals. The performance didn't end with the show, continuing into the night with a jam session featuring Matt Hill (Musical Director), Pando Harrigon (ASM), Bennett Walker (Logistics Expert) and some of the local musicians.

Heading south from Weipa we turned off the Peninsula Rd to Aurukun. 3 hours drive south from Weipa and on the West coast of the Cape. We had a few issues to deal with on arrival to this community, as a location for the performance had not been locked in. The school principal was also concerned about the security of the rig and the safety of the Fruit Fly team as the community had just received their tax returns and pensions. This all added up to lots of money and continuous partying and drinking in

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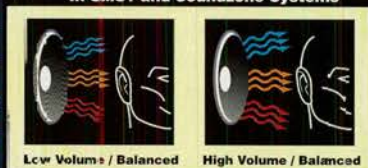
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Working in Weipa



Welcome to Aurukun - and don't forget to say hello to Chainsaw



Pre-show parade at Aurukun



Red Brigade in Cairns

the community.

We had a few options to choose from for a performance space, the new Gymnasium, the football field, the school oval or the school grounds. We did not have sufficient rigging equipment to use the huge new gymnasium; the football oval was located close to the canteen (alcohol) and raised a few safety issues but did offer 3 phase power, the school oval lacked any power supply at all and the school grounds were littered with underground services.

We went with the school grounds as there was good shade from the trees and sufficient room for the rigs and an audience. It also provided the safest environment. As for the underground services, some were new and identifiable, some were located through the help of the local groundsmen, but others had been buried for so long that no one new were they were. The history of hitting pipes and cabling was not good for pegging out our rigs.

Fortunately we avoided all the underground services whilst putting up the rigs. Unfortunately for our Osteopath the same couldn't be said. Whilst hammering in a peg for her tent she met some resistance but managed to knock it through. On removal she encountered a small flow of water, this small flow soon turned into a 5m high cascading shower sourced from the schools irrigation pipe.

Any security concerns in Aurukun were dealt with by the school's overnight patrol. This team was very effective and has managed to reduce damage costs at the school by thousands of dollars a month. Consisting of Kisa, Bud, Gretel and 'Silly Bitch' this team patrolled the grounds from 10pm to 6am. This team each had 4 legs, and yes, were a pack of dogs. Not just any dogs but Rottweilers. This patrol proved very effective. It did cause concern for us as we were all sleeping in tents. The tents were outside (obviously) and the toilets were a hundred metres away. So after 10pm your bladder would start playing tricks on you and the thought of running the risk of meeting one of these dogs whilst running to the loo was not fun. However, the situation did get you to your tent early in the night.

As with the other communities there was another grey bull in Aurukun. This grey bull was supposedly carrying the spirit of a lady who had previously owned him. Given the name of Chainsaw he proved more aggressive than the other bulls. I was quick to get out of the way after he straddled towards me and took a swing with the head and horns. He managed to round up a few other staff members who retreated to the car to get a way. Chainsaw had different ideas and proceeded to ram the 4WD, scratching up the rear door of the vehicle with his horns. We were told that he had a dislike for white vehicles.

The performance here was again run on a 10amp power supply with a reliable cable run. The lighting rig was left in the truck and a daytime performance organised. The pre show

parade was a great hit with the locals. Led by the school tractor with the addition of a drum kit and coloured streamers, it was followed by a succession of students, stilt walkers and a ride on mower.

We then had a few days off prior to arriving in Cairns for the final workshops and performance. We took this opportunity to visit the Daintree on the drive back, making for a pleasant break from the dry, dusty county that we had been travelling through for 7 weeks. We were lucky enough to be touring with Bennett Walker (Logistics Expert) who is an elder from the Daintree region and was previously a ranger in this area. He organised for an unused camping area to be unlocked for or use, located in the rainforest by the waters edge it was a spectacular place to spend a few days. He gave us a great insight to his country and life.

Moving onto Cairns we set up in Munro Martin Park, opposite the Civic Theatre. We had 100 kids participate in the workshops over the week with the weather proving a little disruptive. It went from on again off again rain to stifling heat. As we got closer to the performance the weather reports did not look good. With showers forecast and no possibility of the show being delayed we steamed ahead.

About 5 minutes into the show and the rain came down. Fortunately it was not raining heavily, but enough for the safety officer, director and myself to look at each other, waiting for the other to call a stop the show. It was an interesting experience mixing the show from under a loose tarp and looking out for the safety of the audience, staff and performers. The show did go on and was well received by a crowd of over 2000, all of who had sat through a 5 minute shower.

8 weeks after beginning the tour in Cairns all 26 of us headed our separate ways (thanks to the fall of ANSETT), all totally exhausted but exhilarated by the experience we had been involved in and shared with each other and the communities of the Cape.



Thanks to Packrick Buckle for his story. He will be earning a couple of hundred bucks for this submission! If you want to earn money and tell us about the shows or tours you are doing, take a look at the freelance submission guidelines on our website: www.conpub.com.au

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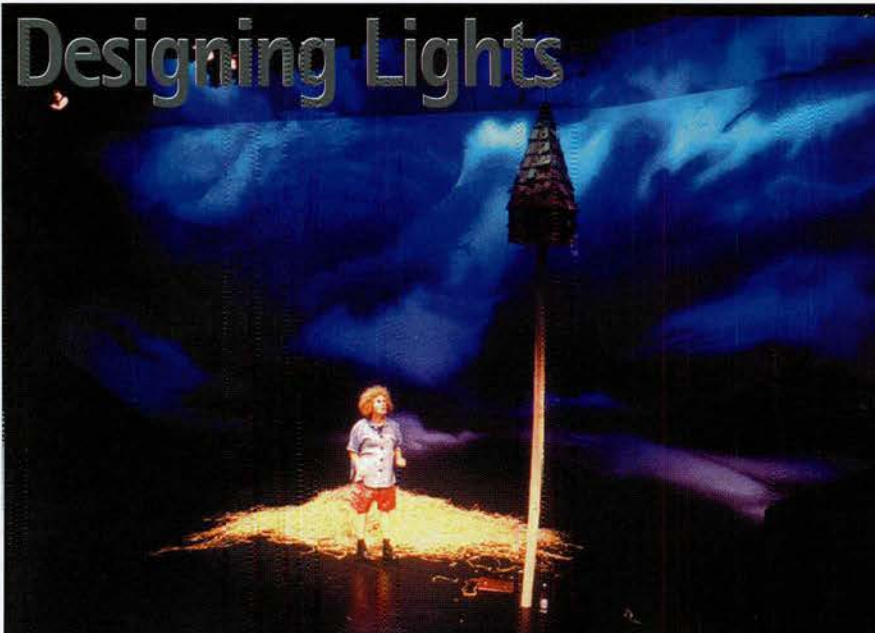
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Martin Kinnane has been a lighting designer around Sydney for a number of years. Recently, he was appointed as the lighting designer for the New Year's Eve celebrations on the harbour and at numerous sites around Sydney. When Connections caught up with Martin, he was going through equipment tenders for what is to be a huge event to see out the year.

by John Grimshaw

The New Year celebrations on Sydney Harbour are traditionally huge, with 2-3 million people lining the foreshores, filling the city boating on the harbour and attending office parties – taking up every vantage point for what has become one of the world's best New Year celebrations.

According to Martin, there were to be no more "large scale" New Year's Eve celebrations in Sydney, as the last five years were part of a sponsorship package. However, due to the success of those events, Sydney's Lord Mayor earlier this year decided to continue the concept of a high profile group of events with New Year's Eve 2000 as the benchmark, so the City of Sydney's Cultural Affairs and Events Unit appointed three key people to make the event

happen. Ignatius Jones was appointed as the Artistic Director, Mark Thompson as the Designer and Martin Kinnane as the Lighting Designer.

The position of Lighting Designer for the whole event was created for this year, to unify the lighting design and implementation across all of the event sites and on the harbour. This is no small task when you consider that this includes five venues, three of which have stages for three nights of events, lighting for the tall ships parade, numerous smaller installations, and (of course) the secret lighting reveal on the Harbour Bridge.

So how do you approach designing something on this kind of scale? For Martin, this has been one of the most enjoyable aspects of this gig. Being used to theatre and corporate event designs where the overriding restriction was the budget, it was an interesting change to be able to put budget considerations on hold, and think purely about what would be required to do the job as well as what he could do to make the event have the visual impact New Year's Eve demands.

Interestingly, the decision has been made not to use lasers for the advertising on the Bridge Pylons this year; they are to be replaced with Pigi Projectors allowing the use of colours. Coming



(top left) A scene from "Kids Stuff", an Ensemble Theatre production that was lit by Martin Kinnane (below) Martin in the production office at Sydney Town Hall

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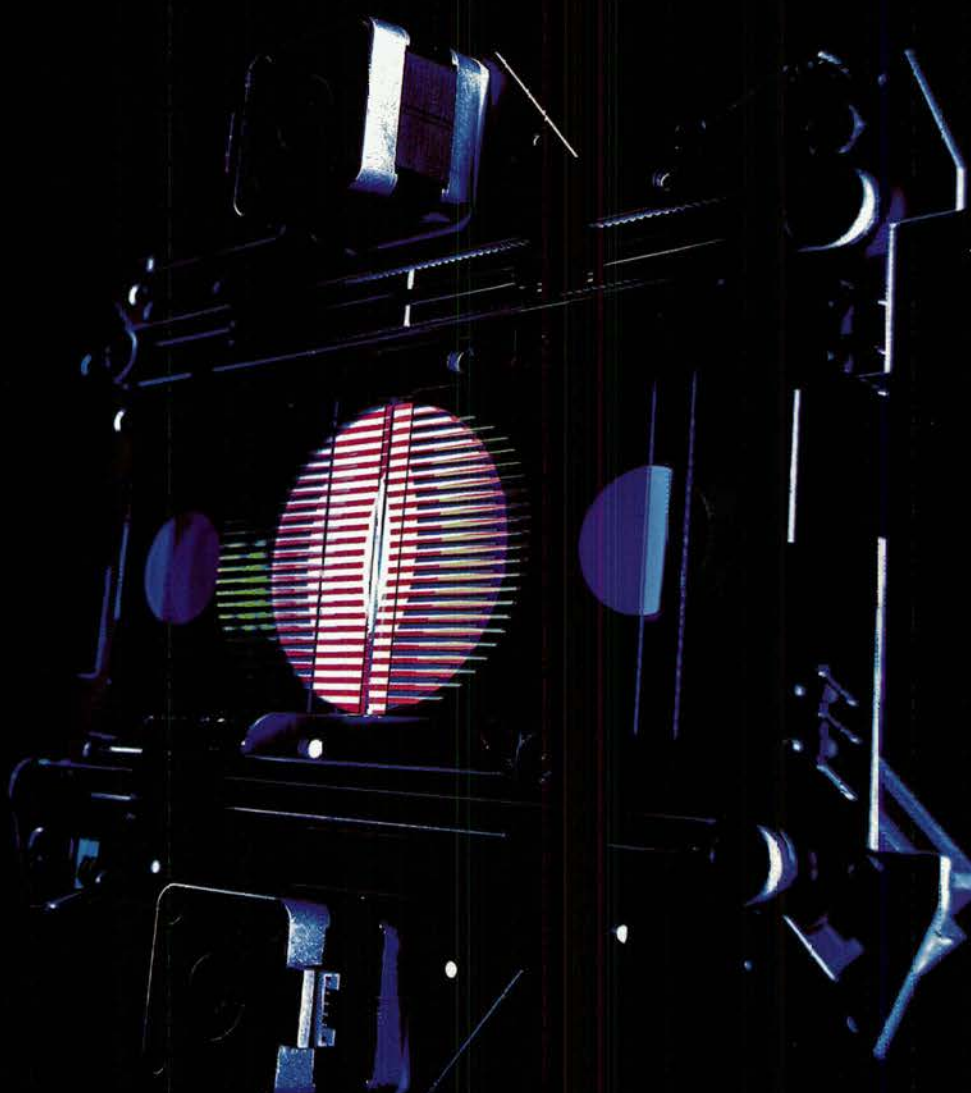
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PEOPLE

Lighting Design

from theatre where lasers are rarely (if ever) used, Martin's thoughts on this are that there is no real visual value in this kind of effect unless the people that make these devices can come up with something radically different.

"While lasers can be great for dance parties etc, we needed to find a method that can be used to entertain the millions at the event rather than select pockets of people".

As for the rest of the design, we will have to wait until a little closer to the event before we can reveal much more, sufficed to say that it is shaping up to be another spectacular event.

So, how does someone make it to the position where they are designing the lights for what could easily be the biggest Australian event for 2001? From Martin's point of view, the path he took is not necessarily open to budding designers of tomorrow.

Martin went through the technical course at NIDA, and then worked in the industry for a number of years, building up his skills on the job and gradually building up his repertoire until he was solely earning income as a designer. This was some years ago now, and in the meantime has built a considerable reputation designing many shows for Ensemble Theatre and other small professional companies such as Railway St Theatre Company, Riverina Theatre Company and corporate events including the Optus building for the Olympic Period.

According to Martin, someone starting today has a big job ahead of them simply getting on top of the technology. For Martin, much of the new lighting technology was introduced as he was making his way

"While lasers can be great for dance parties etc, we needed to find a method that can be used to entertain the millions at the event rather than select pockets of people"

through his career, so learning about what it could do was relatively easy. However, someone starting now could be easily seduced into trying to use much of the technology before they really have the skills to use them well - trying to run before you can walk.

These days, Martin works occasionally at NIDA, looking after students as they find their way through designing their first shows. As he sees it, the difficulty lies in the fact that courses like the NIDA one is really a Stage Management course, and has little time to teach all the skills required today.

"I feel one of the reasons why quite a number of designers have come from NIDA is that they teach a broad range of skills," says Martin. Martin went on to say that this diversity is essential to be able to then go on and specialise in lighting design, but that should only be the starting point. At the moment, he sees that the only place at the moment where you can get this next stage of specialised training is in the workplace.

"[When] I was in Canada, I saw that there was a place for a young designer to work on expanding their knowledge in other styles of design and styles of theatre. While the Industry here is smaller, there may be a place for some sort of Post Graduate course in Lighting Design like NIDA's Directors Course for people at a certain position in their career."

Of the future, Martin's goal is to remain designing a diverse range of events, because it is the diversity that keeps the job interesting. This begged the question of what he thought of the design approach where you have a basic design that you adapt to every show.

"Where's the fun in that!" he replied. "The danger of formula designs is that you could easily get stuck in a rut."

There are plenty of designers that always use the same channel in the same locations - regardless of show, they could call out a number and that light would come from the same location for each show. According to Martin, this is fine, but you have to be careful because it then becomes very easy to start using the same colours, the same effects and the same fixtures. Before long, a particular lighting designer will have the same 'look' for each show.

To Martin, working like this is a path to getting bored with your job. "I understand the concept, but as a designer, you've got to enjoy what you create."

...and Martin is certainly doing that.

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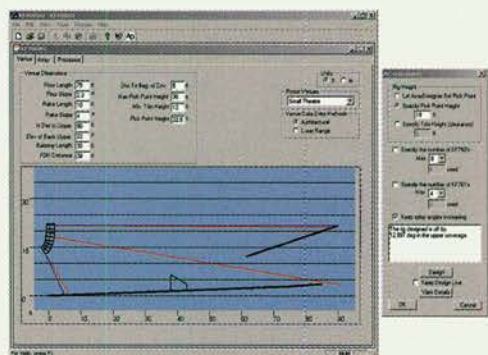
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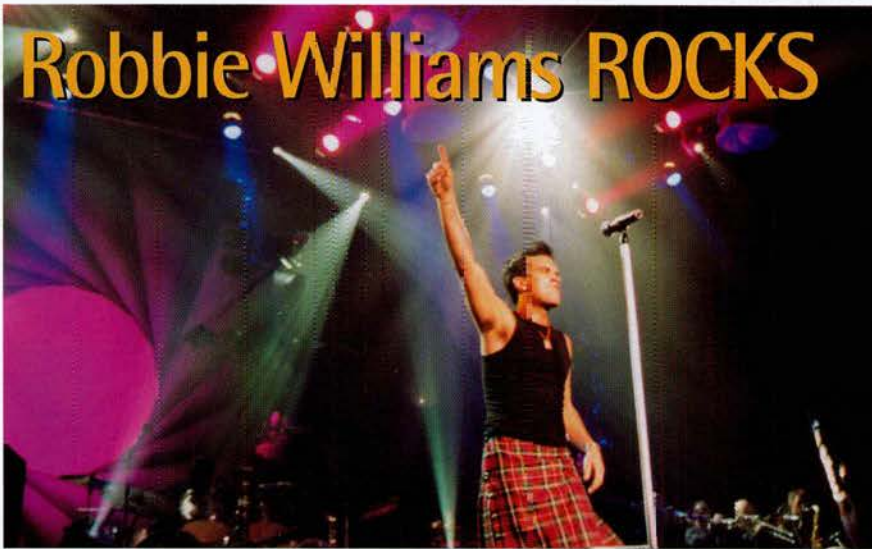
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Arena Concerts



...So says Mandy Jones, who took a look backstage with Liz Berry, Lighting Designer...

Despite a lack of radio airplay in this country he is nonetheless incredibly popular, packing out arenas in Adelaide, Sydney, Melbourne, Perth and Queensland on his latest down-under tour. Brimming with credibility, over the last three years Robbie has re-established himself as a dynamic live performer and has well and truly moved on from his daggy boy-band beginnings in Take That. On stage he is unpredictable and is best summed up with a quote from his media release as "A man so maddeningly cool he can hold a stadium audience in the palm of his hand while scratching his tackle with the other". And they're not speaking figuratively.

While Robbie and his crews are used to playing huge arenas and stadiums in the UK, his recent tour of Australia/NZ was a scaled back version of these extravaganzas. This was due partly to a major decrease in international air-cargo limits since Sept 11 - touring their large custom built truss system was not viable.

But what Robbie lacked in staging he more than made up for with his on-stage antics. Kilt-clad & with expletives pouring from his mouth, he worked the crowd into a frenzy with his music and then slayed them in the aisles with his humour proudly announcing he is the only person who can say he's been in Take That and two of the Spice Girls. With Take That in mind, he performed a surprisingly superior thrash-grunge version of their big hit 'Want you back' before commenting their music is "still wank".

British LD Liz Berry has designed for Robbie since he established himself as a solo artist over three years ago. Liz's beginnings in lighting were at University where she earned "30 quid a night" for her efforts. Seven years later, Liz is a high-demand intelligent-light designer for Bryan Ferry, Roxy Music, Madness and Belinda Carlisle in addition to her extensive touring commitments with Robbie Williams.

Being Robbie's first & only LD, Liz has played a significant role in creating and developing the look of his shows. A high turnover of designs and Robbie's concerts always look fresh. Robbie is not the kind of artist who tours the same

show for months on end, so touring is a creative process as new designs are developed along the way to suit a diverse range of venues.

"I've never toured the one design with Rob. Because he's so varyingly popular in different territories we toured the whole on 1999 and the longest I had any one rig was the five weeks we played in arenas. Then we went to theatres in Europe for 3 weeks, then we went to America on a promo, did some American clubs, then back into the theatres, then we did Slane castle in Dublin which was outdoors to a crowd of 80,000 and then we went back into promos. So it's never the same design - I keep changing it."

Liz said the show for Australia and South-east Asia was designed about a month before the tour and was an all new design featuring Liz's fixture of choice, Vari-lites. A self-confessed Vari-lite fanatic, Liz specs Vari-lites when she can. When they're not available, she uses a choice of fixtures from High End. Her Australian stadium rig featured 20xVL2's, 38xVL5 wash and 3xVL6C spot luminaries - a tried and true combination of fixtures.

"I just think the VL2 is the greatest lamp in the world ever ever ever. And the VL5 deserves an Emmy. I have to confess a slight bias because I worked for Vari-lite for two years in the mid eighties, but I just think the equipment is superb and the back-up too."

The rig also had a heavy par rig as back-up and to add intensity to the colour washes. Liz used the pars spread out on four freestanding truss towers, and as a front wash on the front truss. Liz explained she would normally only ever use par cans for a front wash and rarely uses them in the main rig, but decided to make this show a conventional and moving light rig.

"With an artist like Robbie you've got 'Let Me Entertain You', a sort of big rock anthem. When I first heard it, it reminded me of 'Pinball Wizard' - and then you've got 'Angels' which is a very gentle ballad, so you've got to come up with a rig that will do all the looks in between. There isn't one particular sound to the music so I'm almost trying to avoid one particular look to the lights. You need flexibility there to be able to make it go from very hard to gentle, but without trying to put too many toys up there, too many fiddly little bits that are going to take people forever to wire and focus."

For control, Liz prefers a Vari-lite Virtuoso using series 400 protocol. In fact, Liz introduced the Virtuoso to the local market by specifying it for the Roxy Music tour a couple of months ago, and again for Robbie Williams.

Liz works closely with set designer Hattie Spice to come up with the visual concepts for Robbie's shows. In-keeping with the freight restrictions and the hectic touring schedule in the southern hemisphere, the visual concept for this leg of the tour was simplicity. Behind a pretty simple riser set-up were three upstage drapes featuring circles with a radiating iris design - the centre one doubling up as a video screen. Video footage was projected for a 'duet'

(below) LD - Liz Berry



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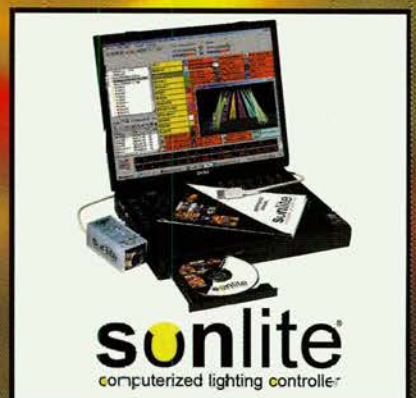
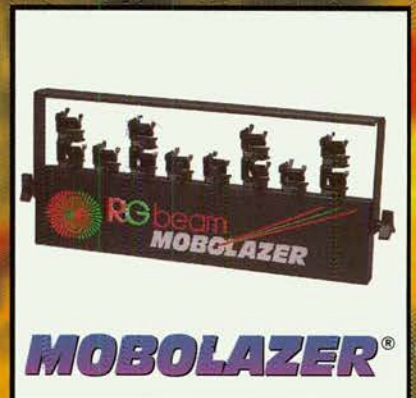
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Arena Concerts

with Kylie Minogue for the song 'Kids' and other footage for 'Angels'. Four offset freestanding towers were the base for the par can rig which Liz uplit with some Vari-lites for a truss-tone look.

"I go through phases. I'm going through a tower phase at the moment. I like lights on the floor and lights in the air and at the moment I like having lots of lights in the middle. For Robbie's stadium shows we had a 70 foot by 30 foot high wall of scaffolding with lights all over it so that was literally all sorts of stuff all over it and lots of weird angles, but obviously that wasn't very transportable so when I couldn't get that here I commuted it into four towers. The towers are a back wall substitute so I've got lots of lights at lots of different heights."

An effective gimmick was the use of light-tubes – long fabric socks attached to par cans which dropped down from the rig to create columns of coloured light.

Liz has a very un-rock'n'roll approach to her use of colour by using a theatrical technique of layering shades & tones to avoid flat colour washes. She used this technique with her pars and the Vari-lites, creating textured washes.

"I do an amber wash which has a bit of 101, a bit of 104, a bit of 105, a bit of 158, so it's all different yellows & ambers. I do the same with the reds, blues & whites so it's all very textured. I quite like doing that with the movers as well, so I use a lot of colour corrections & not the really brassy colours they tend to put as standard colours in the lights."

Liz admitted she always brings her own colours for the VL6's because "they're only as good as the colours you put in them". Liz also supplied her own gobos for the VL6's, in particular large palm leaves to create a tribal feel in a couple of songs, good old laser cones, as well as some hand-made colour break-ups.

"One of my particular favourite gobos that I've been using a long time is one we did in a Vari-lite workshop years ago. We put smashed pieces of dichroic onto a break-up gobo so you get all the different colours. Everyone does it now but mine are actually still glued on after all these years."

Image projection was left up to the VL6C's while the VL2's were predominantly used for

beam looks. Liz joked she is "terribly snobby" for her insistence at using Vari-lites, but explained that most other units aren't capable of the quick colour and pattern changes that she requires.

"I don't like having to take long blinks so if I want to go from yellow to green, I don't want to have to shut my eyes while the light shuffles through red and orange and purple to get there. And in actual fact by the time you've taken that into consideration 99% of the moving lights are out of the window. It's the same with the gobos – they should be there in a blink. I think a Vari-lite changes in 0.1 of a second, which is faster than the persistence of vision. So it's fast, any colour and any gobo and that's what I need.

The VL2 was the first moving light I ever used so why settle for less. If someone can bring out another light that's got that as a given and then has other features as well, then I look at it, but otherwise I don't even bother.

"I suppose I keep up with the technology by a process of osmosis really. People talk about things & I check them out. But there is so much out there I freely admit I don't even bother with 70% of it. I have no idea, there may well be my absolute perfect light by a manufacturer I've never even heard of, but I doubt it."

Having lit for an 80,000 strong festival crowd on the biggest of scales, Liz revealed she equally enjoys the intimacy of small club shows.

"I like it all because on the big shows with the big budgets you get to indulge yourself creatively, I mean, that whole thing of setting the roof on fire, or a big pyro cue with rockets coming from a FOH tower smashing into the stage and then the whole rig would catching fire is great, but you can't do that in a club. But in terms of the vibe, I love club tours."

Following the conclusion of this tour Liz has scheduled a break for herself and will take three months to make her way back to England.

"I haven't had a break in about 2 years, & it's mostly due to Robbie's tour schedule because as soon as we finish one thing there's always just another show and then another show. You keep thinking between shows you'll have time to do something else but then another show will pop up and it takes nearly as long to design a one-off as it does to design a tour, and it's all the little one-offs that eat your time."



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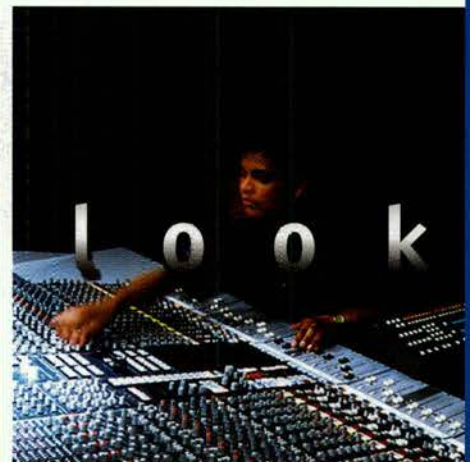
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PLASMA STILL TOO EXPENSIVE'

Survey of potential us buyers of plasma displays show huge interest, but not at current prices.

According to a survey recently completed by US market research firm Pacific Media Associates, potential buyers of plasma displays for home/general use will spend only about half as much as the industry has been assuming.

For years the industry has expected that when the price reaches US\$100 per diagonal inch the market will take off. Of those surveyed, only 33% of consumers intending to buy a 37-inch plasma TV would spend US\$3,000 or more, and only 29% of those intending to buy a 50-inch model would pay US\$5,000 or more. However, three quarters (75%) would shell out US\$1,500 or more for the 37-inch model and 65% would pay US\$3,000 or more for the 50-inch one. This research suggests that plasma manufacturers would do well to reset their expectations of a take-off point to the US\$45-60 per diag. inch range.

US price drop for 61" Plasma

The US arm of NEC recently dropped the price of its 61" Plasma by US\$8,000 to US\$19,995. At press time, NEC Australia could not confirm if the price drop would flow through locally.

Distribution of LG in Australia

Image Design Technology P/L (IDT) of Chatswood, NSW have announced an Australia wide distribution agreement with LG Electronics Australia for the LG Range of Plasma Displays, LCD Flat Monitors and LCD Projection Technology.

LG will be releasing a new range of "high quality, high-resolution display technology". Starting with the all new 40PA10, a 4:3 aspect Flatron Plasma through to the 60PZ10 a 16:9 HDTV ready Flatron Plasma.

IDT's focus will be through their existing reseller network of audiovisual specialist and systems integrators. Mr. Gerry Wilkins, Managing Director of Image Design

Buhl Optical Introduces Large Venue LCD Projector Lenses

Buhl Optical has introduced its latest advance in LCD projection lenses, a series of large aperture, multi-element Large Venue lenses. This series of larger diameter, super bright lenses is compatible with the newest and brightest Large Venue LCD projectors. Buhl's 4-7" (102 mm-178mm) and 7-12" (178mm-305mm) long throw lenses and 1.5" (38mm) and 2.1" (53mm) wide-angle lenses are high quality solutions typically used to project giant video and data images in large rooms from long distances to the screen.

These super bright lenses are available for projector brands such as: Eiki, Sharp, Sanyo and Proxima. For more information, contact Buhl at +1 412 321 0076.

Digital Projection finds a home

The Imax company, Digital Projection lost its representation in Australia when Gearhouse was put to sleep earlier this year. Since then, they have searched for a company to take up distribution, and they have finally found one - SLATS (Stage Lighting and Theatre Sound) in Sydney. For more information contact them on +61 2 9319 4244

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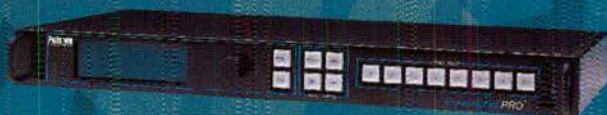
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Epson EMP-810

Epson have made some interesting entries into the projector market of late. Their latest portable projector – the EMP-810 – comes with most of features you could want for this type of device, but how does it stack-up on the testbed?



Measured Brightness:

ANSI Lumens Calculator			Image Size (m)	
2960	3100	2900		0.6
3020	3100	2900		
3050	2840	2870		
0.8			0.8	

Av. Lux: **2971.11**
 Image Area (m²): **0.48**
 ANSI Lumens **1426.13**

Specified Brightness: 2000 ANSI Lumens

Contrast: 400:1 (specification)

Native Resolution: 1024x768

Imaging Type: 3xLCD chip (0.9")

Lamp Type: 200W UHE (1500hrs)

Dimensions: 349x104x274(WxHxD)

Physical Weight: 4.2kg

Speakers: 1x 5W

Vision Inputs: 1xDVI, 1x RGB/Component (15pinHD), 1x Video (RCA), 1x S-Video

Vision Outputs: 1x RGB (15pinHD), 1x Video (RCA)

Vision Source: All standard TV, and computer signals up to UXGA

Operating Noise: 52dB SPL ('A' weighted at 1m from air vent)

Price (RRP): \$12,293

Sales Enquiries: +61 2 9903 9000

Internet: www.epson.com

This unit was tested using
 Displaymate Multimedia Edition
www.displaymate.com

The simple answer to that question is "quite well". This projector uses 3x 0.9" LCD 1024x768 (XGA) panels and some very fine optics to produce a very impressive picture. On first running of the device, one of the initial options that was discovered was various different preset "Color Modes".

These were different colour balances that were notionally for different applications. Of the six options available (sRGB, Normal, Meeting, Presentation, Theater and Amusement), the mode chosen for the testing was 'Amusement', because I found it to be the most neutral colour balance of the options.

Having given the projector some minor additional tweaks for brightness and contrast, the image reproduction on standard video sources (composite, Y/C and component) was quite good. The projector coped with a myriad of image movement types and brightness depths with ease. The contrast of the projector also looked to be very good. This was shown via reasonable image reproduction in dark scenes.

On to analogue computer output testing, and the projector continued to show off a good pedigree. Excellent pixel reproduction and colour depth meant the projector performed well in all test screens used (test software – Display Mate, Multimedia edition). The only identifiable fault was an unusual shadow effect on grey or mid-tone backgrounds – black pixels would have a light shadow to

the right while white pixels would have a dark shadow. This is the first time I have seen this effect in this particular form. Because the effect is limited to precisely one pixel width, it is likely that it is caused by on-board electronics decoding the RGB signal. This fault was very minor, and I had to be right next to the screen to see the effect, so it would be invisible over standard viewing distances.

I had one complaint with the documentation that comes with the projector. One of the 15pin HD connectors on the back doubles as both a computer video input, and as the component video input.

However, there was no documentation to indicate on which pins the Component video was located. Using a RGBHV moulded cable with the 15pin HD plug at one end and 5x BNCs at the other, I was able to eventually work out the three signals – "Y" was on the green BNC, "CB" on the blue and "CR" on the red.

The ability of the projector to reproduce a 256 grey scale was very good both vertically and horizontally. This, coupled with the excellent colour saturation and extremely good pixel registration (RGB overlay) would make this little projector ideal for precision graphics situations.

Another plus for this projector was that the listed brightness was reasonably close to measured levels of the unit tested – a feat that most projectors seem unable to reproduce.

An easy unit to recommend.

MULTIMEDIA VISION SWITCHERS and MIXERS

This month's display technology Market Report takes a look at vision mixers that are designed to do more than simply mix or switch standard analogue sources. Each submission by distributors had to be for a device that could switch sources other than composite. Y/C or component video. Remember, the text here was supplied by the companies that sell the devices. Prices are RRP (inc GST).

Analog Way Graphic Switcher 2

Graphic Switcher 2 has been designed for today's staging needs, it facilitates the connection of up to 16 sources and allows the user to select an output resolution between HDTV and SXGA. All input sources whether composite video, SDI, HDTV or VGA-UXGA are ideally scaled to the native resolution of the display device. Numerous transitional effects including wipes, fades and titles are available from the front panel, remote T bar console or via RS232. A picture in picture function is a standard feature. Optionally available is a video out for recording or TV feedback purposes. Up to four tally outputs are assignable for on air feedback.

• \$40,150

Analog Way Smart Cut 2

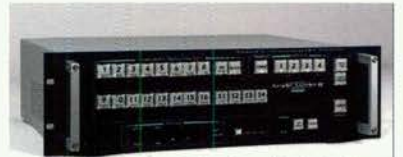
A seamless switcher which performs seamless cuts when switching from PC to video inputs. Smart Cut 2 performs scaling and switching functions, it up converts one of five video inputs from composite, component or S-Video to a resolution that matches one of the two computer inputs. Switching between video and computer then results in a

flawless glitch free switch. Smart Cut 2 also has audio follow or breakaway with attenuation control and master out. All functions including audio control are available via RS232 or an optionally available remote keypad.

• \$7,502

Analog Way Smart Fade

Smart Fade combines the functions of a scaler with a switcher, by up converting video to VGA-SXGA resolutions and performing seamless transitions with PC inputs. This avoids the loss of image quality often found with scan converting. Smart Fade has seven inputs consisting of two composite and two S-Video, one component and two computer inputs, all with audio following or breakaway. Three



Analog Way Graphic Switcher 2



Analog Way Smart Fade

Brands and Distributors represented in this report...

Analogue Way	AXIS Audio Visual	+61 3 9761 2688	www.axisav.com.au
Extron	RGB Integration Pty Ltd	+61 8 8299 0799	www.rgbintegration.com
Folsom Research	Technical Direction Company	+61 2 9698 5588	www.tdc.com.au
Sony	Sony	1800 017 669	www.sony.com.au/production

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Extron DVS 406



Extron ISS Series



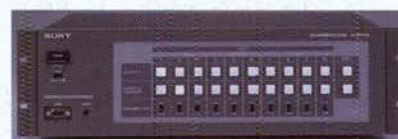
Extron SGS 408



Extron USP 405

Folsom Research:
PresentationPro
& ScreenPro

Sony DFS-700



Sony PVS-R102

effects may be selected from the LCD menu, a transitional fade with 0.5sec to 5sec duration, seamless cut and manual fade. A title effect is also available, where one source may be overlaid on top of another for titling purposes.

- \$10978

Extron DVS 406

Extron's DVS 406 allows seamless switching by a cut or variable dissolve between one RGB input and video inputs. Consisting of five inputs: one RGB pass through or HDTV color space on BNC's, one RGB pass through or component video input on BNC's, three composite or S-Video inputs on BNC's and the option of an extra SDI input. The DVS 406 provides 33 output rates, including HDTV and offers simultaneous outputs on a 15-pin HD connector and 5 BNC's. Additional features include Extron's 3:2 and 2:2 pulldown detection, Dynamic Motion Interpolation, and Accu-RATE Frame Lock.

- \$10,098

Extron ISS Series

Extron's ISS Series, comprising of the 108 and 408 are Integration Seamless Switchers that provide truly seamless, glitch-free switching between eight inputs, each of which is fully configurable for all video types. With 17 and 32 user selectable computer-video outputs respective of model, the ISS combines superior scaling technology with Extron proprietary technologies like 3:2 and 2:2 pulldown, Dynamic Motion Interpolation, and Accu-RATE Frame Lock. Incorporating features like 16 auto-memories per input, five test patterns for projector set-up, preview and program output the ISS Series is the seamless solution for professional presentations.

- \$17,017

Extron SGS 408

Extron's SGS 408 is an eight input, high-resolution component and RGB video graphics switcher that provides seamless cuts, dissolves, wipes and titles. The SGS 408 incorporates two video scalars and can handle NTSC or PAL component video and any RGB input to resolutions of 1600x1200 including HDTV. With Preview and Program outputs it performs twelve seamless dissolve, wipe and title effects. Additional features include test patterns, Accu-RATE Frame Lock, 16 memories per input and a Key capability for users to key text or graphics. For additional control there are optional remote and Event Control Panels.

- \$46,211

Extron USP 405

Extron's USP 405 allows the user to switch many different types of inputs. RGB signals that are input to the USP 405 undergo one of two signal conversion processes: they can be scaled to one of 35 output resolutions, or they can be scan converted to component, S-Video, composite and SDI video signal formats either NTSC or PAL. Video signals input as component, S-video, composite and SDI can be transcoded and output in each format simultaneously in NTSC or PAL. These signals can also be scaled to one of 35 resolutions and output

on 15-pin HD connectors and BNC's.

- \$14,113

Folsom Research - PresentationPro/ScreenPro

The Folsom range of products includes high resolution switchers and scan converters. These devices offer the ability to mix between video and data sources either by scanning the data down or scaling the video up. The mixers range from the seven input, single output (with video or data frame store) PresentationPro to the 16:3 ScreenPro Plus (with Picture in Picture). The ScreenPro Switchers provide preview, auxiliary and matrix outputs all user selectable at high resolution combined with seamless source transitions including cut, fade, dissolve and wipe effects. ScreenPro Plus options include Dual Down Converter Sdi Output Card, Scaler Card and Aux Remote.

- prices range from \$66,750 for the ScreenPro PLUS - 1201 to \$112,750 for the ScreenPro PLUS - 1603
- PresentationPro (Seamless Audio/Video Switcher) \$12,250

Sony DFS-700

DFS-700 is an easy-to-operate switcher incorporating the latest digital multi effects. Includes full component digital processing, 100s of preset special effects, 16:9 or 4:3 operation, a wide range of signal input/output requirements. A base system includes creative tools for digital effects, Color Correction, Frame Memory, Editor Interface, Test Generator, DSK and Fade to Black. Designed to support Pre-read editing with Digital VTRs. Along with Preview, a Tally output is provided for live applications and the standard Editor interface makes the DFS-700 a powerful tool for any application. The system comes with 8 inputs - 4x SDI, 4x analogue. Optional boards for up to 8 further inputs. Outputs include 2x SDI, 2x analogue component, 2x composite, and 2x Y/Cs. Real-time true 3D page turns and effects in an instant. Further optional boards give over 700 pre-programmed special effects.

- base option \$30,000
- fully loaded \$50,000

Sony PVS-R102

The PVS-R102 is a 10 x 2 Matrix Switcher, designed to enhance the flexibility of multimedia presentation systems in conference rooms, lecture theatres and display areas. Easy to operate, it features RGB, component and composite video inputs together with associated audio inputs, including surround sound (5.1) inputs for use with DVD players. Both local and remote selection of inputs is provided, and a built-in composite to component converter ensures optimum image quality when displaying composite input signals. Inputs: 4x RGB, 2xComponent/Composite, 4x Composite, Output 1: RGB/Component plus separate Composite (selected Video Input). Output 2/Monitor: RGB/Component plus separate Composite (selected Video Input). High-resolution component signals, such as 480p or 1080i, and RGB signals with bandwidths up to 150 MHz (1280 x 1024 pixels, SXGA) can be handled by the PVS-R102. RS-232C controllable. 3RU.

- \$6,050

BIG PA LOUDSPEAKERS

It's HUGE! This month's Market Report surveys Big 'n' Loud PA Boxes. Our criteria for the Big PA Boxes Report was: Powered, unpowered, PA systems & composite across three categories: Powered, Unpowered and Stage Monitors. The restrictions for the report were that the boxes had to be 500W RMS or over, passive or active. We had to use our discretion re what complied and what did not!

Some boxes here are not physically big but are a high performance loudspeaker. We have tried to draw a line between large and smaller PA system cabinets. Our June 2002 Market Report will feature smaller PA boxes, so if the system you were expecting to see is not listed it will probably appear then.

UNPOWERED SYSTEMS

Acoustic Technologies FR07

The FR07 is a finely tuned full range enclosure fitted with two high powered 15" bass drivers and an extremely efficient 2" HF compression driver coupled to a high density, 90° x 40° controlled dispersion horn flare. The FR07 has a 1700w power handling capability combined with ultra low distortion and a smooth, extended frequency response. The FR07 is the ideal loudspeaker system for dance clubs, live music venues, corporate installations or houses of worship. Sound rental companies love the versatility and ease of transportation offered by the FR07.

- \$4145

Acoustic Technologies HL03

The HL03 is a high power, compact 3-way loudspeaker system designed to reproduce the most challenging musical material with very low distortion and high vocal intelligibility. The HL03 features an extended range 15" bass driver, a 6.5" midrange device optimised for horn loaded applications and a 1" HF compression driver. Total power handling is 1000w. This quality loudspeaker cabinet exhibits finely detailed, transparent mid-high reproduction, complementing tight, well defined bass performance, making it an ideal choice for all pro audio applications including live music reproduction, dance club installations, sporting events, theme parks and multimedia events.

- \$2975

Acoustic Technologies MH09

The MH09 Concert Mid-High is a trapezoidal, horn loaded enclosure with a 30° horizontal dispersion and comprehensive flying hardware capabilities, ideal for critical large scale array applications. The low mid section consists of two high powered 10" transducers, each coupled to its own waveguide. High frequencies are handled by a 2" Neodymium HF driver and high density, constant Q waveguide. Ideal with Acoustic Technologies GROUNDSWELL Low Frequency Delivery System. This cabinet features 2x 1400w, 18" subwoofers in an enclosure tuned for full power bandwidth to 30Hz. GROUNDSWELL is a no compromise solution for all extreme sub-bass requirements.

- MH09 — \$6900
- GROUNDSWELL — \$4999

Acoustic Technologies MLA01 Micro Array

The Acoustic Technologies MLA01 Micro Array is a 3-way active speaker enclosure implementing the

exacting line array principle. A proprietary waveguide in the centre of the cabinet is the heart of the system providing a seamless ribbon of high quality sound at 1000Hz and above. The waveguide is flanked on either side by a 10" neodymium bass transducer providing extended LF response to 50Hz. MLA01 Micro Array can be matched with the BB05 sub-bass cabinet, a highly engineered and innovative enclosure employing 2x 1400w, 18" woofers. The BB05 provides full power response to 35Hz under high level, high excursion signal conditions.

- MLA01 Micro Array — \$3995
- BB05 Sub — \$4400

ARX 212 Concert Series

Powerful, processor controlled, Mid/High pack with 2 x 12" Mid drivers with ARX PowerDome phase

Compiled by Daniel Grafton



Acoustic Technologies FR07

Brands and Distributors represented in this report...

Acoustic Tech.	Acoustic Technologies	+61 7 3376-4122	www.acoustic-tech.com.au
American DJ	LSW	+61 2 9568 2100	www.americandj.com
ARX	Resource Corp (Eastern States)	+61 3 9877 8233	www.arx.com.au
ARX	Audio Source (WA)	+61 8 9354 3185	www.arx.com.au
Bose	Bose	+61 2 9204 6111	www.bose.com
Celestion	Network Entertainment Technology	+61 2 9905 5997	www.network-et.com
Cerwin Vega	Audio Products Australia	+61 7 5529 8788	www.audioproducts.com.au
D.A.S.	Magna Systems and Engineering	+61 29417 1111	www.magnasys.com.au
EAW	Production Audio Services	+61 3 9415 1585	www.productionaudio.com.au
Electro Voice	EVI Audio	+61 2 9648 3455	www.eviaudio.com.au
Elliott Sound	LSW	+61 2 9568 2100	www.sound.au.com
FBT	LSW	+61 2 9568 2100	www.fbt.it
Fender	Fender Australia	+61 9666 5077	www.fender.com
Funktion-One	Funktion One Australia	+61 3 9379 2433	www.funktion-one.com
HK Audio	Audio Products Australia	+61 7 5529 8788	www.audioproducts.com.au
JBL Professional	Jands	+61 2 9582 0909	www.jands.com.au
Klipsch	Network Entertainment Technology	+61 2 9905 5997	www.network-et.com
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Martin Audio	Technical Audic Group	+61 2 9810 5300	www.tag.com.au
Meyer	Meyer Sound Australia	+61 7 3252 4493	www.meyersound.com.au
MTS	Network Entertainment Technology	+61 2 9905 5997	www.network-et.com
Nexo	Group Technologies	+61 3 9381 4911	www.gtaust.com
Peak	Central Music Instruments	+61 3 9315 2244	www.cmi.com.au
Proel	Central Music Instruments	+61 3 9315 2244	www.cmi.com.au
Renkus-Heinz	Audio Sales and Marketing	+61 2 9585 1011	www.asmaust.com
Tanroy	Syntech International	+61 2 9417 4700	www.syntech.com.au
Turbosound	Audio Telex Communications	+61 2 9647 1411	www.audiotelx.com.au
Yorkville	Dynamic Music	+61 2 9939 1299	www.dynamicmusic.com.au

Big PA Loudspeakers



Bose 4432-II

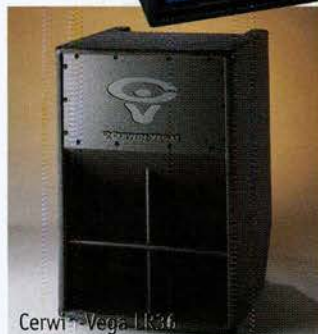


Bose 9702-II



Celestion
CXi 1C22

Celestion
CXi 1811



Cerwin Vega LK36

plugs, and 1 x 2" Ferro cooled HF driver. The 212 has a unique one piece fiberglass flare moulding for maximum strength and accuracy, and shares a common footprint and frontal area with the other ARX Concert Series cabinets. Complete with flying points. ARX speaker systems are made in Australia and sold all around the world. They are one of the very few pro audio companies whose pricing has actually gone down since the introduction of GST! Uses the LSP-2 ISC processor

- \$3944

ARX 218 Concert Series

A reflex loaded, processor controlled 2 x 18" sub-bass pack for LF enhancement of the 922 or for use as a system with the 212 Mid/High pack. Uses LSP-1 ISC processor. The 218 is designed for those times when only 18's will do!

- \$4148

ARX 922 Concert Series

This compact but powerful processor controlled active 2-way, physical 3-way loudspeaker uses 1 x 15" LF driver, 1 x 12" Mid driver with ARX Power Dome phase plug, 1 x 1" Ferro-cooled HF driver on modified flat front radial flare. The ARX 922 shares a common footprint and frontal area with the other ARX Concert Series cabinets and ships complete with flying points. Uses the LSP-2 ISC processor.

- \$4320

ARX 925 Concert Series

A trapezoidal, processor controlled 2 x 15" triple chamber band-pass bass pack for LF enhancement of the 922 or for use as a system with the 212 Mid/High pack. The ARX 925 has a matching footprint and frontal area for easy clustering and shares a common footprint and frontal area with the other ARX Concert Series cabinets. Complete with flying points. Uses the LSP-1 ISC processor.

- \$3614

Bose 3202-II

The Bose 3202-II loudspeaker is a mid/HF component of the Panaray LT system that can be used in either in a passive 2-way or bi-amplified configuration. Required active equalization can be provided by the Bose 1800-V amplifier or by 4-6 bands of parametric equalization plus a high-pass and low-pass filter. Freq. range: 160Hz to 16kHz (\pm 3dB); Crossover freq. 2kHz; Nominal impedance — as Passive 2-Way: 16 Ω ; Bi-amplified: Mid-freq - 16 Ω , High-freq - 8 Ω . Maximum acoustic output; as Passive 2-Way — 134dB SPL, 1m (rms) and 140dB SPL, 1m (peak). In Bi-amplified mode; 134dB SPL, 1m (rms), 140dB SPL, 1m (peak).

- \$7456

Bose 4402-II

The Bose 4402-II loudspeaker is a mid/HF component of the Panaray LT range and can be used in either a passive 2-way or bi-amplified configuration. Required active equalization can be provided by the Bose 1800-V amplifier or by 4-6 bands of parametric equalization plus a high-pass and low-pass filter. Arrays of 4402-II loudspeakers are ideal where speaker-to-listener distance is greater than 75 feet. Freq. range: 160Hz to 16kHz (\pm 3dB), Crossover freq. 2kHz; Impedance: as a passive 2-Way — 8 Ω ; Bi-amplified: Mid-freq - 8 Ω , High-freq - 8 Ω . Maximum recommended amplifier power: Passive 2-Way, 600w into 8 Ω ; Bi-amplified, Mid-frequency 600w into 8 Ω , High-frequency 150w into 8 Ω .

- \$6218

Bose 502 BE Environmental Acoustimass

The 502BE Environmental Acoustimass bass enclosure is designed for outdoor installations and an integral component of the Panaray LT system. Inside the 502BE loudspeaker is a high power 12" woofer

that provides high acoustic output with minimal distortion and compression. The low cutoff frequency (150 Hz) makes the 502BE loudspeaker a hard-to-localize bass source allowing for placement flexibility. Frequency range: 55Hz-150Hz; Impedance, 8 Ω ; Maximum output: 115dB-SPL average, 122dB-SPL peak; Recommended amplifier power, 450-1200ws continuous into 8 Ω ; Sensitivity: 90dB-SPL, 1W, 1m, 55Hz - 150Hz. Features include: Rugged enclosure of phenolic resin-impregnated fibre-board (waterproof) finished with black-scratch resistant vinyl; Neutrik Speakon NL-4 input connector.

- \$2652

Bose 9702-II

The Bose 9702-II is a mid/HF component of the Panaray LT system and can be used in either a passive 2-way or bi-amplified configuration. The 9702-II loudspeaker requires active equalization either from the Bose 1800-V amplifier or by 4-6 bands of parametric equalization plus a high-pass and low-pass filter. Frequency range: 180Hz to 16kHz (\pm 3dB); Crossover frequency 2kHz; Impedance: Passive 2-Way - 8 Ω ; Bi-amplified: Mid-frequency, 8 Ω ; High frequency, 8 Ω ; Maximum output: Passive 2-Way - 128dB SPL, 1m (rms), 134dB SPL, 1m (peak); Bi-amplified - 128dB SPL, 1m (rms), 134dB SPL, 1m (peak). In arrays, and combined with the 502 BE, Bose 9702-II's are ideal for uniform coverage and high fidelity sound.

- \$5902

Celestion CXi 1022

A slimline mid-high loudspeaker for demanding high SPL applications designed to be used with a separate bass loudspeaker for full-range high power sound reinforcement. Features: Dual 10" bass-mid drivers and a 2" compression driver; Rotatable horn of either 60°H x 40°V or 40°H x 60°V HF dispersion. Performance: Power LF: 500w, HF: 120w 500w; Sensitivity (1W/1m): 102dB; Maximum SPL (short term) 129dB; Impedance 8 Ω . Recommended active crossover points: 120Hz, Passive 2-way, 2.2kHz. Designed for use with an active crossover or available with an internal passive crossover for driving off one amplifier channel. Constructed from 18mm void-free birch plywood and fitted with 12 x M10 steel reinforced flypoints. 38kg

- \$3799

Celestion CXi 1812

This dual 18" dedicated sub-bass loudspeaker is designed for powerful LF reinforcement. Its powerful magnet structure was developed using finite element analysis for optimum flux distribution. Performance: Power 1200w; Sensitivity (1W @ 1m) 101dB; Maximum SPL (short term) 132dB; Nominal Impedance 4 Ω ; Freq. Range 30Hz - 500Hz; Drivers 2 x 18"; Connectors 2 x Neutrik Speakon 4. Rectilinear construction from 18mm void-free birch plywood finished in black texture paint. (H x W x D) 644x1130x580mm Designed for use with an active crossover. 68kg

- \$3999

Celestion CXi1531

The CXi1531 is a 3-way, 15" full-range loudspeaker for high power sound reinforcement applications. Features: 15" LF driver with a 4" voicecoil; 8" mid-frequency driver with 2.5" voicecoil, and a NoBell horn that offers full-range performance. Power: 750w; Sensitivity (1W @ 1m): 100dB; Maximum SPL (short term) 128dB; N Impedance: 8 Ω ; Freq Range 45Hz-20kHz; Crossover: Passive 2-way using polypropylene capacitors and air cored inductors; Dispersion, H x V 70° x 50° rotatable. The CXi1531 can be operated in mono-amp mode, or in bi-amp mode using an external active crossover. Construc-

tion: 18mm void-free birch plywood in a 20° Trapezoid Shape. Connex are Neutrik Speakon. 69Kg.
• \$4499

Celestion CX11811

A high efficiency 18" horn loaded bass bin with 4" voice coil and 18" driver, the CX11811 is suitable for use as a stand-alone speaker or in large arrays for maximum bass reinforcement. Design features: Compact long folded horn enclosure; Power 600w; Sensitivity (1W/1m): 104dB; Maximum SPL (short term): 131dB; Nominal Impedance, 8Ω; Frequency Range 45Hz - 450Hz; Connectors: 2 x Neutrik Speakon 4. Constructed from 18mm void-free birch plywood in a rectilinear shape and finished with black texture paint. Dimensions: H x W x D 750 x 522 x 780mm Designed for use with an active crossover. 60kg
• \$2999

Cerwin-Vega LR36 – 18" Folded Sub Woofer

For decades Cerwin-Vega has maintained high standards for its bass horn technology with the well known L36PE "Portable Earthquake" & its successor, the SL36B. Now the "Earthquake" performance is available in a compact 18" folded horn. The new LR36 uses a newly designed 18" woofer with clean output at 35Hz, and a unique bias control system for improved linearity & accurate "Punch". The LR36 is recommended in all applications requiring a compact cabinet featuring high acoustic output. Low distortion, and cost effectiveness in a highly portable system.
• \$2,199

Cerwin-Vega SL36B "Portable Earthquake"

Cerwin-Vega's respected bass horn technology is exemplified by the well regarded L36PE and SL36 "Portable Earthquake" horns. For the SL36B "super-sub", Cerwin-Vega has developed a new 18" woofer with more output at 30Hz and a unique dual action bias control system for improved linearity and accurate "punch". The new 18" driver, in conjunction with numerous innovations inherent in Cerwin-Vega bass horns, results in unrivalled performance. The SL36B should be arrayed in groups of two or four and is recommended for all applications requiring high acoustic output, low distortion, and cost effectiveness in a high powered portable system.

• \$2,799

Cerwin-Vega V152

The V152 is a high performance 15", 2-way that uses proprietary transducer design technology. A rugged diecast woofer frame provides rigidity & precision for tighter tolerances & higher efficiency, which produces high output bass frequencies as well as reliability over the long term. In order to attain a smooth response at high SPL levels, Cerwin-Vega also developed a proprietary spherical waveguide tweeter horn flare that provides high HF output that can "keep up" with the low end. Furthermore, the wide dispersion characteristics of the spherical waveguide make the V152 an excellent choice for full range nearfield applications. The V152 handles 600w peak.
• \$1,099

Cerwin-Vega V252 – Dual 15" Full Range Speaker

High efficiency, wide dynamic range, generous power handling, solid bass. The new V252 combines these Cerwin-Vega traditions in a complete, full range system featuring two spectrum shaded 15" low-frequency drivers and the sparkling high-frequencies of the bi-morph spherical wave guide. The V252's 15" drivers are carefully optimised for smooth, extended midrange response without the brash, fatiguing "honk" of conventional 15" systems. The bi-morph spherical waveguide is like no other HF device. It maintains wide dispersion and excels above 8kHz – the most demanding frequencies to project, where the atmosphere is soaking up sound and most compression drivers are beaming and running out of steam.
• \$2,099

D.A.S. ST-215

The D.A.S. ST-215 is a 800w/200w 15", 2-way with a 2" neodymium magnet compressor driver. Average power handling is 800w (RMS). IEC on-axis frequency response is between 80 Hz - 20 kHz and On-axis sensitivity (1W/1m) is up to 108 dB SPL. Coverage angles are 45° horizontal and 40° vertical (average of 1/3rd octave bands from 500 - 8 kHz) and the nominal impedance is 4Ω for the LF section and 16Ω for the HF section. Features the ND-8 large format compression driver and 4" voice coil assembly designed for high power handling and 2" elliptical waveguide Twin B-30 (15") cone transducers for low-



Cerwin-Vega V152



DAS ST-215 & DAS ST-218



EAW Avatron



Fat Frog

- 24/48 Control channels (48 in wide mode)
- The ability to control 12 moving lights
- An effects generator
- A fixture library
- 9 pages of 12 submasters
- Softpatch to 512 DMX channels
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- Floppy disk drive
- Up to 999 Memories
- Super user functions
- Twin isolated DMX Outlets
- Monitor output & keyboard input



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Big PA Loudspeakers



ESP E4215



EV X-Array



EV Xi-Series



Fender SPL Series 1226 Mk.II

mid frequencies.
• \$5500

D.A.S. ST-218

Part of the Sound Touring Series the ST-218 bass system incorporates two 18" cone LF transducers providing efficiency, enhanced pattern control and high definition. Speaker frames are die-cast aluminium with a 4" diameter LF voice coil. AES power handling (based on a two hour test using a band-limited 6 dB crest factor pink noise signal) is 600w for the LF transducer, for a total system power of 1200w. Nominal on-axis frequency response is 35 Hz to 300 Hz. On-axis sensitivity (1W / 1m) is 102 dB SPL. Nominal impedance is 4Ω. System drivers are mounted as horn-loaded radiators and the enclosure material is Wisa Birch Plywood.

• \$2400

EAW Avalon

The Avalon line of loudspeaker systems is designed for high-energy dance clubs. Avalon line comprises bottom-heavy systems with double the number of woofers per system to deliver the beat as a physical concussion. The flagship DC1 employs the mid/high components of the traditional 3-way system with four 15" woofers. Simultaneously, EAW engineers have created a subwoofer system optimised to deliver 50 Hz and up, enhancing response in the critical 50 – 200 Hz region. There are 9 Models in the Avalon range, from the DC1 – Quad 15" with single 10" & 2" compression driver through to the DCT2 with Triple Super HF drivers.

• \$1,995 to \$19,995

EAW KF650z

A 3-way full range system in a vented trapezoidal enclosure. Includes a 15" woofer, vented, a horn-loaded 10-in midrange cone and a 1.4" exit compression driver on a 60° x 40° constant directivity horn. Powering mode is switchable: bi-amplified (passive LF/MF crossover) or tri-amplified. The KF650z Virtual Array system's true 3-way design dramatically improves the quality of vocal reproduction while its cone-driven midrange horn and horn-loaded woofer extend pattern control into the lower octaves. 1 x 15", Vented; MF Subsystem 1x 10-in Horn-Loaded Cone; HF Subsystem 1x 1.4" Exit Compression Driver on Constant Directivity Horn.

• \$10,995

EAW KF750

The KF750F 3-way tri-amplified full range system contains new EAW technologies that make it a powerful concert touring sound reinforcement tool. Its Acoustic Singularity design aligns the three subsystems along a single axis so the KF750 acts as a true point source, greatly reducing temporal smearing and improving overall clarity and impact. The KF750F's 15°-per-side trapezoidal enclosure features eight 4-position flytracks that accept industry-standard flyclips. Configuration: 3-Way, Full Range, LF Subsystem 2x 12-in Cones, Dipolar Array, Vented; MF Subsystem 10-in Cone, Radial Phase Plug, Horn-Loaded; HF Subsystem 2-in Exit/100mm Voice Coil Compression Driver on CD Horn. Trapezoidal cabinet.

• \$15,000

EAW KF760

The KF760 Series is a high output touring line array scalable from theatres under 1,000 seats to stadiums. The KF760 Series uses advanced divergence shading where all loudspeakers are powered at equal level. This provides uniform sound from directly beneath an array out to hundreds of feet without complex signal processing. Vertical coverage is set by varying the splay of the rear of the enclosures, leaving the fronts tight-packed. The KF760 is designed for use

with the near-field KF761. LF Subsystem 2x 12-in Woofer, Horn-loaded; MF Subsystem 2x 10-in Cone, Radial Phase Plug, Horn-Loaded; HF Subsystem 2x 2-in exit/75mm Voice Coil Compression Driver, Horn-loaded.

• \$18,000

ESP E4215

Awesome 2 x 15" speakers that are big on bottom end punch, crystal clear mids & highs. 104dB sensitivity; 400w RMS rated power, 800w RMS maximum power. Weight 36kg. Dimensions: 480 x 410 x 1080mm. Made in Australia.

• \$ 1999 pair

EV Mongoose EVO3

The Mongoose EVO3 is a compact, trapezoidal two-way high-efficiency constant directivity stage system. With a nominal impedance of 4Ω, EVO3 incorporates a passive crossover network optimised for a smooth and accurate response. Bi-amped operation is also possible by way of a high power-handling switch. Power handling limit: 2000w program. The Mongoose EVO3 offers extremely wide-range music reproduction as well as accurate vocal coverage and maximised intelligibility, ideal for any professional touring or installation application requiring accurate, high-level sound reinforcement. Accessories: HST-5 hanging system kit; WB-1 Wheel board for easy moving and enclosure protection.

• \$5175

EV QRx112/75

This 12", 2-way incorporates EV's DL 12BFH woofer and the large format DH7 horn driver and can be used with additional subs or stand-alone for monitoring or supplementary systems. Because of its enclosure, the QRx112/75 can be used as a floor monitor, in clusters or when limited clearance/sight-line demand careful placement. High sensitivity, ultra-linear frequency response. Solid bass below to 46Hz (-10dB). Easy external operation mode selection. 3.5" voice coil (titanium diaphragm). Consider also the QRx218S subwoofer for the QRx112. It is the most powerful in EV's line-up and includes a direct radiating, vented design that produces solid bass to 35 Hz (-10dB).

• QRx112/75 — \$3399

• QRx218S Sub — \$3999

EV X-Array

The X-Array, X-Series speaker systems provide high-end performance and flexibility for concert touring systems. X-Array, X-Series design features include high acoustic output capability with neodymium magnets for very large arrays, high fidelity in a relatively lightweight, compact enclosure. The X-Array incorporates EV's Ring-Mode Decoupling technology (RMD), part of EV's traditional top-down development strategy that brings acoustic advantages to other EV products. X-Array™ has excellent acoustic output and high directivity control. Includes custom designed rigging hardware allowing "one-man" rigging capability. For additional easier handling special speaker dollies are available.

• From \$6,899

EV Xi-Series

The Xi-Series brings touring-quality sound to installation contexts and incorporates high-output and ultra-linear short-, medium- and long-throw systems, in two-, three- and four-way configurations. The Xi-Series incorporates EV's Ring-Mode Decoupling technology (RMD) HP horns for secure directivity control and even coverage. The Xi Series utilises a full-range Vented slot load designed LF enclosure; Coaxial horn-loaded MB/HF section fully rotatable, 3-way high-output; 3.5" voice coil; vertical directivity

5.1 Surround Mixer



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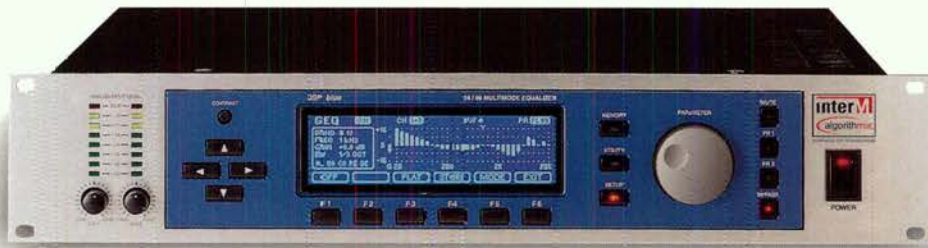
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control below to 200 Hz. The Xi-2181 Subwoofer includes a manifolded, vented design, excellent linear excursion and accurate transient detail.

- Xi — \$11,860
- Xi 2181 Sub — \$5511

Fender SPL-215s

The Fender Tour Series SPL-215s is a top of the line subwoofer designed for demanding concert sound applications. The loudspeaker utilises a bandpass design with a frequency response of 35Hz - 170 Hz +/- MB. Sensitivity is 101dB (1w/lm) and is rated for 800w power handling per E.I.A. RS426 and 1600w program. Maximum dB SPL output is 130dB. The cabinet is constructed of Baltic birch plywood and is covered in a durable black paint.

- \$1699

Funktion-One F218

A ground stackable, double 18"± (800w @ 4Ω) bass enclosure. Featuring neodymium magnets on drivers. Frequency response 40Hz to 280Hz. Self powered versions available on request. The F218 is extremely robust and can deliver large quantities of tight, punchy, well-defined bass. The F218's enclosure is quite small for a horn loaded bass box, and is visually stunning. Single 18" versions are also available. Ships complete with integral handles and wheels.

- \$7,900

Funktion-One Resolution 2

Compact, full-range, bi-amped enclosure, containing 15"± bass driver (400w @ 8Ω), horn loaded 8"± mid driver and passively crossed 1"± horn (120w @ 12Ω total). Constructed from 15mm birch, with large integral handles for ease of handling. Dispersion: 50° H, 25° V. Optional wheel-board, flying yoke or stand mount available. Resolution 2's compact size and low weight (just 42kg) belie the huge sound that this speaker box produces. The combination of new driver construction and an improved wave-guide system enable this single box system to deliver exceptional sound with an amazing amount of bass.

- \$8,680

Funktion-One Resolution 4

Companion product to the Resolution 5. High powered, medium throw 3-way enclosure. Consisting of a 12"± horn-loaded low-mid device (300w @ 8Ω), an 8"± horn-loaded mid-range device (200w @ 16Ω), and a 1"± horn (50w @ 16Ω). Dispersion: 50° H, 25° V. Includes wheel-board, captive lead and integral flying system. Dimensionally identical to R5 & R18. Produces the same brilliant sound, with the same flying system as Resolution 5, however the wider dispersion suits lower SPL environments. As with the R5 & R18 the unit is designed to truck pack. 60 cabinets will fit on the "dancefloor" of a 45' pan-tech!

- \$14,400

Funktion-One Resolution 5 & Resolution 18 Sub

Both part of the Touring Resolution Series, the Resolution 5 is a High powered, long throw 3-way enclosure. Consists of a 12"± horn-loaded low-mid device (300w @ 8Ω), an 8"± horn-loaded mid-range device (200w @ 16Ω), and two 1"± horns (100w @ 16Ω total). Dispersion: 25° x H, 25° x V. Includes wheel-board, captive lead and integral flying system. Dimensionally identical to R4 & R18. The Resolution 18 sub is a single 18"± (400w @ 8Ω), horn loaded bass enclosure to be flown with Resolution 4 & 5. Includes wheel-board, captive lead and integral flying system. Dimensionally identical to R4 & R5. Frequency response 45Hz - 114Hz.

- Resolution 5 — \$15,800
- Resolution 18 Sub — \$10,300

JBL Array Series (Mid sized venues)

The Array Series of loudspeakers provides high quality sound reinforcement solutions for both installed and live sound applications. Each Array series full bandwidth cabinet features Optimised Aperture Bi-Radial Horns in both 45 x 35 or 90 x 40° coverage patterns, and neodymium based 14" LF cone drivers. All Array series components include JBL's S.A.E.E. flying hardware system. Suitable for in Concert Halls, Worship Spaces, Arenas, and almost any application where high quality sound is important. The Array Series includes the 4892 (1 x 14" LF 2-way), 4894 (2 x 14" LF 2-way), and the 4893A sub-woofer.

- 4892 — \$7945 • 4894 — \$11,995 • 4893A Sub — \$5195

JBL SRX Series

The new SR-X Series was designed for these most discerning users, with 11 models that embody engineering, proven tour sound performance, reliability and value inherent in the JBL name. The SR-X line includes an extensive range of high performance portable speakers for virtually every application. Whether your needs call for subwoofers, front-of-house systems or stage monitors, you can be assured that each component in the SRX series represents the highest standards in portable PA systems Suitable for musicians, DJs, clubs and institutions who demand the best portable speaker systems.

- From \$2,995

Klipsch KI 362 & KI 215

The KI 362 is a compact trapezoidal three-way featuring a 15" high excursion woofer and 1.5" midrange compression driver (titanium diaphragm) on a 90° X 60° Tractrix Horn, and a high sensitivity 1" titanium diaphragm HF compression driver on a 90° X 60° modified Tractrix Horn. The KI-362's midrange and high-frequency devices are mounted on a circular baffle module for flexible usage and suspension capability is via 12 built-in 3/8" 16-thread fly points. For extended low-freq performance, the KI-362 is size, shape & acoustic output-compatible with the Klipsch KI-215 LF speaker system, using an external active two-way Xover.

- KI 362 — \$3499
- KI 215 — \$3299

Klipsch KP480BX

Klipsch's KP-480 is a high-output bass reflex speaker system that combines an 18" (46cm) woofer with a down-firing 15" (38cm) passive radiator. This unique design produces extended LF response and higher output from a smaller and lighter enclosure than can be achieved with more conventional vented designs. The KP-480 passive crossover is set at 150Hz with a slope of 12dB per octave for the woofer and 6dB per octave for any full-range speaker system connected to the HF output section. The crossover also allows the addition of a subwoofer to just about any system without the complications and expense of bi-amping.

- \$2599

Klipsch KP682A

The Klipsch Professional KP-682 is a high output, bass reflex subwoofer system featuring advanced LF driver design that augments the LF bandwidth with a smooth, low distortion response down to 40Hz (-10dB @ 30Hz). Features: 2x400w 18" (460mm) woofers; geometrically optimised magnet structures & lightweight cones that efficiently converts electrical power into sound whilst reducing distortion and heat build-up associated with power compression. The enclosure is constructed of one" (25mm), void-free birch plywood and the cabinet is fitted with high quality casters.

- \$4999

Mackie Vision Series PA152



Klipsch KI 215



Mackie Vision Series PA152

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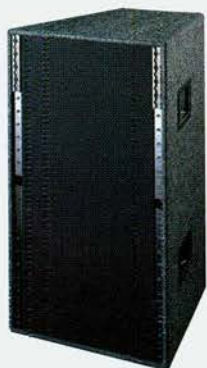
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Big PA Loudspeakers



Nexo Alpha System M3 Mid/Hi



Nexo Alpha System S2 Sub Bass



Peak HPS-118



Peak HPS-1500

Features a precision RCF 15" LF driver and a 3" HF coil titanium compression driver, this 2-way loudspeaker delivers 500w RMS/1200w peak. Features a built-in LICC (Low Impedance Compensated Crossover) crossover, dynamic HF driver protection, trapezoidal Baltic birch enclosure, internal inserts and eyebolt suspension hardware and speakon connectors.

• \$3495

Mackie Vision Series PA180SW

This 18" subwoofer system features precision RCF 18" driver, built-in LICC (Low Impedance Compensated Crossover) crossover, Baltic birch enclosure, internal inserts and eyebolt suspension hardware and speakon connectors.

• \$2495

Martin Audio W8CT/W8CM

The W8CT and W8CM are dedicated LongThrow cabinets for use as a standalone system or as top tier components in a W8C concert array. The W8CT and W8CM are capable of generating the enormous sound pressure levels required to achieve a flat frequency response in a stadium or festival type system, without the use of delay stacks. The HF/High-Mid W8CT comprises six 1" compression drivers and three 6.5" horn loaded high mids, with the Low Mid W8CM containing two 12" horn loaded drivers. Both units are identical in size to the W8C and are fully equipped for flying.

• W8CT — \$13,995

• W8CM — \$8,495

Martin Audio Wavefront 8 W8C/WSX/W8CS

Probably Australia's largest selling concert system, the Martin Audio W8C/WSX/W8CS is an extremely flexible short/mid/long throw system for any music genre. The system consists of a 3-way trapezoidal concert system with 1" compression driver/CD horn, 6.5" high-mid and 12" low mid both horn loaded with 55° horizontal dispersion combined with the ground stacked WSX single 18" 'Monster' 7-foot folded horn sub-woofer and the flyable W8CS single 15" folded horn sub. Ground stackable or flown the boxes are compact, wheel mounted, an easy 2-man lift and a very space efficient truck pack.

• W8C — \$9,995

• WSX — \$7,495

• W8C — \$7,495

Martin Audio W8F/W8S

The W8F is an extended version of the W8C providing two 12" low mid speakers in place of the W8C's single driver. The size matching W8S has two drivers, a 15" on a folded horn plus a direct radiating 18". Both units are fully equipped for flying with MAN Flying Fittings.

• W8F — \$11,995

• W8S — \$9,995

MTS DT118 Sub

Frequency Response (-6 db) 40Hz-200kHz. Continuous Power 600w; Peak Power 2400w; Nominal Impedance 8Ω Sensitivity (1W-1m) 102 db; Crossover Frequency 200 Hz. LF 18". Dimensions H x W x D 24"x26"x19". Weight: 32 Kg.

• \$1299

MTS DT215

The DT Series feature Fibreglass 90x50 constant directivity horns & a proprietary lens with 1" throat, coupled to a 1 1/2" diaphragm & compression driver. Crossovers use CompGard passive-limiting bulbs to divert DC overloads to a light circuit without signal interruption. The Deep Tuned (DT) LF design offers 12" and 15" drivers with maximum enclosure depth and fully optimised Theile port for great stand-alone bass response. Frequency Response (-6 db): 40Hz-18Khz, Continuous power, 600w; Peak, 2400w;

Nominal Impedance: 4Ω; Sensitivity (1W/1m): 102 db, Crossover Frequency: 3 kHz; HF 1" Titanium Compression. Driver, LF, 2-15". Dimensions H x W x D — 48"x19"x19". Weight: 50 Kg.

• \$1399

Nexo Alpha System B1 Bass

The Alpha B1 is a bass module designed to be stacked or flown in arrays with the Alpha M3, M8 and S2 cabinets. The B1 features a Nexo high power 15" LF driver on an innovative internal flare component manufactured of rigid honeycomb composites. This high efficiency design delivers extremely low distortion coherent bass output from 40 Hz to 190Hz. The box is the same size as the compact M3 and weighs 51 kg.

• \$7,100

Nexo Alpha System M3 Mid/Hi

The Alpha M3 is an advanced, high power Mid-high module. It uses 2 exponential horn loaded 10" MF compression loaded drivers & a constant directivity horn loaded 3" HF driver giving 35° x 35° dispersion. The M3 can be converted to a wide dispersion box by switching the interchangeable horn to the medium Q 75° x 45° option. Sensitivity for the M3 (1 W) is 110dB nominal with a maximum output of 145dB. They are compact, fly easily and weigh only 57kg.

• \$11,295

Nexo Alpha System S2 Sub Bass

The Alpha S2 Sub Bass is designed to be stacked together or flown in arrays with the Alpha M3, M8 and B1 and Alpha-e series cabinets. The S2 uses two Nexo high powered long excursion 18" LF drivers in a high efficiency resonator design that is combined with low speed port geometry to deliver low distortion output from 32Hz - 64-80Hz. The cabinet is the same size as one M3 and one B1-15 together and is easy to fly from the same hardware. The sub ratio to bass boxes is 1:3 depending on program material.

• \$9,350

Nexo Alpha-e System

The Alpha-e is a compact version of the Alpha concert system and is ideally suited to a wide range of applications, from clubs and theatres to large-scale live events. It offers total integration with existing Alpha systems. The Alpha-e series is available in two formats: firstly, Alpha-e Full range cabinet and secondly, Alpha-e mid only with a separate horn loaded 18" bass enclosure for maximum flexibility. The Alpha-e is configured to operate active or passive top end and is therefore suited to almost any kind of sound reinforcement application.

• \$12,300

Peak HPS-118

A small footprint allows this sub enclosure to go where the big boys cannot and deliver 600w of low-end refined sound. Solid bracing & excellent venting ensure that the only thing shaking will be the dance floor. Like its big brother this box is powered by Eminence, & like all spkr cabinets in the Peak range are covered by a 10yr limited manufacture warranty.

• \$1,299

Peak HPS-1500

This box is specifically designed to deliver high consistent & near bulletproof 1500w of brute force and sonic power. 2 cast frame 600w Eminence speakers compliment the 300w High Compression Eminence Driver to balance the power and deliver clean, consistent long performances. It will keep up with what you put in, and out-last your audience.

• \$2,295

Peak HPS-218

Dual 18" Eminence OPRO cast frame 600w speakers are the heart and soul of this seriously beefy

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One of the first in a new generation of CAD condenser microphones. Using the latest computer modeling tools has resulted in a microphone that features the best of old world and new world technology at an astonishingly affordable cost.

The M177 features a single pattern version of the original Equitek E-300 capsule. It's an externally biased capsule with a gold sputtered 1.1" diaphragm. The M177 has a high speed, low noise operational amplifier head amp, coupled with a new discrete high efficiency power supply circuit. This results in incredibly low noise, low distortion and fast transient response. Test drive one today.

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- Great Ballistic Response

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CAD M179
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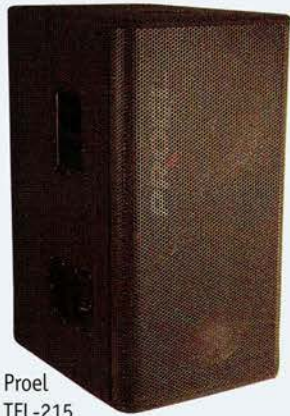
Not just your typical multi-pattern version of the M177! Utilising the original dual-sided Equitek E300 externally biased capsule with a gold sputtered 1.1" diaphragm, the CAD M179 features 5-point detented pattern control providing 9 useable patterns, continuously variable between detents. This makes for an incredibly versatile microphone with a wide range of applications.

Both M-Series microphones work with 24-48 volt phantom supplies! Other features include a non-capacitive 20 dB pad switch and an 80 Hz high-pass filter. Seriously professional microphones at astonishingly affordable prices.

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Proel
TFL-215



Proel TPR-18



Tannoy B475 Sub

subwoofer. Omni directional characteristics allow the bottom end to get to every corner of your venue adding those important frequencies like kick and low bass. Guaranteed to shake loose your kidney stone and step on your chest.

- \$1,955

Peak HPS-258 Sub

With so many dual 15 boxes on the market Peak Audio stand out as a clear winners in value for ears, let alone the value to your hip pocket. HPS-258 boxes have excellent sound qualities directly attributed to the quality and care in design and manufacture. Made from solid 15mm plywood, super strong and super light, a real alternative to plastic. Tight bottom end with sculpted mids complement the powerful and consistent top end.

- \$1399

Proel TFL-212SP4

A top sounding speaker from Italy, with fly points for endless usage possibilities, ideal for long and narrow throw both indoor and outdoor use. The TFL-212SP4 gives clear and powerful sound intelligibility in the vocal range and will perform well in installations and live situations. The specs are impressive if you like numbers; sit back and be blown away by sound not paper.

- \$2,350

Proel TFL-215

Dual 15" subwoofer that delivers clear and concise bottom end. It has the punch and the warmth experienced from high end, high tagged speaker systems. An absolute solid workhorse that gives as good as it gets and then keeps giving. If you just read about it without experiencing it, you're missing out.

- \$2,095

Proel TPR-18

A single 18", LF band-pass subwoofer for your listening pleasure. 600w of continuous power to get down to your toes and 35hz to fill the void that's been missing from your live music. Mobile installations, small club venues will benefit from the sound quality this speaker and your 15" & horn boxes will thank you.

- \$1,995

Renkus-Heinz CE3TKA

The full range CE3TKA is the primary building block in the TSC loudspeaker family developed by Renkus-Heinz specifically for the touring market. Specifications: Sensitivity (1w/1m): Highs - 112dB@ 2.5kHz, Mids - 100dB @ 500Hz, Lows - 104dB @ 200Hz; Maximum SPL: 134dB pgm /137dB peak; Frequency Response: 60Hz-18,000kHz; Drivers: HF - two SSD1802-16 1" throat (160w pgm @ 8Ω), MF - two 6.5" cone drivers (520w pgm @ 8Ω), LF two 12" cone drivers (1400w @ 4Ω); Crossover point: 350 Hz & 2.2kHz. Weight: 79.4 Kg. The CE3TKA is intended for use in tri-amped systems along with an associated Renkus-Heinz analogue or digital controller.

- \$12,699

Renkus-Heinz CT10

Integrating similar technologies as in all the CT Series, the CT10 is a full range 3-way employing 2 X 12" LF woofers, 10" MF and 2" HF drivers. Maximum program SPL: 134dB, all in a 20° trapezoidal, multiply cabinet. Specifications: Sens (1w/1m): 103dB@300Hz; Max SPL: Lows - 134dBpgm/137dB peak, Mid/High 131dB pgm /134dB peak; Frequency response: 60Hz-18kHz; Dispersion: 20° H X 40° V; Mid/High Driver: CDT-2 CoEntrant w/3" throat, 2" HF driver & 10" MF; 600w pgm @ 8Ω. M/H c/over inc.; Low driver: dual SSL 12" woofers that can deliver 1200w (pgm) @ 4Ω; Crossover point: 350 & 1800 Hz. Weight: 93 Kg.


- \$14,999

Renkus-Heinz CT6 SUB

The CT6SUBK subwoofer was developed as a companion to other CT6K Series loudspeakers for high-level entertainment applications that demand the punch and impact obtainable only with 18" subwoofers. It offers unparalleled bass performance from a 40° trapezoidal cabinet, matched for other CT6K series loudspeakers. Key features: High power, dual 18" subwoofers provide 136dB sub-bass peak SPL and with their massive motor structures they can easily handle 1600w of program power. The heavy-duty enclosure is constructed from 13-ply hardwood and rigidly braced to eliminate rattles and withstand abuse. Rigged either with Aeroquip track fittings or 12-point universal mounting hardware. Ships in a choice of finishes.

- \$8,949

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Renkus-Heinz CTK6

CT6K Series systems integrate the latest in Renkus-Heinz' innovations that redefine "reference quality" for medium to large-scale applications. Key technologies include: CoEntrant Topology that creates a new type of wideband, low distortion point source; Complex Conic horns that are designed to provide excellent pattern control and more natural reproduction than conventional horns (may also be rotated 90°); TRAP "True Array Principle" Configuration assures coincident acoustical centres and minimal comb filtering in tight packed arrays and the horn loaded high power 15" woofer handles 800 Ws program power and maintains pattern control to 200 Hz whilst its Complex Conic UHMW Polyurethane horn eliminates pass-band resonances.

• \$9,999

Tannoy B475 Sub

A dedicated 18" subwoofer designed for high definition sound reinforcement at low and ultra low frequencies. The B475 will extend the bandwidth of DualConcentric systems to below 30Hz. Power Handling (RMS/pgm) 300w/600w; Peak SPL (half space): 129dB.

• \$ 3629

Tannoy B950 Sub

A dedicated sub-woofer for high definition sound reinforcement, extending bass frequencies to below 30Hz. using twin, high power 18" bass drivers. Power handling (RMS/pgm) 600w/1200w; Peak SPL (half space): 135dB.

• \$6178

Tannoy T300

This high performance loudspeaker employs a halogen HF protection system & the new Dual Concentric SuperDual driver featuring a double roll cambric suspension for greater LF dynamics and control. Freq response: 55Hz-22kHz; Power handling (RMS/pgm): 250w/500w; Sensitivity: 100dB/2.83V @ 1m; Peak SPL: 131dB; Nominal Impedance: 8Ω Dispersion: 60 deg conical; Power Handling (RMS/Programme) 400 W/800 Weight: 35.0kg. The Tannoy B400 Sub is the ideal companion for the T300, a horn loaded sub-bass enclosure that produces high output for maximum LF impact. The B400 features a 15" driver in a compact rugged birch ply cabinet. Power Handling

(RMS/pgm) 400w/800w.

• T300 - \$4247

• B400 - \$3629

Turbosound HiLight THL-2 & THL-828.2

The THL2 is a 3-way bi-amp or passive enclosure suitable for bands or clubs in 3-way mid/high and dual 18" subwoofer combination. It features a 15" woofer, 6.5" horn loaded midrange and 1" compression driver. Suitable for ground stacking or flying. 90x40 dispersion. Peak SPL: 133dB. The THL2 is also available in a horizontal format for club or low ceiling installations. The THL828.2 is an efficient (104dB 1w/1w) dual 18", horn loaded subwoofer that compliments the THL2 for live band and club applications. The THL828.2 is built for touring with 4 recessed carry handles and 4 heavy duty wheels. Peak SPL for the THL828.2 is 141dB.

• From \$19,408

Turbosound HiLight THL-811.3 & THL-828.2

A 2-way system with mid/high and subwoofer combination. The THL811.3 is a fully horn loaded mid/high enclosure featuring a 10" midrange and 1" compression driver. The THL811.3 is very compact easy to transport and easy to fly. It operates from 130Hz up to 20kHz and can produce 105dB at 1w/1m. Peak SPL is 135dB. Dispersion is 55x40. A skeleton version is available for installations. The THL828.2 is a very efficient (104dB 1w/1w) dual 18" horn loaded subwoofer to compliment the TH811.3 for live band, outdoor festival and club applications. The THL828.2 is built for touring. Peak SPL for the THL828.2 is 141dB.

• From \$17,783

Turbosound QLight TQ-440 and TQ-425

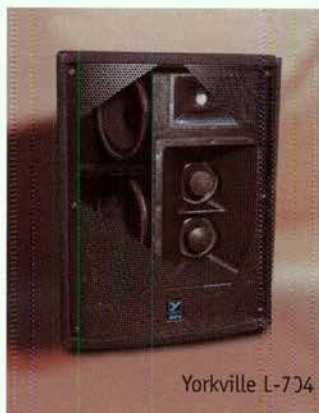
3-way mid high and dual 15" subwoofer combination for corporate, band, club and theatre applications. The TQ440 is a 3-way, bi-amp enclosure featuring a 12" woofer, horn loaded 6.5" midrange and a 1" compression driver. Woofer and compression driver are in a dual concentric configuration. Requires a digital crossover such as the Turbosound LMS-D6 to bi-amp. Very compact, high power system with a wide variety of flying and arraying options. Dispersion is 60x40. Peak SPL is 137dB. The TQ425 is dual 15" subwoofer featuring two front loaded 15" woofers with 4" voice coils in a vented enclosure. Peak



Tannoy PowerDual iQ10



Turbosound HiLight THL-2



Yorkville L-734

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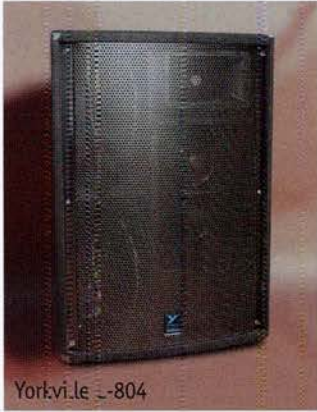
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BYTECRAFT ENTERTAINMENT

Big PA Loudspeakers



Yorkville L-804



EAW EP1



EAW EP2

SPL is 138dB.

- From \$18,046

Yorkville L-704

Following in the L-Series New Design, the L-704 engages the "Lower, Louder, Lighter" theme that exemplifies the L-Series design philosophy. With the new reflex cabinet design and the neodymium drivers it offers more efficiency, better even dispersion and greater bottom end than ever before. The L-704 is a 700w, 4Ω box configured with 2 x 12" neodymium woofers, 2 x 6" horn loaded cone mid range drivers and a 2" Horn. Sensitivity: 102 dB @ 1W/1m; Max SPL: 130db; frequency response: 45hz-16kHz. A 3-way box that sounds great alone or with subs as a multi-box system.

- \$3395

Yorkville L-804

Yorkville's new L-Series loudspeakers are a radical departure from previous designs and create greater efficiency where needed using a new reflex cabinet design and driver set-up. The L-804 is an 800w, 4Ω box, configured with 2 x 15" Neodymium woofers, 2 x 6" Horn loaded cone mid-range drivers and a 2" HF driver. Sensitivity: 102 db @ 1W/1m, Max SPL 131db, frequency response of 45Hz-16KHz. A true 3-way cabinet that sounds great and that can run as a stand alone speaker or with subs as an high quality multi-box system.

- \$3595

Yorkville LS-1208 Subwoofer

Yorkville's LS-1208 "Basspipe" subwoofer is the result of two years solid research on optimising high output, LF sound. It is a multiple flare horn, connected to an organ like pipe, slowly flaring to the mouth. The bandwidth is narrowed which is optimised to a specific range in the lower register. Outdoor measurements show smooth, high output in the 35Hz to 200Hz ranges. LS-1208 is a high efficiency, single 18" box rated at 1200w program power at 8Ω; sensitivity: 105dB @ 1W/1m; Max. SPL 136dB, frequency response of 35-200 Hz.

- \$2495

Yorkville LS-908 Subwoofer

LS-908 Subwoofer design is similar to Yorkville's Elite subs. Designed to combine well with the L-Series

full range or top end boxes, especially when used with a Yorkville processor. The LS-908 is an 8Ω, horn loaded, passive, 800w subwoofer. Sensitivity: 106dB @ (1W/1m); Max SPL: 135dB; frequency response: 45-150 Hz. The cabinets are constructed of 3/4" Canadian plywood with heavy internal bracing for reduced resonance & better durability. Black carpet covering, metal corner protectors, with rugged curved anti-resonant metal grilles, 2 rear mounted wheels, & 1/4" or Speakon input connectors. Suitable for touring or fixed installations.

- \$2495

POWERED SYSTEMS

ARX SPL 20

The ARX SPL 20 is a trapezoidal arrayable Sub-bass amplifier/speaker combination. 18" (460mm) bass driver in reflex loaded cabinet with onboard high power Mosfet amplifier, 24dB crossover and ISC system protection. Rugged all ply cabinet supplied complete with rigging points. Auto summing (L + R) circuitry when used as a single mono sub. A flexible Sub Bass solution for all flown applications - just connect a signal and AC power.

- \$3801

EAW EP1


The EP1 Powered Loudspeaker System optimises performance and reliability for a wide range of portable and permanently installed sound reinforcement applications. The internal Close Coupled Power Module provides ample distortion-free amplification as well as sophisticated, transparent driver/amplifier protection circuitry and signal processing. Powering: Internal/Mono Amplifier Sub Bass Subsystem 2x 15-in, Vented Cabinet Type (shape) Rectangular with Integral 2 x Swivel Caster and 2x Fixed Caster Controls 2 x 7-Amp Circuit breakers for AC Main, 1 x High Pass Filter, Enclosure Materials Baltic Birch Plywood. Connectors 1x Neutrik PowerCon (AC mains) XLR female (audio input); XLR male (audio output) Pin 2 Hot Suspension Hardware (4) 3-Position Flytracks Pole Mount Cup.

- \$12,950

EAW EP2

The EP2 Powered Loudspeaker System optimises performance and reliability for a wide range of portable

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and permanently installed sound reinforcement applications. The internal Close Coupled Power Module provides ample distortion-free amplification as well as sophisticated, transparent driver/amplifier protection circuitry and signal processing. Configuration: 2-way, Full Range. Powering: Internal/Bi-amplified. LF Subsystem: 1x 15-in, Vented HF Subsystem 1x 1.4" exit/75mm Voice Coil Neodymium Compression Driver on Wave Guide Plate Coverage Angles 90° (h) x 90° (v), Trapezoidal cabinet. Connectors 1x Neutrik PowerCon (AC mains) XLR female (audio input); XLR male (audio output) Pin 2 Hot Suspension Hardware (6) 3-Position Flytracks. • \$12,740

EAW EP3
EAW's EP3 powered loudspeaker system optimises performance and reliability for a wide range of portable and permanently installed sound reinforcement applications. The internal Close Coupled Power Module provides ample distortion-free amplification as well as transparent driver/amplifier protection circuitry and signal processing. Configuration: Full range 3-way. Powering: Internal/Bi-amplified (passive LF/ MF crossover). LF Subsystem: 1x 15", Vented MF Subsystem. 1x 8" Cone, Horn-Loaded HF Subsystem. 1x 1.4" exit/75mm voice coil Compression Driver on Constant Directivity Horn. Suspension Hardware (6) 3-Position Flytracks with Integral 3/8"-16 Threaded. • \$13,700

EV SxA180 Powered Subwoofer
The SxA180 sets a new standard for powered subwoofers. Its design includes an active crossover output to perfectly match the SxA100 and plenty of low end in a very compact package. Attention to the dynamic requirements of LF reproduction resulted in combining a high efficiency transducer (DL18BFA) with a class-D digital amplifier capable of 650w dynamic power. 126dB maximum SPL when used with an SxA100. A premium transducer, optimum enclosure, and the right amp provide a warm, deep sound. A dolly wheel set provides a transport base for the sub and full range speakers. • \$2799

FBT Pro Audio MaxX 6a
Features a 15" woofer with 3" voice coil, die cast alu-

minium frame and neodymium magnet structure. A HF neodymium magnet compression driver (with a 2,5" diaphragm) is coupled to an FBT 90°x60° horn with a 1.4" exit. Includes built-in 700w RMS (PWM) "Pulse Width Modulation" amplifier for the woofer and 200w RMS class G amplifier for the HF driver/horn. FBT's ADAP (Advanced Dynamic Active Protection) Circuitry is employed to prevent damage and shutdown of the amplifiers transducers. 900w RMS; Maximum SPL: 128dB; frequency response: 40Hz-20kHz. Control panel features an adjustable preamp gain control, 3-Band EQ. Weight 29Kgs. • \$5699

FBT Pro Audio MaxX9a Powered SUB
Bass-Powered reflex system with 900w RMS. Custom 15" woofer with neodymium magnet. Enclosed polypropylene cabinet speakers; Impedance: 4Ω. Recommended amplifier: 900w RMS; Applicable power for brief intervals (IEC 268-5): 1200w RMS Frequency response (@ 5 dB): 40 Hz - 125 Hz. Sensitivity (@ 1W/1M): 97 dB Maximum SPL: 126,5/128dB. Speakon input connectors. Dimensions (WxHxD) 496 x 648 x 485mm. Weight 29 kg. • \$4449

JBL MP418SP - 18" Powered Subwoofer
The MP418SP is an integrated 600w JBL pro woofer with a Crown CE2000 2 channel amplifier with 660 watts per channel. One channel is dedicated to powering the internal woofer, while the other amp channel can be configured to drive either a second (unpowered) sub, or a full range satellite speaker such as the MP410. An unpowered version (MP418S) is also available. • \$4995

Mackie Fussion 3000
The Fussion 3000 is an active tri-amped 3-Way system that features high-precision transducers combined with amplifier technology generating extreme output levels and low distortion. Inside there's a 3" titanium horn-loaded HF compression driver, horn-loaded 8" midrange with TransCoil voice coil design, four 12" LF woofers, separate 1000w, 200w and 100w high efficiency Class-G amplifiers for the LF section and high fidelity Class-AB mosfet based amplifiers with individual transformer balanced outputs for the Mid and HF drivers, plus active time and phase cor-



EAW EP3



JBL EVO

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Mackie Fussion 30C0



Meyer CQ-1

Meyer M3D Line Array



Turbosound QLight TQ-440SP



rection, parametric EQ and electronic crossovers. Ideal with the Fussion 1800SA/1800S Active Double 18" Subwoofer System.

- Fussion 3000 — \$10,995
- 1800SA — \$6495
- 1800A — \$3295

Mackie SR1530

The Mackie SR1530 active 3-Way Speaker System just looks like an SR speaker. Actually, it has a 3-way electronic Xover, 3x separate FR Series power amps at 500ws total RMS delivered to the transducers, 3x parametric equalisers and a time corrector all in the one box. RCF transducers: 15" with Inside/Outside heat resistant voice coil and high flux magnetic circuit, 6" horn-loaded mid & a 1" exit compression driver. The enclosure is trapezoidal Baltic birch with rugged molded resin end caps. Combined with the Mackie SRS1500 Active Subwoofer & you have the new "Rock Pig Rig" - portable, easy-to-setup, & the best sounding system around.

- \$3295

Mackie SRS1500

The SRS1500 is an active 600w subwoofer system with a huge output but modest size. The SRS1500 is the first go-anywhere, ultra compact active subwoofer that works with any system - active or passive. At just under 2 foot tall, it cranks out up to 127dB of tight, floor stomping, hair parting bass, all the way down to 35Hz! Inside is 600w of FR Series high-current amplification, a 15" cast frame transducer with 3" Inside/Outside-wound voice coil and high flux magnetic circuit, and a built-in electronic stereo/mono high-pass crossover network. Constructed is of 13-ply Baltic birch with built-in pole mount. Start shoving your audience around today!

- \$2695

Meyer CQ-1

CQ-1 is a wide coverage main loudspeaker system that is self-powered, phase corrected and provides low Q. The CQ-2 narrow coverage version provides high Q coverage. The units are arrayable and flyable. Constant Q horns are the result of extensive development in Meyer's anechoic chamber. Freq response of 40 Hz-18 kHz is uniform over the entire coverage area in both the horizontal and vertical axes, and the unit produces no side-lobes (measured at one sixth octave resolution). Both CQ-1 and CQ-2 feature one 15" LF driver and one 4" diaphragm HF compression driver. Maximum SPL: 136 dB (CQ-1) and 139 dB (CQ-2). Weight 59kg.

- CQ-1 and CQ-2 each — \$11,150

Meyer M3D Line Array

Meyer's M3D is the first and only line array system to feature state-of-the-art BroadbandQ technology that marries a new HF manifold system with Meyer's proprietary directional LF technology. This controls precisely vertical and horizontal coverage between 35 Hz and 18 kHz and produces optimised line array behaviour. The M3D employs a new, REM (Ribbon Emulation Manifold) to feed a constant directivity horn from the drivers, controlling driver output and minimizing overall distortion. Includes four 15" LF cone drivers (two rear facing), two 4" diaphragm compression drivers, frequency response 37 Hz - 17 kHz. Maximum SPL: 145 dB. Weight 189 kg. Consider also the companion M3D-Sub directional subwoofer.

- M3D — \$28,500
- M3D-Sub — \$19,400,

Meyer MSL-4

The MSL-4 is a horn-loaded long-throw loudspeaker system that is high-Q, self-powered, and operates with a flat frequency response from 18kHz down to 65Hz. Arrayable, with a precise coverage pattern, the

MSL-4 can be tight-packed for high power over long distances or splayed to increase the horizontal coverage. Features one 12" LF driver and one 4" diaphragm HF compression driver. Frequency response 65 Hz - 18 kHz; Maximum SPL 140 dB. Weight 82 kg. Suits Meyer's 650-P High-Power Subwoofer, a self-powered bass-reflex design that uses two 18" drivers capable of long excursion with minimal distortion. Frequency response: 28 - 100 Hz, Maximum SPL: 136 dB. Weight 100 kg.

- MSL-4 — \$13,660
- 650-P Sub — \$8,600

Meyer UPA-1P

The UPA-1P is a compact wide coverage loudspeaker ideally suited to small PA or down-fill applications that require a compact high-powered system. UPA-2P is the narrow coverage version. Both feature one 12" LF cone driver and one 3" HF compression driver, integrated electronics that auto-selects correct voltage, phase-corrected electronics that help produce flat acoustical phase and amplitude responses and precise imaging. Horns exhibit constant Q; Frequency response: 65 Hz - 16kHz. Maximum SPL: 133 dB. Weighs 35 kg. Ideal with the USW-1P self-powered Compact Subwoofer. USW-1P features two 15" LF cone drivers. Frequency response 30 - 125 Hz; Maximum SPL: 135 dB. Weighs 62 kg.

- UPA-1P/ UPA-2P — \$7,250
- USW-1P Sub — \$6,025

Turbosound QLight TQ-425SP

Dual 15" self powered subwoofer to suit the Turbosound TQ440SP. Features two front-loaded 15" woofers with 4" voice coils in a vented enclosure. Integral control electronics and 1600w power amplifier with limiting and attenuation control. Includes full range and high pass outputs to connect to powered mid/high enclosure. Features flush handles and a pole mount to support a TQ440SP mid/high enclosure. Fitted with 4 heavy-duty wheels. Optional flying strips available. Peak SPL is 138dB.

- \$13,268

Turbosound QLight TQ-440SP

Compact 3-way self powered touring/theatre enclosure featuring a 12" woofer, horn loaded 6.5" midrange and a 1" compression driver. Woofer and compression driver are in a dual concentric configuration. Internally bi-amped with a 500w, LF power amp and a 300w HMF/HF power amp and built-in limiters. One of the most popular enclosures in the Turbosound range due to its clarity, size and power. Does not require a subwoofer in many applications. Selectable music/speech curves. 60x40 dispersion. Peak SPL: 134dB. Pole mount, eyebolt or array options.

- \$12,636

STAGE MONITORS

Cerwin-Vega SM122

For nearly fifty years Cerwin-Vega have been designing and building durable and efficient sound systems. Designed for a variety of professional applications, the SM122 stage monitor adheres to the continuing legacy of high efficiency and performance value. The 12" woofer combined with the unique bi-morph drive high efficiency tweeter provides tremendous value for money over typical floor monitors.

- \$999

Cerwin-Vega SM152

Cerwin-Vega's SM152 2-way stage monitor features a 15" woofer and horn tweeter mounted in a coax configuration. The 1" throat compression-loaded horn tweeter has a large magnet structure for excellent transient response at high power levels. Coax. arrangement of the drivers has distinct advantages; being a single point source with controlled directivity,

“peaks and valleys” in the frequency response are eliminated, i.e. there are no large “bumps” in the response as a microphone is moved around the monitor. This allows more gain before feedback.

• \$1,199

EAW SM15

This 2-way full range loudspeaker system incorporates a 1x 15" Neodymium LF transducer and a 1.4-in exit Neodymium compression driver. Powering mode is bi-amplified. The LF driver is mounted in a vented enclosure tuned for optimum LF response. The HF driver is loaded on a constant directivity horn with a nominal coverage pattern of 40°x60°.

• \$7,445

EAW SM200

The SM200 is a 2-way switchable (passive/bi-amp) full range system in a vented low profile stage monitor enclosure. Includes a 12" woofer and a 2" exit compression driver on a Wave Guide Plate. Powering mode is switchable between passive (LF/HF crossover) or bi-amplified. The WGP eliminates horn throat distortion for natural vocal reproduction. Dual NL4 connectors facilitate “daisy chaining” multiple monitors. The SM200iH offers the lowest profile of any EAW stage monitor currently available. Available in mirror-imaged right and left versions.

• \$5,935

EAW SM64

A smaller version of the SM84, the SM64 is again a unique high-output two-way stage monitor. In addition to a revolutionary 4 x 6-in LF driver configuration and split baffle design, the SM64 employs a 1.4-in exit neodymium compression driver on a unique 40°H x 90°V angles front-horn. It is capable of 129dB SPL peak output.

• SM64 Estimated list — \$6,900

EAW SM84

The SM84 is a unique high-output two-way stage monitor. In addition to a revolutionary 4 x 8" LF driver configuration and split baffle design, the SM84 employs a 1.4" exit neodymium compression driver on a unique 40°H x 90°V angled-front horn. It is capable of 139 dB SPL peak output.

• \$9,280

EV Xw15

The Xw15 is EV's finest, maximum-output monitor complete with two-way high-output, large-format components. Rugged low-profile enclosures of 12-ply birch are uniquely curved for friendly handling, and a symmetrical design allows two monitors to be placed side by side so that the HF horns are coupled for high-level, large-stage applications. The 80° x 55° constant-directivity horn is oriented to provide narrower coverage side to side and wider coverage up and down – helping to isolate adjacent monitor mixes and provide extended front-to-back stage coverage. The Xw15 incorporates the EVX-155 woofer with a 4" voice coil (titanium diaphragm) for increased bass output and lower distortion. B.-amp only.

• \$4,748

JBL 4890A

Part of the JBL Array Series, the 4890A is a horizontal low profile format, full bandwidth two-way stage monitor suitable for medium to large venues. The 4890A features a 14" neodymium-based LF cone driver and rotatable 60 x 40 Optimised Aperture Bi-Radial Horn. Rated at 600w, the 4890A can deliver 132dB SPL @ 1m. Freq resp is 70Hz-18kHz (+/- 3dB). The cabinet is constructed from 13-ply hardwood finished with JBL's black textured DuraFlex finish.

• \$8,595

JBL 4891A

Part of the JBL Array Series, the 4891A is a vertical (small footprint) format, full bandwidth two-way stage monitor suitable for medium to large venues. The 4891A features a neodymium-based 14" LF cone driver and a rotatable 60 x 40 degree Optimised Aperture Bi-Radial Horn. Rated at 600w, the 4891A can deliver 132dB SPL @ 1m. Freq response is 70Hz-18kHz. The cabinet is constructed from 13-ply hardwood finished with JBL's black textured DuraFlex finish.

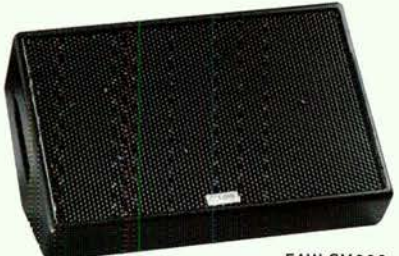
• Priced at \$8,595

JBL MP415

Part of the MP series, the JBL MP415 is a portable 15" two-way speaker system in a multi-angle enclosure designed for FOH or stage monitor applications. Suitable for high level music or speech reinforcement in small to medium venues, the MP415 features a



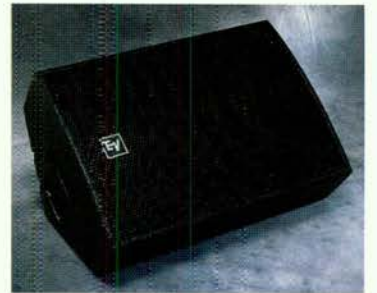
EAW SM15



EAW SM200



EAW SM84



EV Xw15



SLAM! stand for “Stereo Limiter And Micpre” and it pretty much describes what it will do to most VU meters. We had to put a switch on this limiter to drop its internal VU meters down 3 & 6dB to keep the poor little needles from bending. It'll get LOUD fast (hence the exclamation mark). And on top of being an amazing pair of (actually four) Limiters, and Class A tube mic preamps, it also has masters degrees in DI AtoD and DtoA, VU and PPM but that was too much for an acronym.

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Klipsch
KSM-15 II

single 15" LF driver in a bass reflex enclosure, and 1" HF driver coupled to large format 70 x 70 degree horn. The MP415 is rated at 350w (1400w peak), has a frequency response of 44Hz-20kHz (+/- 10dB), and can deliver a healthy 130dB SPL @ 1m. Constructed from 18mm plywood finished with JBL's black textured DuraFlex.

• \$2,095

JBL SR4702X

Part of the JBL SRX range, the SR4702X is a 12" two-way passive stage monitor suitable for small to medium sized venues. Features 12" VGC LF transducer and 1" exit compression driver on 85 x 85 degree conical horn. The SR4702X delivers high output from a compact low profile enclosure. Rated at 600w with a maximum output of 129dB SPL @ 1m. The cabinet is finished with JBL's black textured DuraFlex finish.

• \$3,895

Klipsch KSM-15 II

Part of the professional KSM Series, this compact low profile monitor provides high output with low distortion so detail can cut through in the monitor mix. The KSM-15 II utilizes a 15" (380mm) woofer and a high-powered, 2" (50mm) titanium dome compression driver mated to a 60° x 40° Tractrix Horn. The KSM-15 II is a two-way vented system that may be bi-amped or connected in parallel and is ideally suited for larger stage applications, particularly when used in multiples or pairs. The monitor includes a well-positioned carrying handle and a black, powder-coated perforated metal grille. The finish is B-Black textured paint.

• \$1999

Meyer PSM-2

The PSM-2 is a self-powered loudspeaker designed for professional stage monitoring applications. It is a high power system (139 dB peak SPL) with a medium Q horn, providing even coverage in both the horizontal and vertical planes. The PSM-2 has a phase corrected frequency response of 50 Hz to 18 kHz. The cabinet can be tilted at 35°, 55°, or 90° from the stage to permit optimal placement. The PSM-2 incorporates innovative technologies: Intelligent AC system for automatic voltage selection; TruePower Limiter technology for safer and higher continuous SPLs; and, the RMS Monitoring System for remote performance supervision of limiting activity, power output, voltage, temperature, fan speed and driver status.

• \$10,666

Meyer UM-1P & UM-100P

The Meyer UM-P Series (UM-1P/UM-100P) self-powered stage monitors integrate a 12" cone driver and a 3" diaphragm compression driver with phase-corrected optimised electronics & amp in a compact enclosure. By producing flat acoustical amplitude and phase responses, full-range bandwidth, and system impulse response, the UM-P Series moves beyond a conventional stage monitor. The UM-P Series supplies a maximum SPL of 132.5dB at 1m with high intelligibility in the vocal range, without distortion or colouration.

• UM-1P & UM-100P — \$7,050

Meyer USM-P Series

These self-powered stage monitors incorporate a 15" LF cone driver, a 3" diaphragm compression driver, phase-corrected processing electronics and a dual channel power amplifier in a rugged enclosure. Both USM-P Series monitors are identical except for the HF horn configurations; USM-1P has a narrow beamwidth (45° H x 45° V) for close placement, and the USM-100P offers a wider 100° H x 40° V pattern for broad coverage in either wedge or flown applications. Maximum output: 132 dB peak SPL/1m with

low distortion. USM-P Series systems excel in stage monitoring applications that require efficient response down to 30Hz for clean, high level reproduction of bass and drums.

• USM-1P & USM-100P — \$7,325

MTS DT115MR

The DT Series feature Fibreglass 90x50 constant directivity horns feature a proprietary lens with 1" throat, coupled to a 1-1/2" diaphragm and compression driver; crossovers utilize CompGard passive limiting bulbs to divert DC overloads to a light circuit without signal interruption. The Deep Tuned (DT) LF design offers 12" and 15" drivers with maximum enclosure depth and fully optimised Theile port for great stand-alone bass response. Frequency Response: 45Hz-18KHz Continuous Power: 350w; Peak Power: 1400w; Nominal Impedance: 8Ω; Sensitivity: (1W-1m) 100dB; Crossover Frequency: 5 kHz; HF 1" Titanium Comp. Driver: LF 15" Dimensions: HxWxD 26.5"x20.5"x19". Weight 25kg.

• \$999

Nexo PS15

The PS15 is a lightweight, high-powered multi-purpose loudspeaker where throw and broad dispersion are required without sacrificing sonic purity. Nexo PS15 contains a proprietary constant-directivity asymmetrical dispersion horn easily rotated into 4 positions. Coupled with the horns unique progressive horizontal (50 x 100° and vertical (55°) dispersion, the most suitable pattern can be selected for vertical or horizontal monitoring. The cabinet can be operated in passive mode with no loss of power handling or sound quality, so a single amplifier channel up to 1000w can save space, money and complexity. Maximum output is 134 dB and a usable range of 50-18kHz. Weighs only 29kg.

• \$5,995

Renkus-Heinz MR121

The MR121K floor monitor is a full range 2-Way System delivering 60 Hz to 18 kHz performance from a compact package Performance: 128 dB peak SPL; Complex Conic horn for excellent pattern control & low distortion; 1" extended range HF driver produces low distortion HF performance to 18 kHz (80w @ 8Ω); 12" woofer + 4" voice coil handles 400w producing LF to 60 Hz. Horn may be rotated 90° and built-in passive crossover network eliminates the need for bi-amping. The MR121K floor monitor easily handles 600w of program power and delivers a clean, undistorted 128 dB peak output SPL level. 22.7 Kg

• \$5299

Renkus-Heinz MR5DK

Also a full Range 2-Way System, the MR5DK has higher ratings for its HF and LF drivers combining for a robust floor monitor system that occupies a minimum amount of floor space. Features Renkus-Heinz's new Complex Conic horn that may be rotated 90° to suit. Performance: delivers 60 Hz to 18 kHz; extended range 2" HF driver (160w pgm @ 8Ω) that produces HF performance out to 18 kHz; heavy-duty 12" woofer with a 4" voice coil with a 600w program power rating. A built-in passive crossover network eliminates bi-amping. The MR5DK delivers a clean, undistorted 128 dB peak SPL output. 28.6 Kg.

• \$5,899

Renkus-Heinz TRC121K

The TRC121K offers full-range, 50 Hz to 18 kHz performance from a compact 2-way loudspeaker system. The TRC121/9K offers 90° by 60° coverage while the TRC121/12K has wide-angle 120° by 60° dispersion. Performance: Sensitivity (1w/1m): 94dB @ 500 Hz; 50 Hz to 18 kHz frequency range with a



Meyer UM-1P & UM-100P



Nexo PS15



Yorkville EM508

123 dB+ output SPL; 1" extended-range HF driver offers low distortion and HF performance to 18 kHz; the heavy-duty 12" woofer (with 4" cone) handles 700 Ws program and provides solid bass down to 50 Hz; Crossover point: 1.8kHz. Choice of coverage patterns and multi-angled construction available. 24.5 Kg.
• \$4,499

Renkus-Heinz TRC151K

The TRC151K loudspeaker offers full range, 50 Hz to 18 kHz hi-power performance from a compact, multi-angled enclosure which makes it suitable for array, ceiling or floor positioning. Performance: 127 dB plus output SPL; Complex Conic horns provide excellent pattern control with low distortion; heavy-duty 15" woofer with a 4" VC and fibre cone handles 800w producing solid bass down to 50 Hz. Available with either a 1" or 2" HF high power driver. The TRC151K Series loudspeakers are available with either 60° by 40° or 90° by 40° coverage and ship with a choice of finishes, multi-angled construction and numerous hardware options. 31.3 Kg.
• \$5,899

Turbosound TFM-212

The TFM-212 is a low profile, passive compact floor monitor featuring two 12" drivers and a 1" compression driver mounted on a 80x60 horn. The TFM212 is a favourite for both TV productions and live sound companies who need a punchy but compact wedge. Unique asymmetrical HF horn design minimises sound spillage into microphones and allows high gain before feedback. Peak SPL is 133dB.
• \$3,980

Turbosound TFM-302

The TFM-302 is a passive floor monitor featuring a 15" LF driver and a 1.4" compression driver. 40x60 dispersion provides even coverage up and down the stage while at the same time minimising sound spillage into the microphones. High levels before feedback can easily be obtained without equalisation. Peak SPL is 131dB.
• \$5,308

Yorkville EM508

Based on Yorkville's powerful TX4, the bi-ampable EM508 floor monitor can be positioned at either 60 or 40 degrees for better-controlled stage coverage. The unique shallow, directional horn on the EM358 allows maximum driver loading while the 850Hz crossover point ensures even output throughout the target zone of the monitor. System Type: 2-Way; Active or Passive. Program Power (Ws) 500; Nominal Impedance (Ω) 8; Sensitivity (dB @1W/1m) 100 Max SPL (dB) 127; Frequency Response (Hz +/- 3db) 50-19,000; Crossover Frequency (Hz) 850 Driver Configuration 2 inch, 15 inch; LF Protection Circuit Breaker; Inputs - 1/4" Jacks 2/Speakon 4-pin 2. Baffle Material 3/4 inch 7-ply plywood. EPM508 Processor is optional.
• \$1895

ABOUT PRICES OF LARGE PA SYSTEMS....

There are smoke and mirrors happening here, because the price of the BOX does not usually reflect the price of the SYSTEM. You need to cost a complete system with drive (processors), cables, flying/hanging equipment amplifiers and racks to get a realistic view. Some systems deliver much more output than others. Some are more amplifier friendly, using amplifier configurations efficiently. Some are self powered. Use this Market Report only as a loose guide, don't try to budget a system quote here. There is more to this than first thought.

Market Reports 2002

Our schedule for market reports next year is available on our website. Go to www.conpub.com.au




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Special Feature

Welcome to Tafe Talk,

the North Sydney College Film and Television Section supplement. As many readers may already know, North Sydney College has been a major provider of training to the film and television industries for nearly forty years.

In recent years some major upgrades of facilities and changes to the way that we operate at North Sydney have occurred. This has resulted in the introduction of our Diploma course and a series of specialist short courses as well as diversification into training for other specialist fields such as sound, acoustics and radio.

Tafe Talk is aimed at informing readers what training opportunities are available to them as well as providing interesting articles outlining some of the workshops and activities that are undertaken here. The supplement will also provide profiles of the various professions that exist within the film and television industries and advise upon paths towards such careers.

Facilities at North Sydney now rival the best in the world and our staff consists of some of the most experienced experts in their individual fields. Our partnership with Fairlight (*see Fairlight Arrives at North Sydney*) has ensured that we are able to provide the most up to date audio training, utilising leading edge Australian technology. North Sydney College is endorsed by Fairlight as their primary provider of product training for the Australasian region. During the short time that we have been delivering short Fairlight based training courses we have built up an extensive client base including; Channel 10, TCN 9, Digital Pictures and TVSN.

I hope that you the readers find Tafe Talk to be of interest and that we are able to assist with your training needs, whether you are an industry professional or a newcomer to the industry. If you have any enquiries please do not hesitate to drop me an email on the provided address.

All the best

Scott Watkins-Sully

Scott.watkinsully@tafensw.edu.au

FAIRLIGHT ARRIVES AT NORTH SYDNEY

North Sydney College and Fairlight have recently come to the end of the first year of a partnership that is revolutionising digital audio training in Australia. The first year has been an astonishing success and the partnership promises a very positive future.

The partnership began when **Scott Watkins-Sully** (TAFE) and **Graham Rothwell** (Fairlight Asia) entered into a deep and highly ideological discussion over an after dinner mint and a small glass of dry sherry. Both agreed that partnerships between private sector equipment manufacturers and public educators were of great mutual benefit to both parties. Subsequently talks were held between management of both organisations and an agreement reached.

Stage one of the project saw the installation of a new sound-editing suite, Foley/ADR stage and mix theatre. Fairlight assisted North Sydney College with the provision of a 16 i/o MFX 3 plus digital audio workstation and a 24 o/p DAD plus digital audio dubber. This

means that as well as 16 o/p on the MFX workstation, a further 8 tracks are available at the mix as media is transferred from the workstation to the dubber via removable drives.

Suddenly we were catapulted from steam powered audio into a world of leading edge technology. The results speak for themselves and since the installation more student projects are going to final mix per semester than ever before. At North Sydney College we

are very much about teaching processes and not system specific operations. Fairlight was an obvious choice in this regard as the system allows learners to concentrate on such processes in a way that many platform-based systems don't always allow. There is no

wading though pull down menus and endless windows on the MFX, however there are many dedicated keys at the operator's fingertips.

(please turn the page)



HOME, HOME ON THE RANGE

by 2 gun Rod the Pascoe kid

North Sydney TAFE Film and Television students were challenged with one of the most difficult sounds to record; gun shots. Not many sound recordists have the opportunity to record "real" gunshots. Gunshots in movies are generally sourced from libraries or manufactured by synthesisers. So when a

group of Location Sound students needed some effects for a film project, they insisted on the genuine article.

As part of their project, the students visited the Anzac Rifle Range in beach-side Malabar for a lesson on recording high sound pressure level (SPL) and transient signals. All their

(please turn the page)



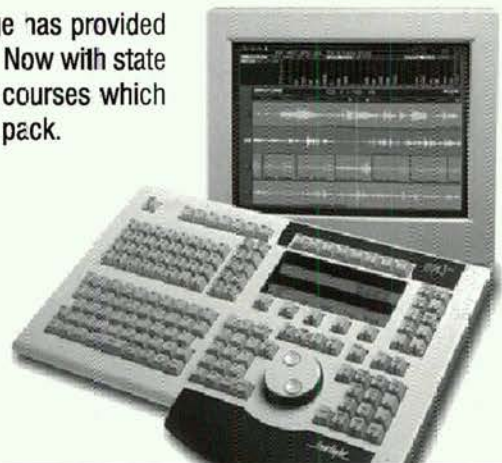
Don't try THIS at home, punters.... Recording REAL gun shots!

Sound Engineering & Recording

18 sessions - \$1650 - commencing 13 February 2002

Quality training utilising the latest in digital technology.
A course aimed at providing an all important
grounding for a career in professional audio.

For over 35 years Film and Television at North Sydney TAFE college has provided cutting edge training for the Australian film and television industry. Now with state of the art sound studios, we are proud to present a series of short courses which take audio training to a whole new level. Call now for an information pack.



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Set Construction & Staging

18 sessions - \$1500 - commencing February 2002

Interpreting and breaking down scripts

Drafting plans

Interpreting plans

Communicating with a set designer

Art department roles

Materials and purchasing

Basic rigging

OH&S

Scenic art

Marbling

Rag rolling

Graining

Construction techniques

Bumping in and Bumping out

Set Handling

Call now for an info pack!

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Special Feature

FAIRLIGHT

(continued)

We feel that it is important that students spend more time during their time with us, attaining skills, as opposed to learning the finer details of a system. The MFX allows even the most inexperienced beginner to start recording and cutting straight away, they then tend to pick up system shortcuts as they hone their craft skills. Once such craft skills have been acquired they can be applied to any system out there in the real world.

The next stage of the partnership saw the installation of the Prodigy 2 suite. Centred around the 48 i/o (24 analogue / 24 AES) Fairlight Prodigy 2 integrated DAW / mixing surface, the facility has allowed us to take training to an even higher level. The suite doubles up as a 5.1 track laying / mixing facility and a 24 track recording studio. The studio floor is 60 square metres with a fully isolated timber floor. International Technology and Communications installed the floor and additional acoustic treatment in both the studio and control room under the expert guidance of Gerald Stewart and Bob Cronin.

The monitoring, as in our other facility, takes the form of active Dynaudio BM 15's with a BX30 sub. We feel that it is important to standardise our monitors throughout the facilities as much as possible as it lends itself to consistency in situations where projects are executed in more than one area.

The new facility has allowed us to offer a new full time certificate 4 course in sound production (7591) as well as commercial short courses in Sound Engineering and Recording as well as a Fairlight Digital Audio Workstations, Advanced Operators Course..

Without the Support of Fairlight, it would not be possible to train our main-stream students to this level.

HOME, HOME ON THE RANGE

(continued)

previous classroom training in recording techniques and acoustics became suddenly relevant.

What sort of mic do I use, do I use a digital or analogue recorder, mono or stereo, how much headroom do I have, how much dynamic range do I need, how can I monitor through headphones, where do I place the mic and what time's lunch? Well there's nothing like being thrown in at the deep end. By the end of the day, all these questions, and more, were answered - especially when the recordings were played through loudspeakers back at the college.

The first task was to set up a number of recorders using different technologies with a number of different microphones. This was an exercise on its own. No one remembered that the Nagra 1/4" recorder had male XLR mic inputs and no one thought of bringing adaptors or a tool kit. Enter the Swiss Army knife - problem solved. It's amazing what can be done under pressure.

Next, the students had to prepare for a "one-shot" recording. This is intended to put the student in the situation where they have to record a single gun shot without hearing one first to get a level and without a "take two" if they mucked it.

The selection of mics comprised a Sennheiser 416 shotgun condenser, an ElectroVoice RE20 dynamic cardioid, a Shure SM61 dynamic omni and a DPA4007 condenser omni, the high SPL handling mic used to record space shuttle launches.

The Nagra, after modifying the mic cable, was the only analogue recorder used on the day. Flash ram, DAT and minidisc portables were also employed.

For OH&S reasons, everyone had to wear hearing protection so monitoring through headphones was an issue. The headphones themselves could not offer enough isolation to act as ear muffs or reliable monitors.

The one-shot results were varied. Some were under modulated but useable when recorded digitally and others were vastly over-modulated, but nevertheless believable in the "movie" context.

The best results were expected from the Nagra analogue/ DPA4007 combination. However the recorder was operating with a limiter in circuit which spoils the effect.

Placing the mic away from the gun a few metres meant that it was possible to pick up the subtle reflections coming back from various structures around the range immediately after the shot was fired. Several locations around the range were used and each produced a different result.

After a pleasant sunny afternoon on the range the students withdrew once more to the classroom for the post mortem. Different recorder/microphone combinations were tested throughout the afternoon and the general consensus was that this is an extremely difficult exercise. One important lesson that was learned was that the sound we associate with a gunshot in the movies leans very much towards acoustic artefacts and not the actual shot. Such artefacts are generally masked by the actual shot when the listener is in such close proximity to the shooter (temporal masking may play a big part).

We assumed that the least likely mike to record the perfect shot would be the sensitive and highly directional Sennheiser MKH 416 P, so the recordist was banished to some distance away from the action in order to compensate for what appeared to be inappropriate kit. When we listened back to the closely recorded shots back at the studio, there was an incredible variety, the minidisk presented us with a fairly weak and unbelievable splat and the compression on the flash ram recorder couldn't handle the transients.

The shots recorded on the DPA 4077 reproduced excellent transients and a very powerful shot sound, however with such little gain in the pre-amp little else could be heard. Eventually we listened to the shot that was recorded with the 416 with anticipated disappointment. Lo and behold! There it was, the classic movie shot minus the high transient. The recordist had been banished to such a distance that the transient was largely ineffective and due to a fair bit of gain in the pre-am and the directional properties of the mic which was pointed down the range, it managed to reproduce the all important acoustic artefacts.

Eventually the huge transient recorded with the DPA 4077 was combined with the Sennheiser 416 recording using the Fairlight MFX. The result? Some of the best and most believable gunshot recordings that we have heard. A great day and a great exercise.



MFX editing at North Sydney Tafe

Digital Audio Post Production

5 sessions - \$1900 - commencing 2 March 2002

A detailed hands-on approach to both craft and equipment operation skills necessary in today's world of digital audio post production.

Fairlight Digital Audio Workstation Advanced Operators

3 sessions - \$1000

Commencing 14 March 2002

Advanced system specific training for sound post production professionals.



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Stereo Recording and Microphone Techniques

4 sessions - \$750 - commencing 23 March 2002

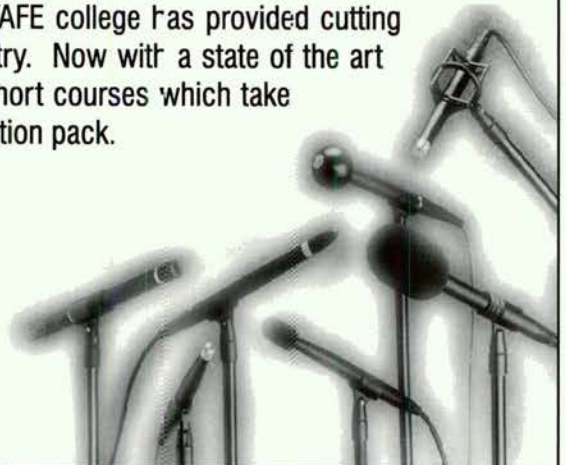
An exploration of acoustic music and atmospheric recording for the audio purist...

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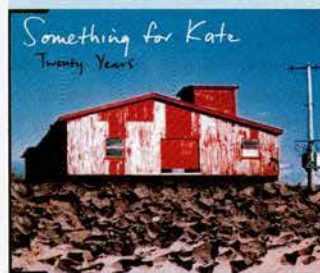
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Tracking Guide

CHARTS



SONG TITLE: Twenty Years
 ARTIST: Something for Kate
 PRODUCER: Trina Shoemaker & Something for Kate
 ENGINEER: Trina Shoemaker
 ASSISTANT ENGINEER: Matt Lovell
 MIXING: Trina Shoemaker @ Mangrove Recording Studios, Sydney



SONG TITLE: Make Me Crazy
 ARTIST: Scandalus
 PRODUCER: Paul Gray/Craig Porteils
 PROGRAMMING/ADD PROD: Ramesh Sathiah
 STUDIO: Song Zu Studios, Sydney
 MIXING: Ramesh Sathiah/Craig Porteils



SONG TITLE: Always Be With You
 ARTIST: Human Nature
 PRODUCER: Ray 'Madman' Hedges/Andrew & Michael Tierney
 REMIX & ADD PROD: Panos Liassi/Gary Sharkie/Andrew Turni for Supafy Prod
 MASTERING (remix): Oscar Gaona @ Studios 301, Sydney

New South Wales

ARTIST	PRODUCER	ENGINEER	SESSION
A#Sharp Jeff Cripps +61 2 9153 9988 24tk Analogue/32tk digital, 3 live rooms			
Port Hacking High School	Jeff Cripps	Jeff Cripps	CD
Toadstone	Jeff Cripps	Jeff Cripps	CD
Beverly Hills Public	Jeff Cripps	Jeff Cripps	CD
Skydome	Jeff Cripps	Jeff Cripps	ADD
Boulder Bay Rob Godwin +61 2 4984 2008 16tk Hard Disk, Neumann Akg Rode, Shure Audio Technia Mikes			
Darryl Bowes	R Godwin	R Godwin	Alex Lloyd JJJ Comp
Bush Tracks Pty Ltd Ruth Miller +61 2 6689 1290 Air conditioned digital multitrack studio			
Geoff Jeffro Andrew	Jeffro/Dave Highnet	Dave Highnet	Album
Old Spice Boys	Azo Bell	Dave Highnet	Edit/Master Album
Asia Lee	Brian & Asia Lee	Dave Highnet	Mastering
Damien Gerard Sound Studio Marshall Cullen & Di Dofel +61 2 9555 1710 2" 24 tk Analog/Pro Tools Digital			
Monstrous Blues	Monstrous Blues	R Pilling	Album
Trysette	Dave Trump	Dave Trump	Album
Pete Wells	Pete Wells/William Bowden	Russell Pilling	Album
Fragile	Russell Pilling	Russell Pilling	Album
Chris Turner	Chris Turner	Russell Pilling	Mixing
Floating Point Studios Peter Tzanetos +61 2 9318 1550			
Mako	Perot von Sturmer	Martin Eckel	Album
Peter Zane	Peter Zane	Martin Eckel	Single
Jack Ass	P Mayse/S Dickson/J Hardy	Peter Mayse	Album
BEI	Johnathon Motley	Peter Tzanetos/Perot von Sturmer	Demo
Gangstar Studios Dave Dwyer Rebecca Dwyer +61 2 4739 0451 48 tk digital studio			
ESense(E Napolitano/S Charlwood)	Dave Dwyer/Rebecca Dwyer	Dave Dwyer	Demo
Glister	Dave Dwyer	Dave Dwyer	Album
Andre Eikmeier/Giant	Dave Dwyer	Dave Dwyer	Album
Junichi T West	Dave Dwyer	Dave Dwyer	Mastering
John Morrison Studio Joan +61 2 9901 4414			
Hillcrest	John Morrison	John Morrison	CD
On Fire	John Morrison	John Morrison	CD
Meghann Cameron	John Morrison	John Morrison	Demo
NSBH	John Morrison	John Morrison	CD
Nu-Town Greg Hopping +61 2 9516 3306 Recording & Pre/Post Production			
Jacqui Hunt	Hopping/Hunt	Loizou(PR)/Hopping(E)	Single
DJ Sully & Gilbo	Irvine/Loizou/Hopping	Loizou/Hopping	Single
Kelly Ophel	Greg Hopping	Greg Hopping	Album
R & R Recording Robert Zimola +61 2 9672 4494			
Jargon	Jargon/Zimola	R Zimola	Album
Midnight Riders		R Zimola	Demos
Jane E		R Zimola	Demos
Dungeon	Lord Tim	Lord Tim	Vocal Tracking
Rockinghorse Anthony Lycenko +61 2 6688 4005 - 48 Neve V series Console Protocols mix24 plus Studer 24trk monitoring			
The ZooBombs	Junkbeats	Jim Arnold	Remix
Breeze	Brendan Anthony	Anthony Lycenko	Single tracking/Mixing
Rover Street Media Group	Artist	Darren Muller	Christmas Album Mixing
Meraki	Artist	Michael Worthington	Album Mastering
Sound Level John Soang +61 2 9552 3200 24tk DA88 16tk Paris Hard Disk			
Drugs	Drugs	Jorden Brebach	Demo
Likwid	Likwid	Jorden Brebach	Demo
Nick Swan	Tony Starr	Jorden Brebach	Corporate Job
Candle Faithful	Candle	Jorden Brebach	Demo
Jack Morton Ent		Jorden Brebach(E)	Voice Overs
Soundwarp Meredith Brooks +61 2 9905 7144 Mastering			
Dave Wilkins	Dave Wilkins	Meredith Brooks	Compilation
Georgie Wallace	David Fielder-Gill	Meredith Brooks	Album
The Trailblazers	Canetoad	Meredith Brooks	Album Restoration
Warwick Tyrrell	Warwick Tyrrell	Meredith Brooks	Album
Guy le Clair/Bruce Cale Duo	John Franks	Meredith Brooks	Album
Studios 301 Steve DeFina +61 2 9698 5888 Recording studios for all genres			
The Whitlams	Daniel Denholm	Daniel Denholm	Tracking
Grinspoon	Phil McKellar	Phil McKellar	String Quartet recording
Tadpole	Steve James	Steve James/Tony Wall	Mixing NZ Band
Powerhouse Museum	Nick Cervonaro	Nick Cervonaro	Post production 5.1 mixes
Jack Jones	Tim Palmer	Tim Palmer	Mixing solo album

ARTIST	PRODUCER	ENGINEER	SESSION
Trackdown Digital Mike Duffy +61 2 9550 6890 64tk digital audio & post			
Moulin Rouge	Bazmark Inq	Simon Leadley/Tim Ryan	Editing & Mixing
Tabaluga 2	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/A Wong	TV-all Post Audio
Flipper 2	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/J Hemming	TV all Post Audio
Old Tom	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/J Mion	TV-all Post Audio
Production Music Services	Peter Baker/Hilton Moday	D Candusso	Brass/Perc/Guitar Overdubs
Troy Horse Mickey Levis +61 2 9319 1799			
Son Veneno	Cesar Marin	Mark Worrall	EP
Kyser	Band/Worrall	Mark Worrall	Album
Arkhen		Band/Worrall	Mark Worrall
EP			
Quoin Technology	Idette	Mark Worrall	Voice Cvers
Danny's Playland	Danny Golightly	Danny Golightly	Sound:track
Velvet Sound Recordings Dave McCunn +61 2 9267 2915 Pro Analogue & Digital recording, mixing, editing & transfers			
Monsterloop	Stuart Cook	Daniel Clinch	Album Track & Mix
Tania Williams	Tony Wall	Tcny Wall	EP Track & Mix
The Utopian Babies	Dave Wilkins	Adrian Grigorieff	Tracked & Mixed
Airborne Blues Virus	Jode	Daniel Clinch	Album Track & Mix
Chloe Maxwell	Directions	Daniel Clinch	Film Narration
Wirra Willa Studio Will & Connie Rout +61 2 9605 1203 - 24tk & 18 digital, VST 32, Triple Dat, Acid Pro, Wave Lab, 3 studio AV			
Arc	The Band	Will Rout/Eddy Barila	Album
Moulder	The Band	Will Rout/Eddy Barila	Album
Daniel-Lafai	Daniel	Eddy Barila	Album
Tepa Faletose	Matt Wakeling	Matt Wakeling	Album
Ted Dallas	Eddy Barila	Eddy Barila	Album

Queensland

Coral Sea Studios/ Select Sound Jan Sarchfield +61 7 4059 2888 Digital Recording Studio			
Seaman Dan "Steady Steady"	K Neuenfeldt/N Pegrum	N Pegrum	Overdubs/Mixing CD
Jimmy Little	Mark Mannock	Josh Blair	Vocal track for CD
Daniel Webb	L Webb/N Pegrum	Nigel Pegrum	Song Recording
St Augustine's School Big Band	Nigel Pegrum	Nigel Pegrum	Location recording/studio mix
Trinity Anglican School	Nigel Pegrum	Nigel Pegrum	Studio recording

Megatrax Digital Reno Nicastro +61 7 4031 2205 Audio Production			
Feel	Tommy D	Tommy D	Album

Stargate Music Productions Dash McIvor +61 7 3263 6294 Paris Protocols Adats Logic New & Vintage			
Outboard			
Kerry Kennedy	Dash McIvor	Dash McIvor	EP
Michael King	Dash McIvor	Dash McIvor	Demos
Blue Stranger	Dash McIvor/Galaway	Dash McIvor	Album
Welcome Strangers	Dash McIvor/Radford	Dash McIvor	Post Production
Ian Muir	Dash McIvor	Dash McIvor	Album

Victoria

Audrey Studios Craig Pilkington +61 3 9415 8599 Analogue Digital Hard Disk Studio-recording, sequencing & arranging			
Prayer Babies	David Badrick	David Badrick	Album
Barb Waters	C Pilkington		Album Debut
The Drowners	C Pilkington/Mick Thomas		Track Remix
Ches Haines	Ches Haines		C Pilkington
Post Production Editing			

Crystal Mastering Joe Carra +61 3 9326 2318 Mastering Suite			
Planet X	Brett	Joe Carra	Mastering
Pegazus	Band	Joe Carra	Mastering
Pacer 21	Band	John Ruberto	Mastering
Inca Marca	Dillon/Durr	John Ruberto	Mastering
Husk	Band	Joe Carra	Mastering

Dex Mastering Adam Dempsey, Ken Shulman, Dean Collett +61 3 9372 2266 Pro audio mastering & restoration, Sonic sol. & Sadie			
ABC	Justine McSweeney	Adam Dempsey	Heywire Series
Second Honeymoon	Band	Ben Hurt	CD
Chris Jones	CAAMA Music	Adam Dempsey	Album
The Speedsters	Warren Hall	Adam Dempsey	Live Album
Carols by the Bay	Dennis Walter	Adam Dempsey	Concert CD

NSW TRACKING GUIDE
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www.soundonstage.com.au



CHARTS



SPIDERBAIT
OUTTA
MY
HEAD

SONG TITLE: Outta My Head
 ARTIST: Spiderbait
 PRODUCER: Magoo/Spiderbait
 STUDIO: Rockinghorse Studios
 ENGINEER: Magoo
 MIXING: Spiderbait
 MASTERING: Steve Smart @ Studios 301, Sydney



SONG TITLE: The Metre
 ARTIST: Powderfinger
 PRODUCER: Nick DiDia/
 Powderfinger
 STUDIO: Sing Sing Studios,
 Melbourne
 MASTERING: David Macquarie @ Studios 301, Sydney

Tracking Guide

C H A R T S



SONG TITLE: Buggin' Me
 ARTIST: Selwyn
 PRODUCER: Paul Begaud (for PJB Productions)
 STUDIO: Sony Music Studios
 ENGINEER & MIXING: Paul Begaud/Tod Deeley
 MASTERING (Remix): Don Bartley @ Studios 301, Sydney



SONG TITLE: Alive
 ARTIST: Gooch (featuring Linda Janssen)
 PRODUCER: Justin Shave
 REMIXING & ADD PROD: Craig Obey/Paul 'Flex' Taylor
 MASTERING: Kathy Naunton @ dB Mastering
 MASTERING (Remix): William Bowden @ Festival Mastering



SONG TITLE: I Don't Care
 ARTIST: Delta Goodrem
 PRODUCER: Vince Pizzinga
 STUDIO: Beamo Music, Sydney
 MIXING: Phil McKellar @ Mangrove Recording Studios, Sydney

listings!

email your Tracking Guide submission by the 15th of the month. Don't worry about layout, just include the info. Email to: mail@conpub.com.au or use the form on the website: www.conpub.com.au

ARTIST	PRODUCER	ENGINEER	SESSION
JMC Studios Damien Kondic +61 3 9696 4117			
Cynical	Damian Kondic	Damian Kondic	EP
Kandy Flip	Damian Kondic	Damian Kondic	EP
Students Recording	Various	Various	Demos/Singles
Omad Black	Damian Kondic	Damian Kondic	Album
Blynd	Damian Kondic	Damian Kondic	Album
Studio 52 Carly Byrne +61 3 9417 7707 3 Major Music Production Studios			
The Luke McTharlin Project	Luke McTharlin	Jared Scott	Album
RMIT	Laki	Jared Scott	Training Program
Shiique Deevah	Trevor Carter	Trevor Carter	Album
True Form Recording Neil Gray +61 3 9391 0907 Mackie HOR 24/96 Recorder, Classic analogue console & outboard			
Pollyanna	Matt Handley	Neil Gray	B sides
Azucar	Neil Gray/Band	Neil Gray	EP
Sexual Chocolate	Neil Gray/Band	Neil Gray	Demo
Williamstown High School	Neil Gray	Neil Gray	Album
Steve	Bruce Gayther	Bruce Gayther	Single
Wombat Rd Rec Studio Barrie Clissold +61 3 5145 4204 24tk digital & 16tk analogue			
Gimpoid	B Scrape	Barrie Clissold	Demo CD
Geoff Marsh	K Forster	Barrie Clissold	Album Tracking
Heyfield PS	J Caldwell	Barrie Clissold	CD
Boisdale School	J Candy	Barrie Clissold	CD Album
BCMC	G Bantock	Barrie Clissold	Compilation CD #4

South Australia

Earsight Steve Fieldhouse +61 8 8370 3869 PT's 5.2 TDM MixPlus for Mixing, Editing, Remixing & Recording 5.1 soundtracks
 Found Objects Steve Fieldhouse/Chris Lambert S Fieldhouse/C Lambert CD Album Mixes

Western Australia

Bonsai Tom Thorpe +61 8 9246 4408
 Alan Arched Tom Thorpe Album tracking
 Pete Stone Tom Thorpe Album Mixing
 Thorpe & Van Ross Tom Thorpe Jingle
 Norma Woodcock Tom Thorpe CD Mix & Edit

Planet Sound Studios Yoko Kurihara +61 8 9382 2211
 Hank Marvin Hank Marvin Les Williams Album
 The Royal Philharmonic Orchestra Kevin Peek Les Williams Album
 Mark McEntee Trevor Spencer Demo

Revolver Vic Manfrin +61 8 9272 7505 Digital/Analogue Music Facility
 Crimes of the Primary Band Ben Glatzer Ben Glatzer CD EP
 Showbag Band/Ben Glatzer Ben Glatzer Album
 Mr Sandman Band Ben Glatzer Ben Glatzer CD EP
 Starling Band Ben Glatzer Ben Glatzer CD EP
 Twang Thang Gregbird/Vic Manfrin Vic Manfrin Album

Satellite Recording Studio Darren Halifax +61 8 9470 4003 Protools mix plus 64tk
 Desmond Jack Desmond Jack Darren Halifax Demo
 Floating Widget Band/Darren Halifax Darren Halifax Sound for Picture
 Knotwork Band Darren Halifax Album
 Grease Monkey Band Darren Halifax Demo
 Marie McDonough Band Darren Halifax Demo

Sonic Lab Mark Whitehouse +61 8 9375 3902 Sonic Solutions Mastering & DUD
 Theona Councillor Alan Pigram Mark Whitehouse CD Mastering
 Spokaine Simone Magemann Mark Whitehouse CD Mastering
 Great Southern Plantations David Ikin jM Whitehouse/L Collins Enh CD Rec & Mastering
 Joe Algeri David Hughes Owen Mark Whitehouse CD Mastering
 David South David South Mark Whitehouse CD Mastering &
 Restoration

Witzend Alan Dawson +61 8 9336 1888 16tk Analogue & 8tk Digital
 Trish Mathews Trish Mathews Alan Dawson Album
 Richie Pavledis Richie Pavledis/Alan Dawson Alan Dawson Album
 WA Brazilian Club Inc Carlos Santos Alan Dawson Radio Programme
 The Estranged Alan Dawson Demo
 Katherine Whyte Katherine Alan Dawson Demo

THAT really hits the spot!



Feel like putting a sledgehammer through a new NEC Plasma display? Gordon Anderson & Mile Zivkovic did exactly that as part of the launch of their new combined company.

Anderson's Audiovisual - a well-respected AV integrator, have joined forces with Avsec Communications - a security and data installation firm, to provide turn-key solutions to domestic and corporate AV/IT/RF/Security installs. The new entity will be called GMR, and is based at their new premises at 3/68 Roberts Ave, Mortdale NSW 2210 (+61 2 9586 3230)

Their were some suggestions at the launch that the battered plasma was actually damaged prior to the event. We at Connections want to believe that this was not the case.

(standing left to right) Mile Zivkovic, Romeo Susnjara, Michael Baker. (kneeling left to right) Matt Manix, Gordon Anderson, Rhys Pople, Steve O'Brien.

A Spectacular View

Sydney distribution firm **Show Technology** took their entire staff and stood them on a cliff face in the Blue Mountains, west of Sydney. They tell us that this retreat in the Blue Mountains saw staff and some family spend the weekend relaxing, bushwalking and otherwise winding down at the Leura Resort.

Oh yeah- they also had a special meeting to help staff focus on issues including marketing, company image, and a look at the competition.

This picture really begs a caption! Send us your suggestions.....



MACKIE COMPETITION FINDS A WINNER

Australian Audio Supplies recently announced the winner of their Mackie Rocks Competition. Hundreds of Mackie users from all over Australia sent in pictures and letters describing how they use their Mackie Gear.

The winner was Bruce McCumstie, well-known in Country Music circles for his Billabong Boogie Band and Willie Nelson Show. The prize? Lots of Mackie gear! Bruce uses mixture of Mackie gear including a 1402 VLZ



Mixer, M1400 Amplifiers and C300 Speakers.

His winning quote was from the musicians that were constantly come up to him at gigs and saying: *"I didn't particularly come to listen to your music, but I've been told to come and listen to your PA"*

You can check out Bruce's website at:

www.loveyawayillie.com

Photo shows Bruce (right) being presented with his prize from David Croxton (left), MD of Australia's Mackie Distributors, Australian Audio Supplies.

MOVED:

Elite Sound and Lighting have moved to Canberra. The change is part of a large expansion of the business and a move to be more centrally located to customers throughout NSW, the ACT & VIC.

They tell us that they are continually investing in new equipment, and their new location is intended to provide customers with production, hire, touring and event production management needs. New ph. nos. will be announced soon.

50 Templestowe Ave, Conder ACT 2906. Call +61 2 6294 0739.

MARRIED:

Chris Morton of ARO Technology (Adelaide), to **Nisha**, at Bangalore in India. Congrats!

BABY!

Adam and Nicole Clark of Centre Stage Australia (Melb) recently rejoiced in the birth of a little son. Very fresh born and so un-named at presstime. Fantastic!

Cheeky Promos...

Two promos passed over the desks of Connections this month that were deemed to be a bit cheeky...



Did you not connect with your last staging company?

The above postcard was distributed by Videoplus, and has the caption, "Did you not connect with your last staging company?" Duoh? Wha.....?



David Manning



It would be fair to say that in today's audio market, there are few brands who offer a premium level of personal service. One who does is TurboSound. Established since 1987 and in 2001 took a revolutionary step...

The second promo was an email sent by the vendors of TurboSound to their customers. In it were a few bold claims of market leadership, and they *drew attention* to the fact that Meyer Sound sells direct in Australia, rather than through dealers. Meyer appreciated the plug.

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The Future of Internet Broadcasting

Re May Connections (you were referring to <http://www.thebasement.com.au> as an indication of the future direction of rich media over the internet). I felt compelled to respond to your comment "The answer to data bandwidth is not here yet, and nothing is yet looming on the "technology radar".

Certainly our company has products well under the radar that has applications to the issue of delivering rich media over the internet. I work for Network Appliance (www.netapp.com). We are a leading provider of data access appliances in two technology areas:

1. Data Storage Appliances or what we call "filers". Filers are in effect purpose built file servers, Yahoo! have over 250 terabytes of our storage for all of their internet data.

2. Internet Caching Appliance or our trade name "NetCache". Many NetCache Appliances have been deployed in Telstra (and hundreds of other large ISP's) for several years now as an edge content delivery devices, used primarily to accelerate internet access by storing commonly accessed internet objects (gifs, jpegs, java applets, pdf's, docs etc) closer to the end user. One of the leading edge features of this product is now integration of Real Media, Microsoft Media and Quicktime audio and video formats.

With these protocols we do several things to overcome bandwidth issues in delivering streaming audio and video.

1. Live Stream Splitting (TV or radio type internet stream) NetCache can establish a single stream from a source web server (say at 128Kb to an end user) and then split and deliver that stream to hundreds or even thousands of simultaneous users. By putting NetCache Appliances at the centre and out at the edges of a network, wide area bandwidth limitations can be overcome.

2. Cache Video and Audio on demand files (CNN style video news bytes) Once a user has viewed an on-demand video or audio stream it is then cached and can be delivered to other users without subsequent streams having to traverse the wide area network.

3. Content Director
This software product allows content to "pushed" to NetCache Appliances out at the edge of the network for playback at a later time. You can send a file that has a 128Kb encoded bit rate over a 56Kb connection at off peak times.

We are actively working with Telco's around the world to implement this technology. We are delivering multi-terabyte caches that are being installed in ADSL head ends to deliver 200Kb video streams to thousands of home users over ADSL.

Admittedly, in Australia the "last mile" issue still needs to be addressed. In countries like Korea, this has all but been overcome for millions of internet users.

Steve Bracken, Network Appliance Australia
steveb@netapp.com

House AV "Unfriendly" contracts

As someone who has been on both sides of the fence I will give the following advice:

1. Any venue that insists your clients use the in-house AV company - request that in writing. This is unfair trading and simply forward that letter to the Consumer Affairs Dept. (I have never received one despite numerous requests and my clients have not been bothered further).

2. In-house that insist on one of their technicians being onsite - ask to see their CV. I would not employ any tech (especially at \$60 p/hour) that did not have a CV full of glowing reports on their field of expertise. If the venue persists then ask why this is not included in the room hire. If you are using house patching etc. it may be useful to have the tech onsite - make them work and insist they are on your event and not servicing other rooms as well - no CV makes them a loader like everyone else!

3. Charging for in-house patch panels - this has been attempted in the past (and no doubt future). If the alternative is to run cables on the floor do it. If this creates an OH&S problem the issue is with the venue restricting your access and puts the safety onus back on them.

4. Restricted access. This is always an issue especially in major venue loading docks. Most allow 20 minutes to unload and remove vehicles. Always check with the venue function contact on any restrictions. I would suggest in the instance outlined that loading in through the main entrance would have been a suitable option.

Finally, I do believe that a venue can set a minimum standard. This was done years ago in a large convention centre to reduce the amount of complaints about poor sound/lights/vision, scruffy crew, late set ups etc etc.

Unfortunately this became a no access policy as the original instigators moved on and the new managers presumed this gave them exclusivity. Once this was tested by an enquiry to consumer affairs it was discontinued.

I look forward to igniting further discussions on this.

Jon Okeby
Jon@tdc.com.au

More on House "Unfriendly" Contracts

I have just read the comments regarding "unfriendly" in-house companies. (November issue) I feel these comments (without names) reflect badly on ALL AV companies that service hotels. We are the second largest in-house company in Sydney, contracted to 9 Hotels. We have NO policies on keeping other AV companies out of our Venues and we do not insist on a technician on site. We are there to service the Hotel and the Hotel's clients.

Noel Hogan
General Manager, Videoplus Pty Limited
nhogan@videoplus.com.au

Projector Testing Software

In the September issue of Connections you mentioned in Projector Testbed when testing the Sharp XG-V10XE projector that Gary Kaaye's software was used. How can I obtain a copy of this or other software to test various data projectors that we are going to evaluate here at Monash University?

David Kajewski
Monash University

Ed - Go to www.displaymate.com - There you will find the latest versions of the software. Prices range from US\$69 for the simplest version of the software (which I have been using until recently), to US\$795 for the "Multimedia Edition with Motion" edition of the software with all the bells and whistles.

Identifying Sex -!

I teach Music Technology as a subject to year 12 students. My new class was finding it difficult to remember all the different type of connectors you come across in audio cables. They had no problem identifying guitar leads and thought male and female jack connectors were completely obvious, but XLR connectors had them completely confused. Brett (whose greatest claim to intellectual fame was being the drummer for the local Death Metal Band) handed me a male XLR connector and said - "Miss, how can this be a male its got a hole in it." In desperation I said to him "Think of this as a particularly lucky guy, in fact he's 3 times luckier than your average guy and as he's not Jewish." Slowly a glimmer of light came into his eyes, a sheepish grin on the face. He jumped up ran around the room I've got it worked out XLRs have foreskins. In his recent HSC trial exam he got every connector question correct.

Suzy Bradstater
Picton High School

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How many people read your copy of Connections?

by Mandy Jones

A Day in the Life of a Gaffer - Michael Hughes

Michael Hughes started working in the industry fifteen years ago. Prior to that he worked as a refrigeration and air-conditioning technician and as an investigative insurance assessor. A competitive sky-diver for over 20 years, Michael competed in many world championships and it was through sky-diving that he became involved in film and TV. A sky-diving friend of his, Bruce Towers, had established himself as a gaffer a few years earlier and asked Michael to give him a hand lighting for commercials. From there they worked on a children's drama series and after a couple of years Michael began to work with other gaffers to broaden his experience. Twelve months ago he was contacted by Director of Photography Brendan Lavelle about working on a new TV drama series *The Secret Life of Us* and he accepted the role as gaffer. Michael lives in the Melbourne suburb of Newport with his wife Kerry and their son Jackson. After a highly successful debut series of *The Secret Life of Us*, series two is now in production in Melbourne. Michael explained what a typical day entails:

6.45am: set off from Newport - Since the new tunnel has opened it only takes me about half an hour at that time of day to get from Newport to Crawfords at Box Hill which has been a real transformation.

7.15am: arrive on location - First thing when I arrive on set it's breakfast which is always nice, unless we've got a pre-light where we have to shuffle something around or change sets. So we'd have pre-light time for half an hour, then breakfast for half an hour, and then straight into it.

7.45am: on set - I supply the studio lighting to the two main stages at Crawfords where all the interior sets are built. We've basically got two apartments in one studio and the bar called 'The Fubar' and Gabrielle's apartment in the other, and we've also got a new set now which will be for Simon the barman. Depending on the call-sheet we may be on one set for most of the day or we can quite often do two scenes in the one apartment and then we move to the next apartment. Night and day scenes are always a bit of work for us because we've got to bring in a lot of heavier lamps for the day scenes which require stronger tungsten lights, mainly 5k's, 2k's and 1k's. Then we need to go to subtler lighting for the night scenes, moonlight-bounces outside and lots of small fluores and softlights, Dido lights and 300watt fresnels.

This next series will feature a lot more location work; the last series was meant to be 70% studio and 30% location but more locations were added. The show is very big in England so the producers, buyers and viewers want to see lots of St Kilda so we're going to have an even heavier location schedule this series.

We compact it into five or six days of location so we usually shoot a lot of half day/nights where we shoot night interiors in the day so we need to black-out the whole outside of whichever location it may be. There's quite a bit of pre-rigging and pre-lighting to do to set that up, and then we might go to a genuine night-shoot which would be a night exterior. It's usually Luna Park or a long 'walk and talk' down Acland Street or something like that. There were a lot of 'walk and talks' in the script last time which meant we had to light quite a

bit of street. It can be a big spread for us in terms of cabling and lights. Considering it's St Kilda it's not too bad on the most part, but we've had our moments. Mainly it's a big nightmare for the unit manager when you plan to shoot and light something one way and then on the day a car has parked there so we're always trying to work around those sorts of problems.

Breaks: everyone drinks coffee on set - I'm not sure there is anyone in this industry who doesn't. I try to keep it down to two cups a day because you can get a bit carried away with fresh coffee on the set all the time. Last series we had all those fizzy energy drinks like Red Bull, I think there was a bit of sponsorship happening so we had a supply going. There were a few Red Bull addicts by the end of the series drinking six or seven cans a day!

A 14 hour day: The schedules are very tight, last series we were averaging eight or nine minutes of TV per day with one camera which is a fairly heavy schedule. In the studio that's pretty good going but on location that's a heavy workload.

The average day is a scheduled ten hour shooting day, so you add a meal break on that and it's basically 11, if we have a pre-light it will be between 30 and 45 minutes, and then inevitably we do overtime, probably more often than not we'll do 30 or 45 minutes. Packing up also takes time. It's different when we're in the studio because we can just turn everything off and walk away but on location you've got to pack it all up so it's probably another 45 minutes if it's an average wrap. Then add another hour and a half for travel.

So it's always near enough to a 14 hour day for me. I basically kiss the family goodbye for seven months which is the only bad part of the job. But it's fun, it's a great series and everyone enjoyed it. Working on a drama series people tend to get pretty jaded because of the long hours but *Secret Life* has been such an enjoyable series with a great crew and cast who get along so well that it's been like a family experience.

End of the day: When I get home I usually have a couple of glasses of wine to wind down and relax, but generally I don't need too much winding down after the drive home with some quiet music. Doing half day/nights is probably the hardest because you get jet-lagged. By the time we wrap and I get home it's about 1 or 2 am, and my son gets up at 7am, so as much as I want to sleep-in, once the family's up, I'm up. It's very draining work so when the weekends come I really need to catch up on sleep as well spending time with my family. If you don't get some sort of rest come Monday you just get further behind. And because lighting is a very physical job, there's a lot of stuff to move and shift and a lot of climbing and rigging on set so by the end of the week you're well and truly shagged. So you've got to eat well and try to pace yourself as much as you can.

From a working perspective I think what I do keeps me interested because it's a real mixture due to the locations. I think if I was cooped up in a dark confined studio I'd throw it in - I need to get out into the fresh air. And that's what's so good about this job - you're in the studio for a few days and then you're out on the road.



Name:
Michael Hughes
Age:
44
Occupation:
Gaffer
Company:
Little Feat
Lighting
Current Project:
The Secret
Life of Us
Location:
Melbourne

Training for Sound Editing in Film and TV



One of this country's leading sound post-production houses, Soundfirm, has once again run their popular training course in the basics of sound editing for film and television. The training course is an introduction to the concepts and detailed processes of sound post-production and was recently held at Soundfirm's Victorian facility in Port Melbourne.

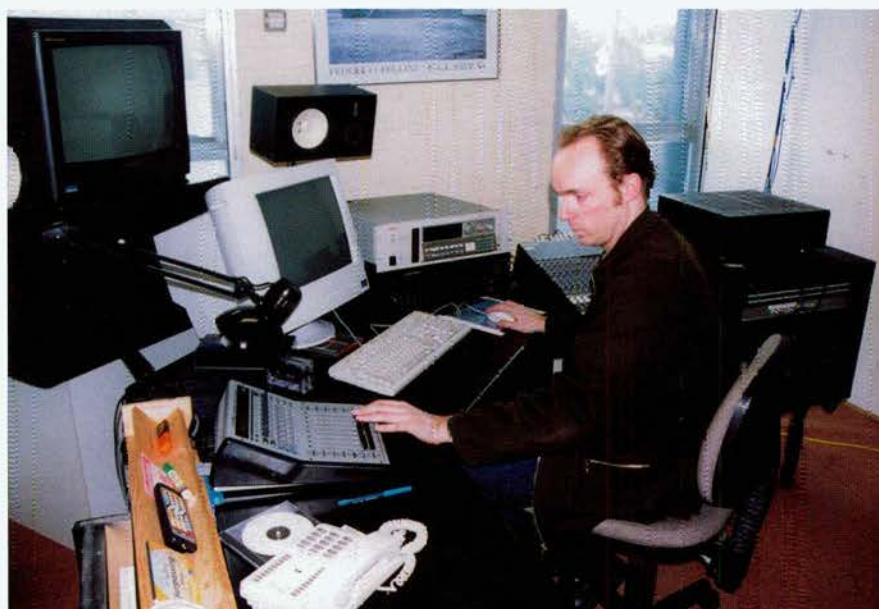
by Mandy Jones

The course is aimed at those who have not had experience in the field of film and TV sound and gives participants a rare opportunity to have a hands-on sneak peek into a busy post-production facility. Soundfirm's Business Development Manager James Tutton explained the course was developed four years ago to satisfy a growing demand for specialist training.

"We saw a shortage, particularly of Sound Editors in the film industry. There's a huge opportunity for young people in particular for a career as a sound editor in the film and TV industry and that's why we started the course," explained James.

Developed by Soundfirm CEO Roger Savage and Bruce Emery from Dolby Laboratories, the course has now been running for three years in both Melbourne and Sydney. Broken down into six sessions and held two nights a week over a three week period, the class size is generally limited to 12 participants so that individual attention can be given.

(below) James Tutton



The course is broken into five modules: module 1 serves as a general introduction to the definitions and basic concepts of sound editing including digital sound, recording, timecode and video work tapes.

Module 2 moves onto sound editing fundamentals where a project is broken down to demonstrate fitting sound to picture, maintaining synchronisation, planning track layouts and dubbing charts. Editing techniques are discussed for the sound groups of dialogue and ADR (Automatic Dialogue Recording), sound effects, atmospheres/backgrounds, foley and music. The basics of project planning are also discussed to explain how editors plan the edit schedule, use effects libraries to layer sounds and work with the supervising mixer.

In module 3, non linear technology and practice is introduced. Topics cover the impact of computers on film post production, from picture editing to computer graphics, to sound editing and mixing. Picture editing systems such as: AVID, Final Cut Pro and Lightworks are touched on, and the main Digital Audio Workstations are discussed in detail.

Module 4 concentrates on using Digidesign's ProTools for film sound editing. ProTools has become a popular choice with film editors and post production facilities worldwide. This module examines the system from a basic introduction of its features and processes, through to editing, Edit Decision List conforming, OMF (Open Media Framework) transfers, and advanced use.

The final module, 5, focuses on advanced editing techniques such as multi channel sound mixing, international Automatic Dialogue Recording sessions, and all the work involved in preparing music and effects (M&E) mixes for an overseas release.

"It's training, not lectures," explained James. "It's about an introduction to learning the craft. We look at the four main careers: Sound Recordists, Sound Editor, Sound Mixer and Senior Sound Mixer or Post Production Supervisor.

"The last night of the course is quite hands-on. The students divide up into groups and actually get to do some ADR and Foley recording for a real world production. For this one we'll be using the hit TV series *Cybergirl* (Network Ten, 4pm Fridays). All the music, the effects, the dialogue, the atmospheres are pulled apart and then the students help put it back together again using the Soundfirm facilities.

"The students will come out with a very basic understanding of ProTools which is pretty much becoming the industry standard, not only for film. It's a course about film so people who are experienced with ProTools will still get a lot out of it in learning about

the roles in film that they might play. So musicians or people in the music industry are finding that it's a good course to make the transition across to the film or TV industry."

Paul Pirola is one of Soundfirm's senior Sound Mixers having worked at the facility for 12 years. He is one of many experienced industry practitioners who assist with the course with hands-on demonstrations of the concepts covered.

"There will be a few of us here helping with some practical things so as Bruce will be explaining something he'll have the opportunity to clarify things by having one of us demonstrate some practical things," explained Paul.

"And then at the end of the course we have organised it to culminate in a night where we'll have three studios with operators in them and we'll break the group into smaller groups and they will have the opportunity to spend a little bit of time in each room asking questions of the operator. It's not long enough for them to take full control of the equipment but it's long enough for them to have a go at recording a line of dialogue or doing a bit of foley on a two or three to one ratio and to see it close up and in the real environment."

Interestingly, James said the courses have attracted experienced professionals and newcomers alike, combining for an interesting class mix. He explained the turnout has been largely made up of students who are beginning their career in film and TV, and experienced veterans who are looking for a career transition. James said the course has successfully catered to both of these groups.

"The course seems to do its best to cater for everyone by finding a happy medium between teaching technology and teaching creativity and also the processes. Unless you've already worked in sound for film there is a lot to learn in the course. That goes for 17 year old beginners right up to experienced industry professionals."

Soundfirm would like to hear from people interested in doing new courses. Some topics being considered are: Pro Tools (more in depth), Picture Editing (Final Cut Pro), Post Production Supervision (Budgeting and Project Management) and a special version of the existing course specifically for Directors and Producers.

Course cost: \$660 inc GST

Contact hours: 18 hours over 3 weeks

Class size: 12 (18 maximum)

Classes available: In Sydney and Melbourne over summer

Contact: Tracey Rankin at Soundfirm Melbourne +61 3 9645 4522

Email: tracey@soundfirm.com.au or go to the course section of their web site at www.soundfirm.com.au for the next class dates.

A student's perspective:

Darren Brown, 29, Melbourne Extreme DV - Darren Brown has worked in video post production for the last five years and has some professional audio experience.



"I work in the film and television industry professionally, but I guess sound post has always been a bit of mystery to me. In Australia there's such a divide between sound post and video post, so this course has been enlightening. The course has been good to demystify some of the terminology and give a very good broad overview of all the concepts involved in sound post, for both film and television. It's great to come into a facility that actually does it every day and to use the gear and see operators doing mixes on material that is actually going to end up on television. It's great to gain access to these facilities and to be able to sit in front of one of only two Dolby 5.1 Accredited rooms in Melbourne.

"Given the limited time frame of the course and I'd be interested in a more in-depth course which actually trains operators over three or six months. This course is very good at revealing the actual processes involved up close and personal. Certainly Bruce Emery's knowledge and experience in the industry is irreplaceable. He and the other sound firm staff (Andrew, Rob, Skye and Francis) have always got an anecdote about something that they worked on which brings it all home. For me, learning from someone who has actually worked on real film and television projects, who understands the pressures and time constraints better than your typical lecturer, makes it all the more worthwhile."

"Everybody does this course for a different reason. Mine was from the point of view of working in the industry I need to know more about this side of it. In video post you often send off a video tape and you get the sound mix back. You don't fully appreciate what happens in between. My career goal is as a Post Production Supervisor so I need to improve my audio skills. My main reason for doing this course was to pick up more of an understanding of this side of the industry."



(above) Pro-tools suite

by Graham Walne

Direct Contact

Are you in a pancake or a pyramid?

These terms are used by management consultants to describe corporate structures, apparently industry has been moving away from a hierarchical system to a flat structure where people share information and there are few layers to the top. It occurred to me that such changes might also have been happening in the theatre, especially with regard to the way the design team works.

I am old enough to have worked with directors who 'did' their own lighting in the days when us LDs were few and far between. Consequently these people knew both the technology and the terminology and later kept a strict eye on young practitioners. The opportunities to be creative were contained within the envelope of the directors' own experience and frequently us young designers became more like the managers of someone else's design.

Only once do I recall a director's experience being helpful! On one production the only set was a vast back projection screen and since the images were thus critical I turned to the legendary Robert Ornbo for help and advice which he gave freely. At the lighting and subsequent technicals the director rarely finished a question to me as his own knowledge cut in and provided the answer... "could we...no you can't...don't worry". By contrast another director wanted a specific effect only achievable with a piece of equipment from the adjacent theatre, being rigged for the next show I was to light. I couldn't release it. He then wanted another piece of equipment from a third theatre also being rigged. Again I couldn't release it. A stalemate developed. I broke it by going to my office and returning with drawing board, lighting stencils, plans of all three theatres and the lighting notes and asking him to do all the designs. After a stony silence we continued with what we had. I hope I wouldn't be so confrontational today and I certainly never worked for him again but....

Again another director planned his productions meticulously with the aid of model actors, he was the only person I've ever worked with who came to the first read through and issued meticulously typed plots to everyone, down to scene change notes, the layout of the props table and the lighting plot! After one rehearsal I saw his eyes widen as I said "I'd like to introduce some more cues"...only his respect for me allowed me to give it a try but he was deeply uncomfortable with the additions. Out of respect for his position I cut the cues.

These stories are typical of many of my experiences in my early days and looking back now I can also see them as being typical not only of the structure of Europe's theatre but of its society as well. By contrast, working in the USA and here in Australia, I have encountered more democracy. In lighting terms this has meant that I am more likely to meet the other members of the design team before the model is glued down and thus more able to contribute ideas which can have an affect on the very concept. I once went through my portfolio and counted the number of UK productions on which I had been engaged before this critical point and it was less than

5%. If I looked at my non-UK portfolio I suspect I've been able to discuss the concept in almost all cases. Whilst this factor must reflect the attitudes of younger countries it also reflects the fact that lighting design is growing up and commands more respect than it did when I started.

I have written in these columns before about some of my favourite directors, notably Sarah Caldwell at the Boston Opera who rarely gave me a lighting note but just referred me to the music - 'it's all in there'; as long as I listened then I had a free hand. Her respect for the composer's intentions produced unsensational and uncontroversial work but it also meant opera lovers didn't have to shut their eyes whilst enjoying memorable performances. This kind of authenticity is also what drew me to Sam Wanamaker's dream of rebuilding Shakespeare's Globe (I was lucky enough to be one of its design team) and his faith in producing Shakespeare without gimmicks so that the words would shine through the centuries. Here in Perth, I count many productions for Perth Theatre Company's Alan Becher as my best work because not only does Alan set tempting problems but he also listens to the solutions. Many of our productions have been done with minimal setting and Alan has reblocked actors' moves if I calculate that I can't get the required degree of separation in a certain position.

The directors of yesteryear would never have been so agreeable. For them, lighting was something you did last and therefore you thought about it last, I've even been banned from one rehearsal room because my presence reminded the director that there was part of the production he wasn't ready to deal with yet.

If directors have therefore moved on, what of set designers?

I used to think that set designers had become more visually oriented as directors moved closer to the text and felt the technology had got away from them. Thus there was a period, certainly in Europe, when the only possible visual conversation was with the set designer and not with the director. However, invoking my milestone of the model being glued down then at this point I've rarely been asked a question by a set designer about how something could be lit. The set has been presented as a *fait accompli* and perhaps only the masking is negotiable, the image existing in the designer's mind in some ethereal black haze.

A lot of this is due to the way we train set designers because few courses provide them with an understanding of both the potential and the limitations of light (it travels in straight lines). Lighting perhaps isn't its own best ambassador because it's easy for anyone to throw light on a stage, harder to create with it.

The democratization of moving lights and colour change means lighting will play a different role in more and more future non-musical productions and if these tools aren't to be seen as gimmicks and distractions then the design process needs to involve everyone equally. Pancake anyone!

"For them, lighting was something you did last and therefore you thought about it last..."



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Car Acronyms

Hold On, 'Nother Dickhead Arriving (HONDA)

One of the popular pages on the dunkworld.com site is the *Car Name Acronyms* section. I initially listed a couple of humorous suggestions as part of one of the stories, with a note asking people to send in their favourites. I received so many that I've had to set up a

separate section for them. If there's one thing the Internet shows you: is just how many people have more time on their hands than they know what to do with.

So, since it's coming up to the holidays, let's put aside thoughts of economic slowdowns, terrorist attacks, Christmas with the relatives and other depressing stuff and have some fun! There are literally hundreds of sites with more names. I've gone through most of them and distilled the best, editing out most of the heavily American-influenced ones, but there are still plenty that are familiar to Australians.

So here goes...

AUDI: Another Useless Deutsche Invention. Obviously written by someone with first hand experience - maybe someone who had one rust away to brown air in the 70's?

BMW: Bought My Wife; Brings Me Women; Big Money Waster; Broke My Wallet; Babe Magnet Wannabe, and LOTS more. There's a certain commonality of theme though, insinuating that Bavarian Motor Werken cars are expensive to run and bought by shallow image conscious airheads (See pic). **CADILLAC:** Crazy And Demented Idiots Like Large American Cars. Nuff said?

CHEVROLET: Chevrolet's not a common Aussie brand so one example will do - Can Hear Every Valve Rattle On Long Extended Trips. There are heaps more for those who are interested, second in popularity only to Ford (see below) **CHRYSLER:** Can't Have Refund, You're Stuck Leasing Edsel's Replacement. A clever one, but I'm sure most Valiant owners would prefer this one - Company Has Recommended You Start Learning Engine Repair!

DODGE: Drips Oil, Drops Grease Everywhere. I've got one and every word is true!

EDSEL: Every Day Something Else Leaks. More to add to the Edsel's woes

FIAT: Failed Italian Automotive Technology, Feeble Italian Attempt (at) Transportation; or the well known favourite - Fix It Again Tony!

FORD: Of all car names, Ford has the most entries - three complete pages full: Fix Or Repair Daily; Fast Only Rolling Downhill; First (or Fails) On Race Day; Funding Our Retirement Daily (from a mechanic's point of view); and

perhaps best of all: Driver Returning On Foot (Ford spelled backwards!)

HOLDEN: Holes, Oil Leaks, Dents, Engine Noises. Come on Aussie come on!

HONDA: Had One Never Did Again; Hold On, 'Nother Dickhead Arriving; plus (and this is a true rarity among these acronyms) one that says something positive about the car - Happy Owners Never Drive Anything (else)

HYUNDAI: A bitter one - Hope You Understand Nothing's Driveable And Inexpensive; and a clever one - Hang Your UNDerwear Anywhere Inside

ISUZU: It Sucks, Under Zero Use

JAGUAR: Only one entry - Junk Always Going Under At Repair Shop. I've owned three Jaguars

during my driving history, and I've always felt that they're the ideal car for a handyman, as long as he's handy with money!

JEEP: Once again, a bitter one - Junk Engineering Executed Poorly; and a clever one - Just Enough Engine Power

KIA: Kick It Again; Keep It Away; Kill It Anyway. Hmm - another commonality of theme here too.

LOTUS: Only one entry, but it's a good one - Lots Of Trouble, Usually Serious. It's no coincidence that the acronym for the Lotus Owners Of New York car club is LOONY!

MAZDA: Mostly Always Zipping Dangerously Along; Made After Zero Design Analysis. Z's are always hard to work with. **MERCEDES:** Many Expensive Repairs Can Eventually Discourage Extra Sales

MG: By and large the Pommie brands cop a bit of a bucketing, and MG is no exception - Merciless Garbage; Money Guzzler; **MG-B:** Might Go Backwards; the new **MG-F:** Might Go Forwards

MITSUBISHI: Not the easiest of names to work with, but someone's had a go - Mostly In The Shop Undergoing Big Investments, Sometimes Halfway Incomplete; and another - Motor Is Tough, Sounds Unbelievably Bad, Intimidates Slow Hondas Incessantly

NISSAN: Needs Imminent Salvage So Abandon Now. You have been warned!

OLDSMOBILE: Someone worked hard on these - Old Ladies Drive Slowly Making Others Behind Infuriatingly Late Everyday; and another - Old Ladies Drive Slow - Mostly Off Bridges Into Lake Erie!

PLYMOUTH: Please Let Your Mother Out Under The Hood!

PONTIAC: People On Narcotics Think It's A Cadillac

PORSCHE: Proof Of Rich Spoilt Children Having Everything. Can't argue with that one!

SAAB: Quite some bitterness here - Send Another Automobile Back; Swedish Automobiles Always Breakdown; Start Adding Additional Brakefluid; Sad Attempt At Beauty. And you've got to say this with a California drawl - 'Yuppies don't cry, they just Saab'.

SUBARU: Screwed Up Beyond All Repair Usually

SUZUKI: Space Usually Zero Unless Kids Inside

TOYOTA: Some bitter ones here too, this time with a local flavour - Taking Our Yen Out Through Australia; The One You Ought To Avoid, They Overcharge You On Their Accessories

TRIUMPH: A cry from the heart here - This Really Is Unreliable Man, Please Help; and another - Tried Repairing It Until My Parts Hurt! Someone speaking from first hand knowledge, by the sound of things!

VOLVO: Very Odd Looking Vehicular Object; Very Old Lazy Vehicle Owner. These are just about all there are, barring variations on the same theme. Personally I thought there would be rich pickings in the Volvo genre, but perhaps the two Vs are a bit of a handicap.

VW: Very Weird; Virtually Worthless. Some literary giant has rummaged through the Roget's Thesaurus and had a go at **VOLKSWAGEN:** Vehicle Owners - Losers Knowingly Suffering With All German Engineered Nonsense. Doesn't quite work, but a good effort!

Well, I think we've managed to stick the boot into just about most car names so far. There are a few missing - Peugeot for example - so if you can think of any new ones (must be funny and clever, and please, not the other Pontiac one) email me and I'll include them on the website. Have a happy holiday season and I'll see you all again in the new year.

durk@dunkworld.com



ENTECH 2002 AWARDS NOMINATION FORM

Connections is now calling for nominations for the entertainment industry's prestigious technical awards. The awards are presented at a special dinner as part of the ENTECH Trade Show, Darling Harbour 4-6 Feb, 2002.

If you have an opinion on who or what in our industry should be recognised for excellence, then we would like you to participate. Just fill in and sign the nomination form below. Your nomination MUST contain a valid email or fax number contact, as this will be used ask you to vote for the final award (see The Awards Process information box):

Your Name: _____ Contact Phone Number: _____
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 Best Lighting Designer (Event/Live Production) _____
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 Best Sound Designer (Event/Live Production) _____
 Best Sound Designer (Installation/Architectural) _____
 Best Lighting Technician _____
 Best Sound Engineer (Event/Live Production) _____

Company Awards (insert the name of the Company you nominate below)
 Production Company (Lighting) _____
 Production Company (Sound) _____
 Production Company (Audio Visual) _____
 Distributor/Importer _____
 Australasian Manufacturer _____
 Pro-Equipment Outlet _____
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Equipment Awards - Audio (insert the make, model and model no. of the product you nominate below)
 Digital Recorder or System _____
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 Speaker (Large PA over 500W RMS) _____
 Speaker (Studio Monitors) _____
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 Analogue Mixer (Studio Production) _____
 Digital Audio Mixer (Live Production) _____
 Digital Audio Mixer (Studio Production) _____
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Equipment Awards - Lighting (insert the make, model and model no. of the product you nominate below)
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Equipment Awards - Display (insert the make, model and model no. of the product you nominate below)
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- Any individual is eligible to make a nomination.
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I understand that I am only to submit one nomination form, and that the information contained here is true and correct:

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NAMM - International Music Market
Jan 17 - 20 2002
Anaheim Conventions Centre CA
www.namm.org

ENTECH - Australia's Entertainment Technology Tradeshow

Feb 4 - 6 2002 Darling Harbour, Sydney
www.conpub.com.au +61 2 9890 2111

SIEL
Feb 3 - 6 Feb 2002 www.siel.com

USITT - Conference & Stage Expo
Feb 13 - 16 2002 +1 315 463 6462

MusikMesse - Pro Light & Sound
Mar 13-17 2002 Frankfurt am Main
www.messefrankfurt.com

SIB International
Mar 24 - 27 2002 +39 0541 744 111

NAB - The Convergence Marketplace
Apr 6 -11 2002
Las Vegas www.nab.org

PLASA - Shanghai
Apr 16 - 18 2002
Shanghai www.plasa.org

NSCA - Expo "Reach the Summit"
Apr 25 - 27 2002
Colorado Convention Centre Denver
www.nsca.org

Infocomm - China
May 8 - 10 2002

AES - 112th
May 11 - 14 2002 +1 212 661 852E

CEDIA Australia
May 15 - 19 2002 www.cedia.com

Lightfair - International
Jun 3 - 5 2002
Moscone Centre, San Francisco
www.lightfair.com

ABTT
Jun 19 - 20 2002
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PALA - Pro Audio & Light Asia, Total Events Asia
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Hong Kong +65 227 3688

NAMM - International Music Market
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Nashville TN www.namm.org

PLASA
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Earls Court, London www.plasa.org.uk

IBC
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LDI
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www.ldishow.com

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Shanghai www.messefrankfurt.com

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