

Channels

with
**Studio
News**

Australasia's Professional Sound and Lighting Magazine

Published every 6 weeks Distributed DIRECT to industry professionals Issue 17 1st November - 15th December 1992

GREAT SOUND MAKERS

inside

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Channels FAX
(02) 876-5715. Open 24 hours



Picture: Tony Mot; Simply Red - tour report, page 20.

Robbie McGraph

Simply Red's soundman talks about making sounds, equipment around the world, trends, mixing consoles ... and especially: Musicians! Our full story starts on Page 18.

Mark Moffatt

The Australian producer, talks about making sounds, recording on a budget, imported producers and the reluctance of record companies to try new talent. The Interview, in Studio News, from Page 34.

LIGHTING

Simply Red use Golden Scans- P.16
Moving Lights get RED HOT- P.11

ICONS & I CHING

Jimmy Barnes In The Studio

Jimmy Barnes has wrapped up a month of tracking in a heavily re-decorated Festival Records studio in Sydney, with American producer Don Goeman. "We were supposed to be here for six weeks, but we've finished today after one month", said Rickster Wil, engineer.

The inner sanctum at Festival had a complete decor makeover for the sessions that included an 18" deep sand in the vocal booth. "Jimmy's beach", explained House Engineer Mark Thomas. The beach was complete with plants, coloured lights and graffiti painted walls. In the control room a menage of objects captured attention, incense burnt and I-Ching was the order of the day. There were stuffed toys, flowers, candles, car parts hanging from the roof, balloons, plastic animals, lava lamps, icons toy cars, tin soldiers, plasma balls, Buddha tea towels - crap everywhere. Just like a mad woman's breakfast.

This was vibe-ville central. Buddhist Monks apparently blessed the studio at the beginning of the project, at whose behest is uncertain.

The project is the next full-on Barnes studio album, code named 'Sweat It Out'. The sessions were back to basics - live band sessions without

Continued in Studio News, Page 34

NEW SUPPLEMENT

inside Contracting & Components

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Anatomy Of A Disaster

The story of an installation gone terribly wrong. Page 26

TOOLS...

We debut new products for better installations. Page 26

Jobs...

We look at the ANA Hotel, a million \$ plus install. P 30

and MORE!

Jands outline a new deal, Les Jones talks about standards, Dyalite expand - start at P.26

The more we listened the better it sounded

Vienna is the direct result of listening to the demands of our customers and shaping our product to meet their needs. So when the other stars are performing, Vienna won't make a song and dance about making sure they sound as good as they look.

As the proud successor to Series 8000, Vienna is ready to meet any challenge. Fully equipped for a life in the theatre, arena or auditorium. A new four band sweep equaliser has been designed specifically with live sound in mind. There are eight mute groups, eight stereo inputs, eight optional VCA groups, an optional 11 x 8 matrix output and control room monitoring. Inputs and outputs are fully balanced throughout and there's an advanced console linking system, compatible with Europa.

In spite of its sophisticated styling Vienna is, like all Soundcraft consoles, built to withstand a tough life on the road. When it comes to live sound, Vienna fits the bill like no other.



Soundcraft Vienna

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Memo record labels: give our Engineers a go!

While this issue details Don Gehman's great achievement in getting Jimmy Barnes tracking session reduced from six to four weeks, other American producers aren't doing as well. Our local recording industry seems ready to accept almost any has-been or almost-now guy with a C.V. that might be fudged. As long as they come from the USA. Real hit makers like Gehman are few and far between.

Leading local producer Mark Moffatt quietly puts the case that the local record companies have brought about a lack of available Australian Producers by failing to let local engineers have a go, so talent regeneration has stalled. Clearly there are some great engineers here, ready to step up - now all our local recording industry needs is some A&R awareness of this.

Looks like a theme through the Studio News pages of this issue to me, see what Gary Rabin from Under New Management has to say on Page 41.

CHANNELS NOW HAS A NEW FEATURE, 'Inside AV Contracting' that reflects the fact there are a lot of people earning a living in the installation sector here, and that much of the product within these pages ends up installed somewhere.

The lead story, 'Anatomy of a disaster' is not the start of a regular witch-hunt, rather the venue owner contacted us, and we reluctantly went to hear his story. Clearly he has some gripes, just as clearly he somehow has failed to communicate very well with some or all of the contractors involved. You decide. In any case, the lighting contractor has made good at presstime, so one part of this mess is no more. Without doubt our story will inflame passions, but that's life!

It is the fervent hope of those few who sweat out this magazine that some contractors/installers out there can get in touch with suggestions for this section in the future!

WE HEAR YOU, this issue has the start of a tidier format - we hope - and the look of the magazine and the ease of use should be even better when next we appear, on December 15th. Let us know what you think! Our next deadline is November 30th, and our Fax never sleeps. (02) 876-5715 is the number.

Channels

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Here's a good one .. those sweetheart deals never really work, do they? Sydney venue operated by the government, published a tender based on a specific type of patch cable - and specified by a Sydney vendor who supposedly had an extra 25% discount from the importer. Second Sydney vendor called the distributor for prices and was quoted a number - then was surprised to win the tender, for around \$15,000. First Sydney vendor flew off the stick and called the distributor who checked the calculations and ... oops! The 25% discount had been GIVEN to the second vendor and ADDED to the first! Channels has mailed a Jeff Bolt brand (JB -1 model) crooked calculator to the distributor concerned

The personage who is not a director but still mysteriously calls the shots at a Sydney firm, wanted a favour. He wanted the rights to distribute an American speaker system, so he called someone from England who he thought had an 'in' with the American firm concerned. Now our Englishman hadn't met the caller, who established in very forceful tones that somehow, somewhere along the way, the Englishman owed him. Owed him to such a degree that the Englishman should drop everything - right away - and call the chief executive of the American firm with a firm endorsement of the bid. The pressure was strong, so heavy, the sense of obligation so unwavering, that our Englishman did, in fact, put a call through to the States on behalf of the non-director type from Sydney. He spoke with the CEO, and strongly recommended against the Sydney firm's bid. They were completely unsuitable, he told the appreciative Yank.

Coemar DeSisti Australia boss Peter Kemp moonlights the occasional truss followspot gig. Having survived the long climb up the rope ladder at a Simply Red gig, he settled into his chair - just beside an arch rival Clay Paky Golden Scan. "I could have kicked it", he said. The Golden Scan was not intimidated, but wouldn't respond when interviewed about the trauma!

Serge Rancev of Audio Oz will marry Kate, a multi media manager, in the middle of Port Philip Bay, on the sharp pointy bit of a steam ship. For those lucky enough to be invited, the wedding meal will consist of fresh fish. There will be a buffet for those who are not such good fishermen. Dress is to be casual (Wellington boots, waterproof coats and life jackets). The Bride should look attractive in her wet suit.

Colin West of Top End in Darwin is a first time dad, after Annette gave birth to Conner James. The paediatrician says Conner needs no PA!

The guy that stole the guitar from Musicians Pro Shop (last issue) actually came back into the store later. His lapse was rewarded by the considerable bulk of owner 'Brute' Barr bearing down upon his person. What a fatal mistake!

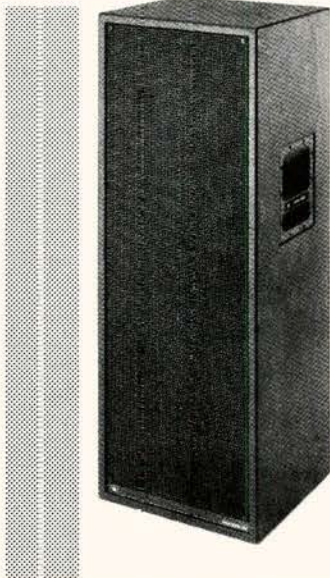


World Supply Line

- Coemar DeSisti Australia is a subsidiary of these Italian firms. Now Coemar have bought a major lump of Orion USA, who are their distributors there. Coemar DeSisti Australia say they now have interaction with Orion. Stand by!
- R.E.P. magazine has been closed down after falling advertising revenue left it in the red. The inside story has it that the advertising rep left, and so did most of the advertisers.
- DOD/Digitech about to make announcement to local market. Something happening here?
- Denon were caught by the demand for the DN-2000F dual CD player for disco's. They say they are now on the ball, with more destined downunder. Despite the shorts, hundreds have been sold here.



Array 4894 2 way dual woofer cabinet (top) and 4893 subwoofer (below).



Array Expands On Cue

JBL debut two major new upmarket designs

LONDON- The major loudspeaker release at the PLASA tradeshow here came from JBL International, who added two Array Series models to their range. The two models position the Array Series in the market that Meyer and to a lesser degree Apogee have assumed, with JBL utilising the software upgradable ES-52000 Digital Controller as the lynchpin for the range. Digital control is a realm Meyer & Apogee are not yet in.

Software upgradability is an angle JBL have started pushing, with users able to upgrade their controllers in the future to cater to advancements. The ES-52000 offers time alignment, horn EQ and most importantly 50dB crossover slopes in a user configured format that will run stereo 2 way or mono 3 way.

Accordingly, the two new Array Series loudspeaker models are a subwoofer, and a dual woofer 2 way box. Both feature a unique 14" woofer, that cannot be purchased as a separate component, as cannot the high frequency driver, a neodymium unit designed for Array. What the firm means by Array Series is the controlled dispersion the cabinets allow, which is limited to 45° at the woofer and horn, allowing the boxes to sit together in a flown 'array' and not interact in any negative way.

The model 4894 is the two way cabinet with dual 14" woofers that is essentially a stretched version of the existing single woofer Array cabinet, the 4892. The dimensions are the same width and depth, so the two types of cabinet can be mixed up in a system. The subwoofer is designated 4893, and is not trapezoidal like the other cabinets in the range, rather it follows the convention that subwoofers are filed on the floor. This model has separate pinouts for each 8Ω speaker.

Flying Array class is an interesting experience. JBL has devised a flying system called SAFE - and it is quick and almost easy to use. A bumper (or fly bar) isn't needed and the system will allow you to fly one box today, or a whole quantity tomorrow, without sending away for another half tonne of metalwork.

-Exclusive for Channels from Phillipa Horran-Smyth, London.



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Rock & Roll Music a new Yamaha outlet

SYDNEY- Rock & Roll Music and Random Audio have established a Yamaha Pro Audio and musical instrument outlet at Rock & Roll's premises in Manly.

Rock & Roll's Neil Smith told Channels he has totally refurbished his showroom to accommodate Yamaha's extensive product range, including Audio Technica microphones. Other new lines include JBL and Shure. Rock & Roll will continue to offer quality 2nd hand instruments and audio equipment.

Call them on (02) 977-3188.



Australian Acoustical Society hosts tech talk

SYDNEY- 'The Gentle Art Of Interactive Optimisation' was the title of a talk delivered by Elecoustics' David Conners and Glen Leembruggen recently. Elecoustics designed the loudspeaker system for the new Parliament House, and this was a technical discussion of it's merits, which include the feedback suppression of 140 microphones in the bear pit itself - The Chamber.

The Australian Acoustical Society (NSW Division) can be reached on (02) 498-8188.



Tube Mic & DI

Groove Tubes are, of course, famous for their valve guitar amps. Now they debut the MD-1 tube condenser mic, and the DT-1 'tube direct' box. These devices are said to have a 'startlingly pleasing' sound, so audition today. Call Drago himself at CMI on 03-315-2244



1992-year of the Lighting Show

No Tradeshow Available, So Manufacturers go Direct!

MELBOURNE- L.S.C. Electronics have hosted the largest lighting gathering yet this year, with several hundred industry types checking out LSC, Selecon and other assembled products - including Tape Tech tape, the gaff with no sticky in the middle, for cable runs. Ferrets and Gerbils have yet to be tested with this tape! L.S.C. say more people from Bytecraft came through their show than any other company.

ADELAIDE- BSS Light & Sound Innovations, with Coemar DeSisti, have done likewise, and say it worked great. Again next year, they say.

SYDNEY- Megatone Enterprises plan a Martin night on Thursday 26th November, at Canterbury-Bankstown Leagues Club, to show the new Pro 218 amongst much more. Call Gina on (02) 564-2277.

Lots Of Watts held a day in Sydney during October where lighting control manufacturers displayed their wares.

Any other firms planning a trade day/night let us know well in advance, (2 months ahead is a good idea) and we'll run a notice here.

SELECON GET IT RIGHT!

New Performer MSR 1200 Follow Spot Released



AUCKLAND- The Performer followspot utilises the latest shortarc lamp technology, with the MSR 1200 lamp burning in an axial position. This produces 1000 lux at 57.5 meters, a blistering result we think.

The Performer has a 20 leaf iris mounted on a heatsink, and a choice of 2 colour magazines: a 5 unit magazine with glass colours installed inside, or an external 6 colour changer. Zoom range is from 5.5° to 9.2°, and operation is from either side. Selecon: 62-9-360-1718.

SM 58 Copy Best Yet!

Can a scuffle rise twice? I was astounded when meeting John Batliner from Shure Brothers of Illinois recently - Batliner reached into his bag with a conspirational look. This wasn't what I expected from the utterly professional visiting product executive! Psst! he said, and urged me over, I expected he wanted to show me something strange, illegal or shady. What he had was at first impression almost all of these things, a genuine SM-58 copy!

What really had me incredulous was the name tag on the illicit device - Shure! Yup, if you can't beat them join them. Shure have the SM-48 on offer, it has the same look, the same feel, the same grille - but not the same capsule - as the SM 58. Best of all it isn't made in some sweatcuse to dubious specifications like anything cloned always is.

While the SM-58 retails for about \$258, the SM-48 is on offer at \$149. A genuine clone beater, according to importers Jands Electronics, or if you can't beat them, join them.



Shure's John Batliner

● Fairlight has a new General Manager - Alan Burrows, who has been involved in manufacturing, exporting and marketing, according to the PR release.

● Jands have announced Rod McKinnon will head their new Professional Range, the result of an expansion drive that has seen the creation of a second range of products designed to cater to music stores and smaller outlets. The second range is known as the Performance Range. McKinnon was previously sales manager at Australian Monitor.

● LSC Electronics have announced the formation of LSC America Inc, in Knoxville Tennessee. Robert Steel will run the outfit, he has done LD duties for Supertramp amongst others. The venture places LSC stock onto American soil, not dissimilar to the approach of Jands and Australian Monitor.

● John Sherwood is the new General Manager at Amber, the company group includes Trace Technology. Boss David Hannay says John Sherwood will be in charge of sales and marketing functions.

● Mr. & Mrs. Peavey will be downunder in November, for a dealers conference. Channels will hopefully interview the famous couple ask all the usual questions. Anything you want to know? Call us, and we'll ask them!

-JG

CREWING AGENCIES COMPETE

There is more to booking crew than using a phone, say United

The crewing service business has become competitive in Brisbane and Sydney of late, with United Crewing Services challenging the incumbent company in each town. "We pay the crew on Friday, irrespective of whether we've been paid ourselves", United's Scott McDougal said, adding that since the business started in Sydney, upwards of 160 crew had been employed at one time or another. "The crew vibe is what counts to the person hiring - think about it - I was the crew chief for a crewing service, where there was no vibe at all, and then the guys had to worry about how they were going to get paid" said Scott McDougal.

"The whole thing started with some crew being dictated to, as to who they could and couldn't work for - you can't do that", said Scott. United Crewing says they have grown from rank and file dissatisfaction at a crew level, into an organised business, which is rare in any industry.

"The production manager needs the best service possible. It just makes his job easy because he's got sound guys, lighting guys, stage technicians working for him, and if they're happy, he's happy. If they've got CES guys helping them load, not able to lift properly, not able to identify a piece of equipment, it just makes their job harder. The more professional the hands are, the easier it is for everyone, things get done quicker".

"It's been an argument that crewing services in the past haven't paid crew (because they themselves haven't collected) but our first job was a big one, the Indy Grand Prix, and we got it because we all worked for the same people in the past".

The hourly rate charged by United varies, in Brisbane for example, a flat hourly rate can be effected, the further South you go, "the more ridiculous it is", according to Scott, who says Melbourne is beset with penalty rates, Sunday rates and a three tiered rate administered by the union.

In Sydney all United crew are union members, "we have discussions with the union, we haven't got a problem with them" Workers compensation, safety legislation and training are all issues that must be addressed by anyone hiring out crew, according to the United team.

"A production manager knows how a day is going to flow, how the schedule's going to run. He knows how many hands each technician needs - two here, two there - what time does he need to be set up? Then what does he need to get out? He knows what it's



Phil Cathcart and Scott McDougal, United Crewing

going to cost him before he even rings us before the gig" said Scott.

The key to this business appears to be knowing the business firstly, and not running out of crew secondly. United partner Phil Cathcart produced a very long list from his portable office, which he and any of the partners in Unitec (there are four) can contact with their mobile phones.

As an example of how work can come in, Phil & Scott were in bed (not together, they hasten to add) and the phone rang late at night. A crewing service hadn't delivered the 12 crew needed for a lead out at the Fordern Pavilion, there were just 6 there. Unitec got 6 crew down there, and the tour loaded out on schedule. "If it's 2 or 20 guys, you've got to have the numbers, and we always send a crew chief".

"We get a lot of calls from people wanting a start in the industry, and you can tell pretty well straight away what's going down - he says he's been in a band, then he's a muso who's never done any work. If he says he's helped out a band, and he's a brickie's labourer, that's different. We get people ringing for crew and asking for someone to help a lighting technician and work a followspect for two nights".

"You've got to talk to people, the vibe and the first look make us pretty right about people". A crewing service can break people into the industry, this is for certain.

United - phone Brisbane: (07) 397-9414, Sydney: (018) 40-8275.

*Nui Russell, who heads Australian Crewing Service in Sydney is not concerned by United's push into his turf. Speaking to Channels during a loadin, Nui says he can field up to 120 crew, as he did for the Prince outdoor show. He says that he won't engage in discourting, because this just means the crew would get less, and he is totally against that.

Australian Crewing Service: (02) 365-1573.

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Dallas show

NEW YORK- The Lighting Industry is gearing up for the largest ever LDI tradeshow, according to organisers Lighting Dimmensions. The show will be held in late November in Dallas Texas, and promises to retain its mantle as the leading lighting event of the year.

Aside from 200 plus manufacturers and suppliers from around the world exhibiting the latest, LDI also run a series of workshops designed to break new ideas and how-to sessions from leading lighting people. Many local lighting professionals will make the trip.

Next issue we will feature LDI '92.

Hitachi delete TO-3 mosfet

TO-3 Mosfets discontinued, Amplifiers redesigned

SYDNEY- Australian Monitor have advised customers that the Hitachi TO-3 Mosfet phaseout will not adversely affect their products. "An alternate device has already been chosen by Australian Monitor ... it is a progressive move which will further enhance our product", according to Australian Monitor Product Designer, Stuart McLean. This follows advice from Hitachi Ltd of Japan that the TO-3 package, including the 2SK176 and the 2SJ56, will no longer be available.

ARX are another Australian Mosfet amplifier manufacturer affected by the move. They released a statement headed 'ARX solves problem of mosfet drought' in which they state that the changeover doesn't present much of a problem, despite the price increase of the alternate Hitachi Mosfet package, the 2SK-400 and the 2SK-114, known as 'flat packs'. "We don't only build amplifiers", said Duncan Fry, so we can afford to introduce a running change to our existing models. We might go to valves next", he quipped.

Amplifier manufacturers, including Jands Electronics, have been quick to point out replacement Mosfets will be available for some time into the future, and that customers should not be concerned about future service of their products. Jands has moved away from the Mosfet as an amplifier output device with the SR-3000, now Australia's best selling ultra high power amplifier, featuring bipolar devices.

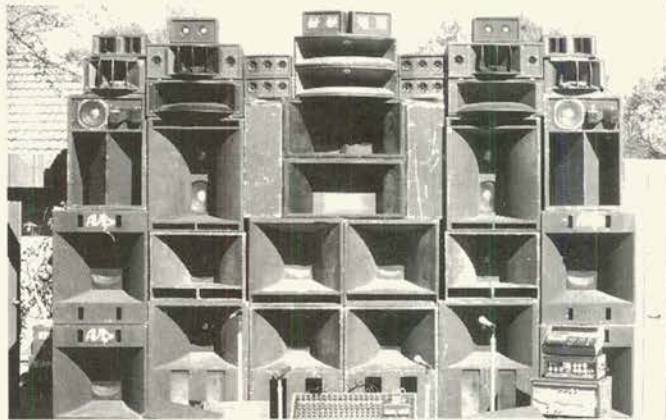
"When we released the SR-3000, we had a series of seminars around the country where we challenged anyone to compare the SR-3000 with anything else around", said Jands Audio Products Manager, Peter Twartz. "I think we proved the SR-3000 certainly sounds better than any Mosfet amp, and it was very hard then not to announce that the TO-3 mosfet was already obsolete. We didn't want to do our competition a disservice, better they announce it themselves".

Processed PA from TOA

TOA have joined the Deltamax bandwagon with this offering that allows mono or stereo, 2 way or 3 way configuration. Like all modern speaker cabinets, the 2 way 'main box' is trapezoidal, with the sides tapering inwards 15°. Aircraft flying points on top make it easy to get the thing in the air, it contains a 12" woofer and a h/f driver with CD (constant directivity) horn. **Weight: 38kg.**

Then we have the subwoofer, with two 15" woofers on board, and band limited to 1kHz. The lowest useful frequency is said to be 40Hz, with the device offering 35Hz at -5dB. 81kg.

To run this ensemble you need the electronics of course- the F1 and the L1 processors, which are mono and use a 'sense loop' for active feedback from the speaker system, of course. This is the same methodology as Meyer & Renkus Heinz. Call AWA for details.



What is it? Identify all these horrible parts and win an exciting prize!



Auckland hang

Scmewhere to visit when in Auckland is Galatos Street, an industry watering hole run by Martin & Leighton Takarangi. Live music happens three nights a week, and the boys say they wanted to create an atmosphere like the Manzil Room and Benny's in Sydney.

An in-house sound system has been activated, comprising a pair of NZ designed JBL cabinets driven with a ZPE-700 Series III amplifier from Miracle Electronics. (I remember ZPE. -Editor)

The venue has a pool room, and it has JBL Control 1 speakers in it. The boys say they are happy with their sound, and they'd like to see you down there sometime!

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SAN FRANCISCO HOSTS BIG AUDIO SHOW

8 Track Digital Recorders The Big News At AES, Monitor Consoles Released

Exclusive report for Channels from Ray Bond

Is the tape recorder dead? Maybe not yet, but rolling towards extinction at a more than rapid pace. Hard Disk storage/multi track recorder systems and digital work stations abound, with products from around the globe including two from Oz, the **Fairlight** MFX-2 and one I hadn't heard of before, the Electronic Digital Innovation Tracker from **EDI** in Melbourne. Other interesting systems were from **Spectral Synthesis** (distributed by Light Years Ahead), **Sonic Solutions** and **Waveframe** from California, **Studer** Dyaxis II from USA/Switzerland, **Anatek** Radar and **Lexicon** Opus - to name some of 30 on display.

Tascam debuted their MDR-88 digital 8 track which uses Video 8 tape and retails in the USA for US\$4500. Not to be outdone, **Fostex** made the major announcement of the show that they had been licenced by **Alesis** to use the ADAT format. (This could see the S-VHS medium as the standard format for the future - which will prevail? The battle lines are drawn! Ed) Local Fostex distributors Syntec doubtless await the new Fostex 'ADAT' with great excitement!

New amplifiers were on show from **Crest**, with the 10001, a 4ru powerhouse delivering 3000w per channel into 2 ohms. The chassis looked decidedly thin to take on the rigours of Australian touring.



Ian Thacker, now working for Klipsch

They have a 4 channel model, offering 1200w per channel at 4 ohms! **BGW** had a rework of their GTA (Grand Touring Amplifier) and **Stewart** of California have an 8kg 2ru amp that delivers 1000w/ch- the PA-1800.

Although the AES is synonymous with recording

equipment the Sound Reinforcement component of the show grows every year. **TAD** who are more famous for their range of quality components showed a complete new line of 6 live SR cabinets, named TCM Series, for which they have 5 patents pending. Looks expensive! **Adamson** from Canada have a growing range some have said will see them as the next Meyer. Meyer had a new high powered stage monitor, the USM 1/S-1 and also the new HD-2 near/mid field monitor.

Expatriate Aussie Dave Martin was on hand to show the new **Martin** EM series compact speakers. Another ex-Aussie is Ian Thacker, who works for **Klipsch**. Peavey had a real good looking digital processor/crossover, priced at about US\$800. Their growth in the contractor market has doubled in 12 months. There is another new **Sabine** Feedback Extremator, the FBX 1800. **Hughes Aerospace** are looking for non-military business with the 'Voice Intelligibility Processor' VIP-110. This allows amplified speech more intelligibility in difficult places, like railway stations.

On a sadder note, wemust

(continued on Page 47)

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Call For Museum Pieces

AES- Melbourne Aug 24 - 26, 1993

The Past- as well as The Future. When visitors attend an AES Convention and Exhibition, it is normally with the expectation of seeing the newest, the latest, the greatest - the state of the art. But there will also be an opportunity to see exactly the opposite!

Ribbon microphones, wire recorders, transcriptions, 'A' and 'B' batteries ... some elements of audio history that the rising generation may be barely aware of, let alone have seen. The opportunity to see and hear some of these devices in action will be one of the highlights of the AES convention.

The Audio Museum was established at the 3rd Australian Convention when enthusiasts formed a collection with emphasis on the development of magnetic sound recording in Australia following WW2. For example, one of each of the models from Mk.I to Mk.V of the Byer-Rola-Plessey series of recorders was on show.

In 1993, the Museum will be back again, and we aim to expand and improve the collection. We would like to call on those who have microphones, turntables, disc recorders, headphones, OB amplifiers ... anything of historical interest ... to make them available for exhibition during the Convention. If they can be documented, it would be even better.

John Smyth, who is helping to curate the collection for 1993 would like to hear from anyone who may have something to offer. He is particularly interested in expanding the exhibition to include audio and recording equipment associated with early sound film or television in Australia. Likewise photos of early recording or broadcasting studios for display in the Museum would also be appreciated.

John can be contacted through the AES office (P.O. Box 149, Ashburton, Vic.) or during business hours on (03) 412-1858.

Genesis Tour 'The Hardest' *Tribulations On The Road- Aussies On World Tour*

The Genesis 'We Can't Dance' world tour is reaping large returns, appearing in the Top 10 Tour listing of Pro Sound News, often at number one. A recent break in the arduous tour saw Sydney technician Michael Waters (pictured) home for a break. "It is the hardest tour I've ever done", he told Channels, "almost as hard as a Bamsey pub run!"

Waters has toured the world with Phil Collins and Genesis before, the connection having originated when Phil Collins toured here some years ago. The tour is exceptional as it has no roof, instead lighting fixtures are rigged on towers either side of the unique stage set, which itself features three large arches (see diagram).

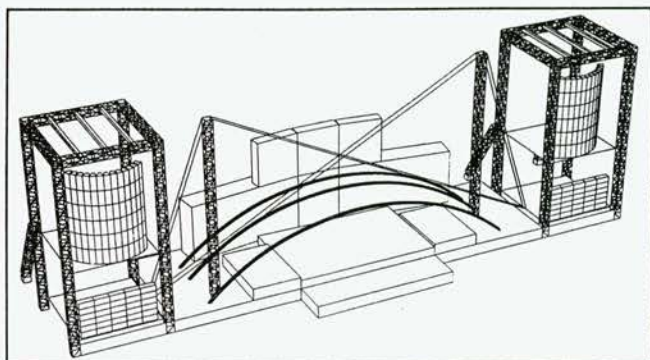
The result is, the PA towers can be placed further apart, so house engineer Rob 'Cubby' Colby is mixing the largest stereo system in the world, or so he claims. Showco's Senior System Engineer is Howard Page, another Aussie at large. The Prism sound system is placed 140' apart, and comprises 78 cabinets per side, with 30 sub woofers sitting beneath. Rigging time is said to be one hour, that is 60 minutes for you non-metric types!

While arduous touring is not uncommon, the 'We Can't Dance' tour has been plagued with injuries according to Michael Waters. European Site Co-ordinator Dixie Swanson died in his hotel room in Montpellier, after suffering a minor heart attack in Berlin. At the last show of the European leg at Knebworth in the UK, a rigger fell through the stage floor, suffering injury.

The run of bad luck included a rigger suffering an assault whilst in social mode in Nice, a Vari*Lite technician suffered spinal injury, and the camera department had cases of hepatitis, a broken ankle and a shoulder injury to contend with.

Of technical note, the band and Phil Collins are using Future Sonics 'in your ear' monitors. The band has taken to this new technology with gusto, according to Howard Page, who says Phil Collins can work in any hall without his monitoring environment changing. Monitor Engineer Phil Christensen sends foldback to the band who also have customised 8 channel mixers on hand to mix their own, a trend 'In Ear' monitoring might encourage.

The tour resumed in October in the north world.



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MORE MOVING LIGHTS!

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New serious Moving Light product has reached our shores, with new releases from COEMAR, TAS, Martin and High End Systems. This takes to five the serious professional contenders amongst perhaps thirty other 'waggly mirror' manufacturers in the world. There is an avalanche of product like this that is capable of confusing even savvy users.

HIGH END SYSTEMS - THE LATE NEWS FROM TEXAS

Accordingly when we announced exclusively in Issue 15 that High End Systems had launched a 'mini Intellabeam', the local industry went into hyperdrive - with speculation ripe that the device wouldn't be shipped, didn't work right, that you couldn't buy a lamp for it, that the only copy of the owners manual had been eaten by a dog in Texas, and that the pigs were loaded and ready to fly.

High End President Bob Schacherl called Channels from Texas as we went to press, with news of the firm's proposed announcements at the forthcoming LDI '92 tradeshow. He confirmed what local High End importers GUVT had already told us, that the Trackspot has been shipped in quantity, is already sold to Australian users, and that the lamp carries a retail price of \$25.00.

"We've got some new developments in mind for the Intellabeam", Schacherl said, "with soft focus effects in the optical train for washes, colour corrected dichroics, gobo wheel and palette flexibility. We're really seeing inroads in the TV market. LDI will be one big bang - it's our statement!"

GUVT's Noel Bourne says the Trackspot has a 500 hour lamp life, 10 dichroic colours, 10 gobo's, full dimming and can be addressed via DMX, analogue or even with an inbuilt microphone. The retail price is \$2999 including sales tax. A proprietary controller will be available soon.

Further news from the Texan manufacturer is that the new Intellabeam LCD controller is now shipping, the Data-Flash has a UV filter, and the low fog Cold Flow is - well, flowing.

High End Systems products from GUVT, call (07) 358-5022.

MARTIN - LAVA LAUNCH PRO-218 AGAINST TRACKSPOT

The Pro 218 is a serious contender in the rental market, according to LAVA's Rod Salmon, "3 hire companies cancelled orders (for other types) once they saw the Pro 218." Rod didn't say which companies, but went on: "another hire company has hired their 8 Pro 218's 17 times in 5 weeks, and has ordered another 8."

The Roboscan Pro 218 has 17 colours, 18 gobo's, dimming from 0-100%, and a Philips 2,000 hour lamp that comes with a 6 month guarantee - presumably offered by LAVA.

Control is via a Martin 2208 controller, and there is a DMX-512 option. Martin products originate from Europe, and on this topic it is worth reiterating here that of the multitude of types on offer, none from Taiwan yet come close to anything from the leading players - Coemar, TAS, Clay Paki, Martin & High End. Control of devices like these is not an absolute science yet. Martin and High End make dedicated controllers, while lighting console vendors offer memory consoles with moving light enhanced versions of DMX-512. This years LDI '92 will, with all certainty, see new software for some existing manufacturer's memory consoles that will allow smoother, more accurate control of moving lights, alongside ordinary dimmer channels and scroller channels.

Call LAVA - Sydney (02) 816-4444, Melbourne (03) 819-6916.

COEMAR & TAS ANNOUNCE PRODUCTS

Coemar's contender at the top end of the market, where Golden Scan, Super Scan and Intellabeam compete, is the Samurai - which worries the others. Soon the Samurai will be on offer with a 1200MSR lamp and external ballast. It will carry a list price of \$8020 PLUS tax.

Moving back to the mass market, TAS will soon debut the Mini Ultra Scan 250, with 10 colours, 10 gobos, built in electronic dimmer, and the usual variety of control options including DMX-512.

Call Coemar DeSisti Australia, (03) 467-8666.



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Queensland	East Coast Lighting	07/2529583	A.C.T.	Topstage Productions	06/2805710
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	Kennedy Amplifier Services	079/573904		K.W. McCulloch Pty Ltd	003/431034
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S. Aust.	Osmond Electronics Pty Ltd	08/3626218			
	GUVT	08/3630454			

SELECON - Ph: 64 9 360-1718 Fax: 64 9 360-1719.

Wrong name

Your Production Diary item in August named me as Craig Mulligan - which was not your fault. However I have been out of the industry for three years, and am known in the industry as Costello, so I would appreciate the correction.

The reason for the name change is that my mother remarried when I was 10 so I used Costello for school and work. When I joined the army I had to use my birth name Mulligan, and I am in the process of changing this by deed poll to Costello.

I have just got out of the army after surviving a bad crash in Malaysia - and 8 months in a Military Hospital. Now I am trying to rebuild my audio career.

-Craig COSTELLO, QLD.

● *Craig sent his Resume, he has quite a history and it presents well. Contact him 07 252-9693.*

Wrong guy

Last issue you named Rocket as FOH for James Reyne in Darwin. Rocket is the tour manager, I do FOH. Andrew Rayson operated monitors, Andy Mutton was LD and Mark Bennett did stage.

For the majority of the last tour we used a double ARX system with triple subs supplied by Rob Miles, an owner operator who works as "Strange Land Prod." I've been operating FOH for 10 years with everything from Meyer to Turbo's, and I have to say the ARX system with AM-1600 power stands up to any small system.

When James goes out again in October I'll be happy to use ARX again.

-Steven Cambridge, Fitzroy, VIC.

Wrong dB formula

Issue 16, page 37 - the formula for deciBels should be: If a Bel = $\log P^1/P^0$, then a dB = $10 \log P^1/P^0$. Keep up the great work - Channels is one helluva read!

-Greig Sheridan, On-Line Audio, Sydney, NSW.

Skunk?

The 'Skunk' character in your Great Mistakes Crutch Story last issue (#16) sounds like a deviate. He (quote) "sat behind her and gaffed her crutch up whilst the band played on". If this sicko owns a budgie or hamster then I'm ringing the RSPCA. I thought even road crews were beyond this sort of behaviour.

-'Pass the gaff', Sydney.

Annoyed by The Punter

I thought I would let you, the Channels team, know that I for one really like the mag, and 'The Punter' obviously doesn't want you to know who he/she is, or you would cancel his/her free subscription. What crap! I really enjoyed the Superstar feature (Issue #16) and like the way you split it into sections.

Other favourites of mine are Duncan Fry, the Letters page, and 'Great Mistakes', although the last one about the girl and the gaff was a bit off. Anyway, keep it up!

-Amanda Sheridan, Byron Bay.

It's back!

I couldn't get too excited about last issue's crossword. Where's the challenge, where's the drama, much too "St. Peters In Crowd". So rather than whinge this month, here's my offer:-

The Punter will provide your rag with interesting and trivial crosswords each issue as long as you lot offer a reasonable prize each month (not just a crappy "T" Shirt).

I suggest all the entries are put into a hat and on a set date first out correct wins the prize. The first Punter X-Word is enclosed for your perusal.

-The Punter, Sydney.

OK, we sacked the other turkey and added a better prize.

ARX explain Afterburner

Firstly thanks for an unbiased review of our Afterburner in the last issue (#16), which was thankfully free of the 'if it's made locally it can't be any good' syndrome which pervades this industry.

However, I would like to clarify a couple of points raised:

1. In split frequency mono mode, the unit splits the signal at 250Hz for individual processing, then **recombines** them so that they appear as a **single** signal at the output. Thus your reviewers' concept of using it to independently limit the subs would perhaps be better expressed as using it to independently control the low frequency component of the signal, irrespective of where it's going. It's a small point, but since the publication of the review I've had people call and ask if the Afterburner is just a crossover with compressors. No it's not!

2. I'm not sure what your reviewer meant by the phrase 'pulsing when brought to near-limiting conditions' means. Is this good or bad? The Afterburner features our exclusive 'AutoSoft Knee' circuitry, which perhaps we should make more fuss about. What it means is that at low compression ratios the compression is of the 'soft knee type' and automatically converts to 'hard knee' as you increase the compression ratio. So, what your reviewer calls 'pulsing' is probably the limiter working as a limiter should - and yes, you can hear it.

The only alternative would be to keep the unit in soft knee mode no matter what ratio, but this would mean an instant reduction in output levels of 3dB or more when limiting, in effect throwing your investment in high powered amplifiers out the window. Anyone who doesn't believe me should try switching the 'Over Easy' switch on a DBX 160X in and out when it is set to a high compression ratio.

With AutoSoft Knee, you get soft knee compression when you need it, like on vocals, instruments, so it compresses unobtrusively - and hard knee when you want maximum system output before limiting. Automatically. All of which adds up to making the Afterburner, as your reviewers succinctly put it, 'an easy compressor to use'. To quote Monty Python: "say no more!"

3. You do us a serious injustice regarding price. I know it may seem hard to believe, but the Afterburner doesn't retail 'for about \$1195', but actually it retails for \$1000, including tax. Legitimate pro-users pay quite a bit less, so the serious shopper could pick up two or even three of these little rippers for the price of one of the other two units reviewed.

-Duncan fry, Director, ARX, Melbourne.

Confused by 'JBL Tweak Speak'

During the JBL Array Series release in Melbourne JBL's Michael Reeves touched on the buzz phrase; 'Steering Technology' in relation to the software in the ES 52000 digital controller. Afterwards I asked him to elaborate on this and he said he wouldn't, and that he had already told me too much. He went on to say that if he told me, he would then have to kill me! Surely I deserve a better answer than this, or is it just 'JBL Tweak Speak'?

-Julian Spink, McLean Audio, Melbourne.

Write to Channels, state your case, tell us your impressions, reveal your angst, display your knowledge, make a goose of yourself, rubbish the editor, attack the layout, criticise anything you don't understand, do it!
 Fax: (02) 876-5715, write:
 PO Box 439, Epping NSW 2121 Australia.

Superstar - the REAL laser story told?

After reading your Superstar story (last issue) we wish to set the record straight about the laser component of the production.

Following months of negotiation and consultantion, we were finally given the go ahead one month before opening night to bring a radical fibre optic fed, super wide scan, high powered laser system on line for the show, despite pleas for at least 3 months lead time. In retrospect, we should have turned down the late offer by the producers, as it turned out to be impossible to import parts, build, refine and tune such a system in time.

When this task became obviously impossible (which Phil Grieves privately agreed was probably beyond T.C.P. in these conditions), we proposed, constructed and brought on line an alternative system to produce all required effects in four days, ready for final rehearsals and successfully continued the tour. "Lasers were particularly impressive" and "Lasers ... used to great effect" were some of the reviewers comments during the first weeks.

After the first 23 shows in Sydney, Melbourne and Brisbane, operation of the show was handed over to T.C.P. who continued our successful format, down to the disc programme we had made.

We acknowledge the assistance of T.C.P. in the crazy days before the opening night, particularly for allowing us to pull apart an "Aquarius" system

to suit our particular needs. However, creative credits for the show are rightfully ours, as we feel sure T.C.P. would agree.

-Geoffrey Rose, Tracy Bourke, Richard Newton. Sydney.

Resources

MIX BOOKSHELF is an American book distribution service, run by the publishers of MIX Magazine. To order from MIX, Fax them on 510 653-5142, detail your name, address & a fax number for questions. Be sure to note your creditcard number, charge name, and expiry date. Then wait!

HANDBOOK OF RECORDING ENGINEERING (2nd Edition)
By John Eargle. Ref. 1021D.
1991, 486 pages, US \$44.95

QUALITY SOUND ENGINEERING
Sherman Keene. Ref 1015D.
1991, 225 pages, US \$34.95.

PRACTICAL TECHNIQUES FOR THE RECORDING ENGINEER
Sherman Keene. Ref 1010D.
1981, 248 pages, US \$39.95.

SOUND RECORDING HANDBOOK
John Worman. Ref 1035C.
1989, 586 pages, US \$49.95

MODERN RECORDING TECHNIQUES (3rd Edition)
Hunter & Runstein. Ref 1031C.
1989, 373 pages, US \$29.95

OBITUARY

Graham Timmermans.

Graham Timmermans of Tower Lighting P/L in Perth and Tower Staging in Sydney was killed in a truck accident near Cobar, NSW, on Tuesday 27th October 1992.

Graham started in this industry 18 years ago, doing his electronic apprenticeship and developed into operating lighting and foldback from there.

Always an achiever, after gigs he'd design and build his own lighting equipment and from this Tower Lighting eventually developed. Stage design and construction was, for Graham, a natural progression and the establishment of a Sydney base earlier this year was a typical example of the drive of this tough but honest man.

He was delivering new staging to Sydney from Perth at the time of the accident. I don't think anyone in this industry has a bad word to say about Graham, clients and suppliers alike. His attention to detail and to getting the job done was reknowned.

Our sympathy goes to Graham's family, his partners and his workmates at Tower. Goodbye Graham, now you can rest.

Alex Doran

Young Alex Doran, 17 years of age from Dundas in Sydney, died instantly on Friday 23rd October when hit by a train as he walked home along the tracks listening to his walkman.

Alex worked in The PA People's Manufacturing division. Alex will be sorely missed by his family, friends and workmates. Goodbye to one of the behind the scenes people who keep our industry rolling.



SR-3000 amplifiers - partial RECALL

A component vendor has supplied inferior, in-correctly labelled rectifiers, so we must recall some SR-3000's **as a precaution.**

Rectifiers fitted in **some** new SR-3000's **may fail**, resulting in considerably reduced output. The rectifiers were supplied as 8 amp rectifiers, however examination following removal of the epoxy surround reveals they are not capable of handling 8 amps- despite being labelled as such. It should be noted Jands ordered these components from an **Australian Vendor**, who supplied them quality certified to AS3902/ISO 9002.

Affected amplifiers carry serial numbers in the following ranges: G 92500 to G 92522, and: H 92700 to H 92739 inclusive.

ONLY the above units are affected. For details on how to return, call Jands Sales on (02) 516-3622 **reverse charges.** Jands will, of course, pay all freight costs associated with this recall, and apologise for any inconvenience suffered by customers as a result of circumstances totally out of our control.

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International Production Notes

From Debi Moen, Performance Magazine.

Who's Doing What

- ◆ Industryites raved about the high-tech rock look of Garth Brooks' recent tour, whose lighting system of 1,000 lights, 60 motors, smoke machines and elevators was dubbed by production crew as the Garthship Enterprise.
- ◆ Looks like country's newest star, Billy Ray Cyrus is next in line. Cyrus kicked off his fall tour with tunes from Led Zepplin and The Who added to his repertoire. his production reflects that rock look, using moving lights, smoke, pyro and moving trusses. Debuting on this tour is a circular Thomas truss - a 20 foot diameter circle that flies over Cyrus' head, moving and tilting during the show.
- ◆ Def Leppard rescheduled two SouthWestern U.S. concerts in September when one of their

truck drivers disappeared with \$320,000 worth of Electrotec sound equipment. The driver was found and charged with burglary, narcotics possession and criminal damage. Sound gear was also recovered.

◆ Bad Company rehearsed with breezes blowing atop the roof of the Lani Lai Hotel in Fort Myers, Fla., reports tour manager/accountant Rick Lawrence. "It was relaxing, and though it was glass enclosed, we could open the windows and look out over the gulf," he says. The 'Here Comes Trouble' tour later broke into full production rehearsals at the Lee Civic Centre in Fort Myers, where the tour kicked off on Oct. 14th. Geoff Perren is production manager, with Ian England as LD and David Natale as house soundmixer. Clair Bros. Audio is handling sound, and BMI Stage Lighting is contracted for lighting.

◆ David 'Gurn' Kaniski recently finished rigging Lollapalooza, then jumped on Lyle Lovett's 'Joshua Judges Ruth' tour as lighting

director. Says Kaniski, 'My biggest concern is that I don't overdo the lighting. The music and lyrics speak for themselves and don't need a lot of flash.' The two truss system features lighting from Phil Ealy's West Coast Stage Lighting.

◆ Dallas based lighting company Syncrolite Systems recently opened two new offices. Syncrolite International sales/marketing office for Europe, is in Apogee Sound's building at 5 Brooklands Close, Sunbury-on-Thames, Middlesex, TW16 7DX England, Phone (44-932) 772-241, Fax (44-932) 771-399. Managing Director is Daryl Vaughan, formerly of Vari*Lite Europe. Syncrolite Systems Japan, under manager Roy Saito, is at 8-5-2 Nakakasai, Edogawa-ku, Tokyo 134, phone (81-3) 5674-0044, Fax (81-3) 5675-0045.

◆ LDI is shaping up, 25% of the floor space booked by International exhibitors. Italy has booked 97 booths alone. The show runs Nov. 20-22, here in Dallas.

*Debi Moen is International Editor for PERFORMANCE Magazine, a prestigious U.S.A. industry weekly.

LIVE PRODUCTION DIARY

SOUND REINFORCEMENT & LIGHTING PRODUCTIONS

Artist/Tour/Show	Crew	Equipment & Notes
A1 Audio Pty Ltd. Margaret Ulrich- TOUR	Sydney George Gorga BE, Brett Harkness SE.	(02) 905-7433 Soundcraft series 4/40 FOH; Soundcraft Spirit 24/8 Mon; EHT Processed PA, Turbosound TSW 24 subs, JBL wedges.
1927- TOUR	Scott Barry BE, Brett Harkness SE.	Soundtracs MX32 FOH; TAC 24/8 Mon; EHT Processed PA, Turbosound TSW 24 subs, JBL wedges.
Warren Zevon- SHOWS	Ian Taylor BE, David Finch SE.	Soundtracs MX32 FOH, TAC 24/8 Mon; EHT Processed PA- 8 mid/high, 8 subs, 4 EHT amplifiers.
Northbridge Centenary CONCERT	Steve Law, SE, Andrew Rodd SE.	Soundtracs MX32 FOH, TAC 24/8 Mon; EHT Processed PA- 12 mid/high, 8 subs, EHT amplifiers.
Bathurst Race Weekend & Vietnam Veteran CONCERTS	Various Shows on consec. days	Soundcraft series 4/40 FOH, Spirit 24/8 Mon; 24 x Martin RS 1200.
Australian Concert Productions Margaret Ulrich- CONCERT	Brisbane George Gorga BE, Olaf DeCeuster & Dave Vinnicombe SE.	(07) 854-1512 PM 3000/40 FOH; Soundcraft 8000/40 Mon; 10 sends 24 TMS-3, JBL wedges. A big PA for just 500 people!
The Bronco's Won!	OK, so the Mexicans lost.	The guys from ACP can gloat, we will get even!
Audex Concert Sound Campus Band Final	Perth Kim Goodlett, Lionel Hoskins, Steve Brain SE	(09) 328-3188 Soundcraft Vienna 40 FOH; DDA 44/16 Mon; Meyer MSL-3's.
Rockmelons- PUB TOUR Channel 7 Telethon	Not reported Richard Foster ME	NOVA NC4 system, Soundcraft Vienna 40, Soundcraft 32/12 Mon. Vienna, DDA, TAC 28/8/2, BSS active splitters etc.
Arena Technical Services Red Hot Chilli Peppers- TOUR	Sydney Ian Macewan LD, Garry Brokenshire SE.	(02) 552-4011 Conventional Lighting System & 16 Intellabeams.
Audio & Recording Red Hot Chilli Peppers- TOUR	Sydney Tony Selinger BE. Bruce Thomas, Garry Hall, David Richardson SE.	(02) 316-9935 TAC SR-9000 FOH; Meyer MSL-10 x 8, MSL-3 x 20, DS-2 x 20, 24 Subs, RA 254 power amps, Ultra-Monitor foldback.
Concert Lighting Systems Yothu Yindi Daryl Braithwaite	Melbourne Mark Gason SE Mark Gason LD	(03) 529-5019 60 Instinct, LSC Dimmers, 60 Par, 10 Leko, 8 Cyc, 2 Lycian f/s Access Pro, LSC Dimmers, 4x9 lites c/w XL Colour Rangers, 14 Colour Wiz, 8 x Par 64, 8 x ACL, 6 x Leko, 2 x Mole Fay. Celco Gold 90, AVO 5k dimmer racks, Lycian f/s, 100 Pars, 40 Leko's, 6 Cantata F, 6 Cyc units.
Shell- Hamilton Island	Nathan Thompson LD, Beau, Iggy & John A. SE	Event 48 Plus, 12 Rays, 40 Pars, LSC Dimmers, 8 Cantata F, 15 x leko, 12 x 1kW flood.
Wrapped In Cotton - RAS	John Hoenig LD Mick Richardson & Troggie SE	2 Instinct, 2 ESP, Access Pro, 23 LSC racks, bulk Pars & trussing- Outdoors for 3 weeks, rained every day- everything worked!
Melbourne Int. Festival	David Shultz LD, Richard Grenfel SE	ESP 36, LSC Racks, 48 Pars, 4 Mole Fay, 2 Terra Strobes, 2 x 400w UV, 2 x Cyc units, Smoke, Pyros.
TISM- At The Palace	Sebastian Harvey LD Troggie - SE	

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SHURE

The Buzz

-By The Weazel

I must inaugurate this new column with the worst possible news that one of our industry brothers, **Graham Timmermans** of Tower Lighting has died in a truck accident as we go to print. Obituary Page 13.

◆ Please use the new form on P17 to report your **PRODUCTIONS. Do it TODAY, we want more!**

◆ **Osmond Electronics** appears here for the first time. Adelaide's largest production house boasts the largest Electrovoice Manifold system in the land - powered by Crown. John Murdoch says he has 60 Macrotech amps in total, and offers PM1800 and Soundcraft Venue consoles.

◆ **AVsound** in Sydney also uses EV Manifold systems. Contact Matthew Kline- (02) 948-2644.

◆ **Yothu Yindi** has done the country by picking up production in each city, as this Diary attests. Engineer Peter Wait is an old hand at this sort of thing, so he knew what he was getting into- but our spy says he lost his voice while in Sydney!

◆ **Jands Production Services** has two theatre sound contracts running at presstime, Buddy in Sydney (still open, despite the receiver being in control) and the Rocky Horror Show in Melbourne, with Rob Boumanis engineering there.

◆ **Audex** in Perth always send a lot of info, which illustrates their heavy workload. During this cycle (aside from their listing below) they have worked for The Church, Beastie Boys, Zep Boys, Absolutely Live, Lucky Dube, De Dannon and Margaret Urlich at the Perth Concert Hall. Other work items include dance parties and the Artrage Festival opening. Phew.

◆ **Queenslanders** seem a bit strange after their football team got up over the Mexicans recently. Aside from the ill-considered comments from A.C.P., the **East Coast Lighting** guys claim to also have suffered the after effects of the unusual and highly controversial thrashing the Bronco's administered. The Bronco's Presentation Ball was a mission that East Coast were involved in. It appears the system engineer 'on the job' was unable to communicate with any effect for a period of some 24 hours immediately following completion of festivities. Obviously struck down by a virus.....

◆ **Oceania** appears here for the first time too. The N.Z. firm are geared up to handle virtually any audio job, and build a lot of gear too. A profile one day would be interesting, huh?

◆ **Stacy Stamboulidis** is a name I hadn't heard for a while. She appears in the diary as FOH-engineer for Kissing Frogs, who put in a show at

the Universal Theatre. Troy-handled sound.

◆ **Who Uses What** is always a fun pursuit through the Diary listings. Winners this month include Jands (Lighting consoles), LSC (Dimmer racks), Yamaha (Mixing Consoles) and JBL (Speakers).

◆ **Crew** names and job descriptions are supplied by the Production Companies, so it is inevitable some SNAFU'S will arise. This issue's letter page is evidence of that! I think it displays a nice touch, a 'consciousness', a recognition of the role played by crew, when a production firm details who they were and what they did, accurately.

◆ **Lansdowne Systems** from Hobart appears here for the first time too, headed by Tony Miller. More on their system spec. in the next issue.

◆ **Jade Lighting** in Launceston sent us a note to the effect that they handle anything in lighting. The contacts there are John Maclaime and Chris Waters. Call 003 26 3533.

◆ **Showcorp** have a working alliance with **Lindsay Hall** and **Chris Murphy**, who operate PA's from the Central Coast. Hall & Murphy have done separate deals with **A1 Audio**, and obtained a largish number of Martin RS-1200 cabinets that can be added together to make a very loud PA. **A1 Audio** are adding new EHT Systems in place of the RS-1200's, and also shedding more TMS-3's.

LIVE PRODUCTION DIARY

SOUND REINFORCEMENT & LIGHTING PRODUCTIONS

Artist/Tour/Show	Crew	Equipment & Notes
East Coast Lighting Elle Macpherson- Pacific Fair	BRISBANE Dyke Dunning, Jason Organ SE*	(07) 252-9583 24 x 1k Fresnels, 24 Pars, Precept 24.
Bronco's Premiership Ball EVITA - Brisbane Riverside	Kerrod Heiniger SE Ian Landell, James Kenny SE	*SE's under extra pressure due to close proximity dressing rooms! (NB- Is this like a White Out? -Ed) Precept 36, 24 x 1k Fresnels, 24 Pars, 12 profiles. 180 Pars, 60 Fresnels, 30 profiles, Gemini control, LSC racks. Major grid, 1st outdoor performance using full set.
Fernandez Music Centre Chill - QLD TOUR Trenchtown Rockers	CAIRNS Keith Walters BE, Doug Johnson SE Doug Johnson BE, Mark Williams SE	(070) 51-8519 Soundcraft Spirit 24 FOH & Mon, SR-3000 amps, 36 LX, Jands dimm. Spirit 24 FOH & Mon, Peavey speakers, Jands amps, LX
Joes PA Hire Dynissty Screaming Jets Radiators	SYDNEY Joe Scaturro SE Joe Scaturro SE Gary Maddox BE, Joe SE	(02) 564-2520 JBL Double 4 way stereo, 6-8 sends active, 40 can lightshow JBL triple 4 way stereo, 8 sends active, 50 can lightshow JBL Double 4 way stereo, 8 sends active, 50 can lightshow.
Jands Production Services Sleeze Ball Yothu Yindi St. George Bank A.G.M.	SYDNEY Cast of 20, it says here? Peter Wait BE	(02) 317-5200 Var* Lites, Mega truss, Smoke, Sub-low's. Assume this refers to Sydney shows- no further details provided. Lots of JBL MR-825, 3 delay zones, 10 radio mics for questions.
Lansdowne Systems Bolshoi Ballet - Derwent Entertainment Yothu Yindi Henry Rollins, Tasmanian Uni	HOBART Centre, 4 shows. Sound, Lighting & Staging supplied. Crew: Collin Ellis, Mark Chatburn, Mark Hayes, Stevan Borojevic, Chris Lynch, Doug Edwards, Sue Fern. Peter Wait BE Stevan Borojevic & Mark Hayes SE Stevan Borojevic & Chris Lynch SE	(002) 311-505 Sound, Lights, Staging, Backline - Princes Theatre & Hobart City Hall Sound, Lights, Staging, Backline.
Laser Light & Sound Aratula Rock 92 Marist Bros. Dance	BRISBANE Zac Harrison, Rio Cudicio John Vincent, Andrew Meadows SE Zac Harrison, Rio Cudicio, Russell Austin, Andy Meadows, Craig Upton.	(07) 846-3500 48 Pars, 32 Rays, 10 DWE, 6 Selecon 1200w Zoom, 4 Golden Scan II, Event 60 plus, 60 way Jands/CCT dimmer racks. 80 Rays, 32 Pars, 4 Golden Scans, Disco FX (shit pile thereof, this says) Event 60 Plus, 60 way dimmers, diamond shaped truss plus pod.
Lots Of Watts Black Stump Festival- main stage Black Stump- Big Top	SYDNEY Greg Kean SE Philby Lewis, Andrew Winslade SE	(02) 638-0302 8 Golden Scans, driven by Jands Event 48 Plus. 48 Instinct, 84ch digital dimming racks, 84 Pars, Theatre luminaires, 4 Miniscans driven by Jands 24ch Event.
Nova Sound Black Sorrows- TOUR	MELBOURNE Damian Young ME	(03) 555-4766 Nova Mon rig only, M32/12 desk, Nova controllers amps and wedges.

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(continued over)

LIVE PRODUCTION DIARY

SOUND REINFORCEMENT & LIGHTING PRODUCTIONS

Artist/Tour/Show	Crew	Equipment & Notes
Oceania Audio Simply Red	AUCKLAND Paul Jeffery, Greg Peacocke SE	64-9 849-3307 PM 3000/40 FOH, Oceania 40-20 Monitor Console, TMS-3 FOH, SLP/DLP wedges with new JBL 2446 drivers.
Irish Rovers	Gordon Rutherford, Ken Memea SE Greg Blades SE	Soundcraft Spirit 24 FOH, Oceania 24-12 Monitor Console, Turbosound TMS-3's, SLP wedges. My Fair Lady Simon Venning, Meyer UPA-1B, PM3000 FOH, Oceania Mon, SLP/DLP wedges 14 ch. Nady wireless.
Iron Maiden	Mike Smeaton, Greg Peacocke SE	TMS-3's, PM3000 FOH, Oceania 40/20 mon, SLP/DLP wedges.
Osmond Electronics Yothu Yindi Beastie Boys The Church	ADELAIDE D. Boughton, G. Romeo SE D. Boughton, G. Romeo SE D. Boughton, G. Romeo SE	(08) 362-9020 PM1800 FOH, EV MT4, Instinct 60 LX, 60 Pars & more LX. PM1800 FOH, EV MT4, Instinct 60 LX, 72 Pars, 5 Lekos. PM1800 FOH, EV MT4, Instinct 60 LX, 72 Pars, 6 Selecon 1200.
Power Sound Audio Hippos	SYDNEY/BLUE MOUNTAINS Terry Henry SE, Geoff Macklin BE	(047) 741-066 Soundcraft FOH, Studiomaster MON, JBL Single, Phase powered.
Premier Lighting Qld. Open Tennis	BRISBANE Rob Rua-LD, Paul Vanderant Stanley Janecek TECHS	(07) 262-8366 46 x 5kW Pollux, 8 x 5kW dimmer racks.
Showcorp Girlfriend- TOUR Jon English - CLUB TOUR McDonalds Bali Conference	SYDNEY Colin Baldwin LD, Richard Kershaw BE, Chris Murphy, Stu Riley SE Lindsay Hall BE, Colin Baldwin LD Ian Couch	(02) 878-1799 Martin RS1200, Yamaha, AVO Light Control, 200 LX Intellabeams. 100 lamps, Dynalite dimmers. Meyer sound, Yamaha desk.
The PA People Black Stump Festival Rugby League Grand Final Mary Black - GIGS	SYDNEY Ken Dodds Production Manager Ross Ford, Chris Dodds SE Ian Baldwin, Gary Morley, Andrew Winnislade, crew Ross Ford, Scott Barry, Ian Baldwin - Audio crew. Steve Leiter, Greg Yates, Andrew Winnislade-	(02) 746-2400 Concert PA, Broadcast system, Lights, stage, power & misc. PM2000/24, 16 CA2521 cabinets, AM 1K2 amps, 24 Bendix King radios, PM 3000/40, 8 TMS 3, AM amps, 2800/40 mon, CA monitors. LX. Instinct 48, Dynalite dimmers, 80 Pars.
Tropo Sound Johnny Albert Band Tommy Emmanuel, James Reyne	BROOME Brett Lyons BE, James Edwards SE as above.	(091) 922-394 Soundcraft 24 ch. FOH, stereo PA, no other details.
Tower Productions Crowded House Angels Yothu Yindi Reebok - Perth Superdome	PERTH Tim Bracksmith PM Lee Gillis SE Lee Gillis, Hayden Steele SE Lee Gillis, Hayden Steele SE Lee Gillis, Hayden Steele SE	(09) 221-4443 120 Pars, 8 x 5k, 8 x 2k, 8 Pallas 4, 12 Ieko, 20 DWE's, Instinct 60, Instinct 48, 144 dimmers, 8 x 5k dimmers 80 Pars, 10 Lekos, 8 DWE, Instinct 60. 60 Par 64, 10 Pallas 4, 12 Lekos, 12 2k, 8 DWE, Instinct 60. 120 Pars, 2 lekos, 3 Lycian f/s, 48 Instinct, 6 x 1k, 6 x 2k.
Troy Balance Wendy Matthews - NSW DATES Rollins Band - SYD, BRIS, MEL Beastie Boys - SYDNEY DATES Live & Sweaty- TV SHOW L7 - SELINAS Psychos Dance Parties	SYDNEY Jim Blackfoot BE, Mal Williams, Matt Doherty SE, Paul Schofield ME Andy Ladler SE, Paul Schofield ME Matt Doherty SE, Barry Brady ME. Alan McIlvrde ME Andy Ladler SE, Paul Schofield ME Mal Williams, Dave Falkiner SE	(02) 552-4266 PM 1800, 2408 Mon, 6 MSL-3, 6 subs, 8 foldback sends. PM 1800, PM2800 mons for 8 sends, Quad Meyer & Subs. PM 1800/40, 2408 for 8 sends, Meyer. 8 send monitor system with Lord Nelson wedges. Triple Meyer, PM1800, MC2408 for 8 sends. 16 MSL-3, 16 subs, 8 EV Deltamax. M1516 console.
Troy Balance AFL Grand Final MCG The Church - VIC DATES Amway Convention - MEL & BRIS Kissing Frogs Sleaze Ball - SYDNEY Beastie Boys - MELB L7 - MELB.	MELBOURNE Ernie Rose ENG, Grant Walsh SE John Phillips PM Rod Marrison SE Chuck Xypolitos ME Denis Bourke ENG, Brian McMahon, Rod Marrison SE Stacy Stamboulidis ENG Denis Bourke, Brian McMahon SE Rod Marrison SE Chuck Xypolitos ME Rod Marrison SE Chuck Xypolitos ME	(03) 699-3844 48 EV Deltamax, PM2000, Otari tape machines, Soundtools Digital Editing system, Yamaha NS-40m monitors. PM3000/40, Meyer system, PM-2000/32 14 send monitor desk, 8 sends used. PM3000/40 consoles, Meyer concert systems, PM-2000/32/14 monitor console, EV Deltamax cabinets. Yamaha 1516 console, Deltamax cabinets, Yamaha amps. MSL-3, Subs, Deltamax, M1516 consoles, disco things. Quad Meyer, PM3000, MC-2408 for 8 sends. Quad Meyer, PM3000, MC-2408 for 8 sends.

LATE REPORTS (which is why they are not in alphabetic order, like the rest!)

Advanced Audio Black Sorrows- TOUR	MELBOURNE Graham Fraser BE, Peter Clark SE	(03) 482-2933 Soundcraft 40ch FOH, 10,000w ARX, 32-12 foldback.
McLean Audio Izzy Stradlin Variety Club Ayers Rock gig Daryl Braithwaite	MELBOURNE Jamie Ellis, Andy Jay SE Glenn Inglis, Mark Brown, Paul Mossop SE, Bruce Johnson BE, Mark Brown MON, same sort of system as above. McLean have several.	(03) 429-5381 12 cabinet modular JBL, PM-1800/40 FOH, 2408 - 8 mon. sends. as above, but larger. Nice work if you can get it!

Key to abbreviations: BE- Band Engineer, ENG- Engineer, LD- Lighting Director, ME- Monitor Engineer, PM- Production Manager, SE- System Engineer. Mon- monitors, FB- foldback, FOH- front of house,

Next Deadline: November 30th !

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AVSOUND RAVE

SYDNEY- Sound Production Company AVSOUND PRODUCTIONS P/L have sought to clarify controversy regarding a free rave run by Tribal recently. "The Tribal promoter originally approached Avsound to sponsor the rave by supplying free equipment. We declined", said Avsound's Matthew Kline.

"It was therefore a great surprise to see Avsound noted as a sponsor on Tribal advertising, and to hear the industry generally believed that we were supplying sound equipment free".

According to Matthew, the promoter then contacted him again and asked for equipment on a discount rate, and this was refused. What eventuated was that Avsound supplied the equipment only, at scheduled rates, and the promoter provided crew and transport.

The Tribal Rave thus went ahead as a free event, held in a paddock somewhere.

Avsound have clients in the danceclub and rave industry who may feel Avsound have been instrumental in diminishing their paid audience on that particular occasion, thus the company felt it was a good idea to set the record straight.

Avsound can be reached on (02) 948-2644.

Hire Equipment News

◆ **Jands Production Services** have added another console type to their inventory with the Midas XL-3 joining. Hot on the tail of the recent addition of Soundcraft Europa and PM-4000 types, this marks a diversity of types that perhaps reflects the outfits varied workload. The XL-3 was bought into the country by **Mark IV Audic**, who were poised to run it around the country on a demonstration tour when J.P.S. grabbed it for the Simply Red tour, where it was used for foldback. Unlike the Europa and PM-4000, the XL-3 can work at either end of the electronic chain because it has 16 auxiliary sends that are mastered with linear faders. The transition from FOH to foldback is easy. The 40ch console is understood to carry a wholesale price tag of around \$115,000.

◆ **Moving Lights everywhere.** Arena Technical Services has selected the Intellabeam as their first moving light, and had a system of 16 out on the red Hot Chilli Peppers tour at presstime. "I think the Intellabeam has a track record now, after the Dire Straits tour," said Garry Brokenshire of A.T.S. Similarly, **Premier Lighting** are thought to have chosen the Intellabeam as their main entrant, they could buy plenty! Intellabeam us-

ers exist outside the mainstream companies too, for example Light Scan Productions in Sydney have 2, and Craig Foot in Newcastle, 4. The Trackspot has also been sold to Premier, and is heavily backordered according to importer GUVT.

◆ **Coemar** are making a dent in the Moving Light War as well, winning the hearts and dollars at Total Concept Productions in Sydney. TCP say they have added the Samurai and the Microscan 400 MSR, and with Clay Paky Golden Scans as well can better meet the demands of the market. "The Samurai has 12 colours and 12 gobos which cater to dance parties", they say.

◆ **Clay Paky** aren't sitting down, additional Golden Scans have been added to the fleet at Sydney's Lots Of Watts, who already run Miniscan and Superscan types. Simply Red toured the region with Golden Scan's recently. (See story).

◆ **Wireless systems** are a growing segment in the Hire Market, with Shure launching an attack with their new L4 system that is used on the Superstar Tour. With 14 channels working there at the same time, Shure say the VHF systems are perfect for professional hire. Topstage Productions in Canberra agree, they have just added six sets. L4 comes with a variety of mic choices.

Next Deadline: November 30th!

Channels

LIVE PRODUCTION DIARY

Free Listing Form- report YOUR sound/lighting productions!

Production Company:..... Name:..... Phone:.....

Act/Artist/Show: Artist engineer/s names: System Engineers:

Equipment

Notes

Act/Artist/Show: Artist engineer/s names: System Engineers:

Equipment

Notes

FAX to (02) 876-5715. You do NOT have to use this form. You CAN send extra shows and extra details. Deadline 2 weeks prior to publication. Mailing address: (if no fax) P.O. Box 439, Epping 2121 NSW Australia.

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SIMPLY ROBBIE

SIMPLY RED toured the region in Spring for Michael Coppel. Production was supplied locally, which breaks a trend for international tours to bring it all with them. Accordingly, it presented a good opportunity to take stock of how capable our local production industry really is. Julius Grafton talks with Sound Engineer Robbie McGraph, who was last here with AC/DC

Simply Red sound engineer Robbie McGraph is a world soundman, if that's a real term, and by this I mean there are several types of soundmen - and soundwomen too. This term 'world soundman' to me applies to Robbie McGraph, because you see the guy here downunder with different acts as diverse as AC/DC (last year) to Simply Red (this year).

"AC/DC opened a lot of doors for me, and when it finished last year Aerosmith wanted me, but I said I had to go home and do Simply Red - and it was like WHO?" Simply Red are not happening to great degree stateside, unlike Europe where the past summer has seen them sell 75,000 capacity sites.

The 'Stars' tour is versatile, direct from this level of success to a lower key tour across Australia and New Zealand, which saw the act sell two slightly reduced mode Sydney Entertainment Centres, a Brisbane and Newcastle Entertainment Centre respectively, then a run of Palais Theatre shows in Melbourne. Adelaide & Perth followed, before New Zealand. The tour then flew to Singapore for some shows.

Simply Red used local production for these far Eastern (or Pacific Rim) shows. Robbie explains: "I feel Jands are opening up and becoming more accessible. In the early days they were inclined to tell you what they had, and that was how they did things. Now they are getting better desks, the crews are well trained and they know what's going on. They allow you to bring in your attitude, so I don't have any fear not bringing my own desks and outboard gear. I know they'll give me what I ask for."

In Europe Robbie uses the EV Manifold system, which he has had a mixed relationship with. (See 'Favourite Gear' box). Then stateside he has most recently used Maryland Sound Industries, who have a 'proprietary system' loaded with JBL. Down here, and it's a Turbo system. "I'd have preferred a S-4 system, but it's out with Jesus Christ Superstar - and you can't argue with CHRIST! But it's nice to have a change - I can hear some reverbs now that I couldn't hear with the Manifold system". Robbie went on to clarify this as meaning every system has a different sound, and the sound of the system reveals itself in funny little ways - like making some reverbs more noticeable.

The system for Australia was essentially 48 TMS-3's, (give or take a few, depending on venue) configured with 20 in the air each side, and four atop 12 subwoofers on the floor, on each side. In Sydney, the flown stereo pair were in front of the stage somewhat, "11' 10" actually. I've slowed them down, delayed them to the floor boxes", Robbie said, pointing to a BSS delay that allows actual measurements to be entered, which saves calculating the delay time in milliseconds. The more frontal hanging arrangement was a compromise with the lighting dept, who like the downstage truss 3' (a metre) in front of the stage.

Again, changes for Robbie in the desk department. "I've been using the Midas XL-3 in Europe, here I'm

trying the new PM-4000. Now EQ determines where your instrument sits in the mix, you add some 3kHz to get it up, take

some out, you don't necessarily use the fader. You put some 200Hz in to match the bass end - EQ plays a really big part. EQ is the nice thing about the XL-3. If you work EQ a lot, it's the kind of board you want - very musical. The PM-4000's EQ seemed a little brittle last night, but that might have been the way I set the whole thing up. But the PM 4000 seems very good."

Funnily enough, Robbie could have used an XL-3 here, as Jands has added the type in their pre-summer splurge, which includes a new Soundcraft Europa. Monitor engineer Steve 'Flakey' Flewin opted for an XL-3 for foldback, the XL-3 is unique in that the 16 auxiliaries run out with linear fader masters, so it is truly a 'bi-sexual' desk. If this is the right term! This means one day out front, another at the other end of the electronic chain, driving foldback! Flakey was better suited with the XL-3, rather than a PM-2800 or a Ramsa which were his other options. Flakey shares this writers dislike of the Ramsa's EQ section, which doesn't have a parametric 'Q' - but that's another story.

Robbie was happy to test drive the (brand new) PM-4000. Accommodating guys, these. "I'm like a racing car driver, I just like to drive every new car!" said Robbie.

The trend towards bringing equipment into the country started with engineers insisting on 'their own' desks. The reasons shoved down promoters throats often involved 'the desk is set for me'. It got silly enough that tours still essentially using mostly local equipment would nevertheless still fly in a PM-3000 FOH console, identical to that available here, just so the engineer could see the same drink stain and grot in the same place he saw in Atlanta the week before. Yin and Yan, huh?

Robbie McGraph and Flakey disprove this excuse, certainly they both had to spend some hours on the setup day establishing a lot of console settings, but this is a task that anyone will have to do more than once on a tour anyway. Now that our local industry boasts virtually every contemporary mixing console type, the need to fly 400kg of console - or two - in and out of the country is negated.

Asked about the challenges involved in mixing Simply Red, Robbie states that the feel is what's important. "For instance, a song like 'Babies' the band recorded in the studio with the drummer hitting the snare with just his finger. So I have to shorten up the reverb, sink the drums into the mix, and lush up the piano, so it's like a grand piano rather than a honky tonk type sound. I add in some 200Hz and take out some 3kHz.

The band stage a 2 hour concert, which totally involves Robbie in maintaining 'feels', something in



Robbie McGraph at the controls, first to use the PM-4000

execution he does well. Reggae, funk, disco - each song is approached with an open mind, Robbie is an active engineer rather than a passive one, he is always altering EQ and riding gain, changing effect - and listening.

After the Sydney show we sit having a not-so-quiet beer(s) in the pub across the way, Robbie asks me what I thought of the mix. I reply that to my ears it was all there, he certainly found 'the feel', and I liked it. I explained that I sometimes listen to a show by 'scanning' each instrument, having taught the receptors on each side of the head to listen to each 'part' of the mix for 5 seconds or so, then move along. "It was all there, Robbie, but at one stage I couldn't hear the ride cymbals". After he almost fell off the chair, Robbie explained that he lost one overhead mic during the show - so there is a reason for everything.

Some of Robbie's Favourite Things

Favourite gear - Vocal mic Beta 58. I like EV's NDyms, but when people say they've got the best mics, it depends on the instruments. In kick I can go from an RE 27 to an M88. Toms I like 421 Sennhiesers, and SM 57's for snare.

Effects - Lexicon 480L, all sorts of parameters, you can do anything with them. The PCM 70 is great, and the AMS reverbs and delays are great.

Speaker box - I'm using EV MT's, but I fell out with the 2" horn with the 4 drivers on it - the Manifold. I decided I don't like it. It's got an inherent distortion around 3.5kHz which I don't like. There's too much power coming down the one throat, so you use a lot of amp power to get it to throw. SSE in England have put a normal EV 2" horn in for me - it's a much sweeter sound, not so raspy. Then they braced the low-mid for me, which has tightened the sound. I don't like speakers that are just efficient, they've got to have a character to them.

Systems - The new Flashlight system doesn't have much character, for example. I don't think they've finished it, but I'm impressed with it. I've been wined and dined by ML from Showco, I like the digital domain, you can hear the dispersion as you walk around it. The Prism system I will be trying.

I like change - I'm like a racing driver - I want to drive ALL the cars, have a little go!

EQ'ing

Robbie on Musicians, Old Age, Fun and Music.

Tuning a concert system isn't that different to tuning the PA for a pub gig, and everyone has little tricks they use - but techniques remain pretty similar.

Robbie McGraph starts his EQ process listening to a track from a CD - 'Red Red Wine' by UB-40. An annoying musical passage, if ever one was recorded! After a couple of re-starts to give the bass end of the system a good appraisal, he switches to some blues, which sound completely different. Using the same musical tracks in every venue gives a sound engineer a reference point - this is common practice.

With the essential sound of the system and room matched, the next phase involves checking each microphone on the stage, by having the foldback engineer talk into each. He identifies the mic by name, "left percussion, check one, two, three, left percussion", the statement allowing time to find the channel, and check the input gain.

Once every channel is correctly identified and the input gain roughly established (often exactly the same as the previous show), Robbie then runs up every vocal channel to approximate operating level. This is done with relative silence on stage, and with one hand on the master faders. The first feedback point (usually around 2kHz) can then be equalised out of the system, then the second.

In this manner the potential maximum gain before feedback can be ascertained, and the system is tuned to ear and to the room. Once the band are into soundcheck, fine adjustments can be made.

Talking about walking into a venue in a new country with a different system:

"Musicians are used to total recall in studios, they think because they can play it straight off, you can plug it in and do it straight off!"

Then the TYPE of people musicians really are:

"To create music they've got to have a certain attitude, a certain sensitivity, they can't be like the rest of us, bumbling around. They write and create, essentially they're artistic people. We technicians are also artistic to a degree, but because we deal with hardware, we don't mess with the laws of physics! You can't sit there with a joint and say 'I think I'll change the laws of physics today!' - but musicians can suck in and pick feels and emotions out of the air in a studio. We are more black and white, we deal with compression ratios, bandwidths and so on."

And really, we all have a story to tell, don't we!

"We were in New York airport and everyone had monster suits on, you know - when you go into an airport people are everywhere, and everyone is an arsehole. We were all standing there waiting for our bags, and the guitarist just said 'We shouldn't be exposed to luggage like this!' Maybe he thought he'd get a rash and his hair would fall out!"

OK, let's really analyse the musician psyche:

"Muso's live on Planet Musician. Every now and then, you can visit! I think they see reality and wave at it every now and then, but that's as close as they get."

But surely older crew are cynical?

"Engineers who work with bands need to be careful NOT to get 'the artist is a wanker' mindset. They're all creative, sensitive people, and once you get to know them they're OK. Except when they catch you laughing behind their backs! Or READ about you laughing behind their backs - worse still!"

Growing old on the road:

"The old roadie is a dying creature everywhere. God knows, I've tried to put on weight and have me jeans halfway down my arse with me crack hanging out. I just don't seem to be able to make it! That was what I was looking forward to in my old age!"

Do musicians cocoon themselves with familiar faces?

"A lot of bands keep crew for a couple of years while they grow, then flush everyone out - and there's bad feelings for a year or so."

And what about the music?

"The reality of what I do is I never add anything to a song. I'm looking for good input from the stage, as opposed to having to toss around and make things that are ropey sound good. That never really works. New young musicians can be a right pain in the arse"

How do you pass the time and have fun on the road?

"Usually we get beavied out and end up in someone's room after a show talking bullshit till the wee hours. On the road with AC/DC we got into paintball, I just loved getting dressed up like Arnold Schwarzenegger and not getting killed! After about 7 months on the road, really close friendships develop, like a family."

So now you've told us about musicians in general, how do Simply Red stack up?

"They're all nice guys. As long as they don't start complaining that the towels are too small, or the champagne isn't cold enough. But you've got to give credit to them though, because they CREATE music."

**Footnote - I'm sure Robbie didn't mean offence to any of his current or previous clients with these comments. Muso's must accept it is customary for slightly ageing present and former roadcrew to discuss their foibles. They do it about us, anyway - often with an audience listening!*

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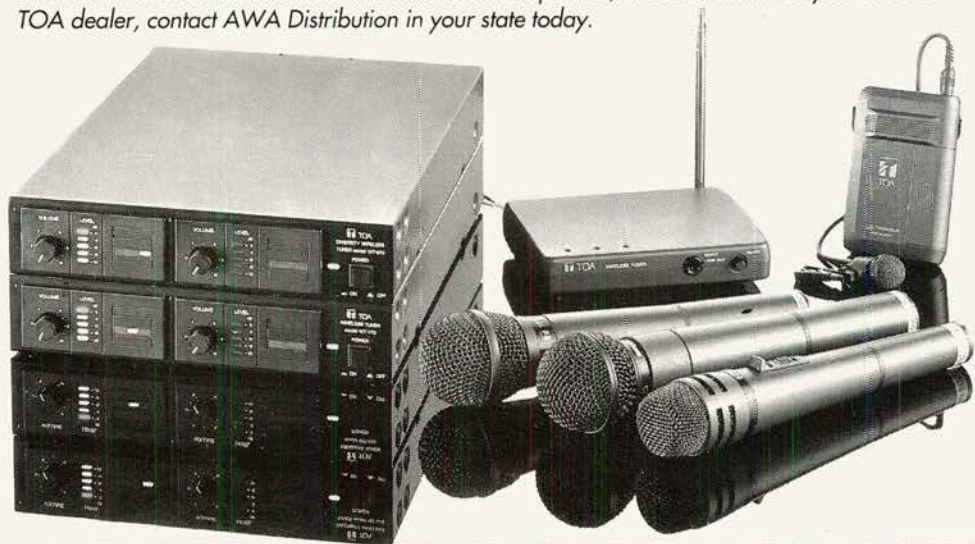
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RED LIGHTING

*Simply Red mix Vari*Lites with Golden Scans for a change - the 'waggly mirror' gets respectable!*

Four metres to the left of the sound consoles at a Simply Red concert is the lighting control zone - and as anyone in the business knows, metres may as well be miles when it comes to these differing technologies. So it was interesting to get LD John Dipple's views on local equipment and crew.

"Top class team, these guys have got it down pat, I just sent them the plot and away we went!" This lighting crew comprised three internationals, being John Dipple LD, Mark Payne Vari*Lite operator, and Ian Haley, who operated the Celco Navigator desk that ran 12 Golden Scans.

It's a reasonably straight forward rig - with a twist, Vari*Lites and Golden Scans don't usually share a stage. "It started with the management wanting a 'Rave' look for one song. We brought them in and used them, then as the tour went on we used them more and more. We are using the 1200w versions overseas, which unfortunately we couldn't hire here, the 1200's cut through the Vari*Lites and followspots. They're different to Vari*Lites.

18 VL-2 and 4 VL-4 Vari*Lites are used on the show, 10 on the floor and the rest in the air. The stage set was designed by Nick Levitt, and is a large disk that sits at an angle, with the kit of drums located in the front quarter, if you get the idea. "Nick designed it to be 3rd world friendly, it is cloth covered and packs right down", John says. Six VL-2B Vari*Lites peep over the disk, set of course in a semi-circle, beaming saturated colour across the surface amongst other looks.

Around the outside of the disk are curved neon sections, joined together, but separately wired so they can be static, or chase.

Having enough "looks" to maintain interest through a two hour show is the challenge here, and this is achieved with the rig and operation. 192 Par's, 48 SCL

(Aircraft landing Lights) and 32 scrollers do the chore, with four grid hung followspots and two more out front. UV Cannons, Strobe Flowers and 16 White lightning Strobes all add touches, as do 236" mirrorballs that are used just once. Mirrorballs are very effective when every moving light in the rig is zero'ed in on them.

At the end of the concert, leMaitre pyrotechnics are fired on cue, airbursts hung from the grid truly contributing an indoor fireworks display. Complete with that action odour, the haze and scent of good old gunpowder, just like the war, son.

"I designed the lighting myself," added John, "I even made all the star cloths myself - glued in all the little lamps. It took four weeks, and an awful lot of cider!" The star cloths are the main 60' x 30' rear curtain, riddled with tiny 'P' lamps, and six legs likewise infected. All turned on, and it's a stage moment!

Many international shows come pre-designed by an esteemed lighting designer, with a lighting director (LD) on the road to maintain the look. John is an exception to this norm, more in the mould of your average Australian LD who'll whip up a design based on physical and fiscal reality, then bust a gut to do the show each day. "In fact I did six designs for this leg of the tour", John says, "after Europe, which was very big. For this leg there is Greece, Israel, Australia, New Zealand, Singapore, and Hong Kong. I think Asia will open up now, they are getting their Superdomes

built."

The Golden Scan operator for this tour is Ian Haley, "from a little village in the North". He drives a Celco Navigator board, which is a fairly radical item in appearance. Ian picks up the story: "Early on I was using a Jands Event, when we started with 6 Golden Scans. Like the Sirius, you have to go through your cues one by one to update them. The Navigator has a software mode called 'Preset Focus' that is much quicker. I understand the Event will have a software

Celco Navigator and Golden Scan 1200



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modification that will enable you to build cues upon cues, that will be better. For the 12 Scans I am running the Navigator is fine, but it doesn't have enough power to recall big scenes properly."

"I've had a few problems with memory corruption with dodgy power supplies, but fortunately not here. I think the Navigator would be ideal for six lamps or so. I saw the Celco Aviator at the PLASA show recently, it uses continual belts, like a track. It's actually quite hard to get your finger into it, and you can't ride it like a normal desk (fader). I think it might stiff - but I shouldn't say that!"

Like Ian, John also attended the PLASA show in London, and was mightily impressed by a new board first shown there. It is called the "Whole Hog", and is said to handle moving lights, items like Pars and scrollers, and Vari*Lite 1 and 5 models. The price was a turn off for these boys, £25,000 - which would translate into maybe \$90,000 here!

The choice of Golden Scans is interesting, it came down to the increased lamp power of the 1200 version in Europe, vs. the Intellabeam. Although not as bright, the guys think the Intellabeam might have slightly better software.

"Waggly mirror moving lights are coming along, they aren't being used in heavy metal shows yet, but it won't be long!" said John.

A1's new EHT PA

Martin RS-1200's are out, a new -and innovative- Aussie made processed system is in for A1, who debut the rig on Margaret Urlich's latest tour.

Margaret Urlich is out touring in support of new product, her first album having elevated her to theatre concert level 18 months ago. Perhaps suspecting some ground needed to be covered again, her agent Owen Orford started this latest tour with an extended run of warmups in pubs and clubs around Sydney.

Faced with some space limitations in the venues, sound engineer George Gorga opted to trial a new speaker system that A1 Audio have introduced. The EHT Processed System has been around in prototype format for about two years now, an earlier version is installed at Springfields where George had used it a few times.

Etone designed and build this system in Australia, and it is fairly unique as each amplifier contains signal processing. You send full range signal to each amplifier input where it then is sorted out. Etone's Nik Kay originally intended to

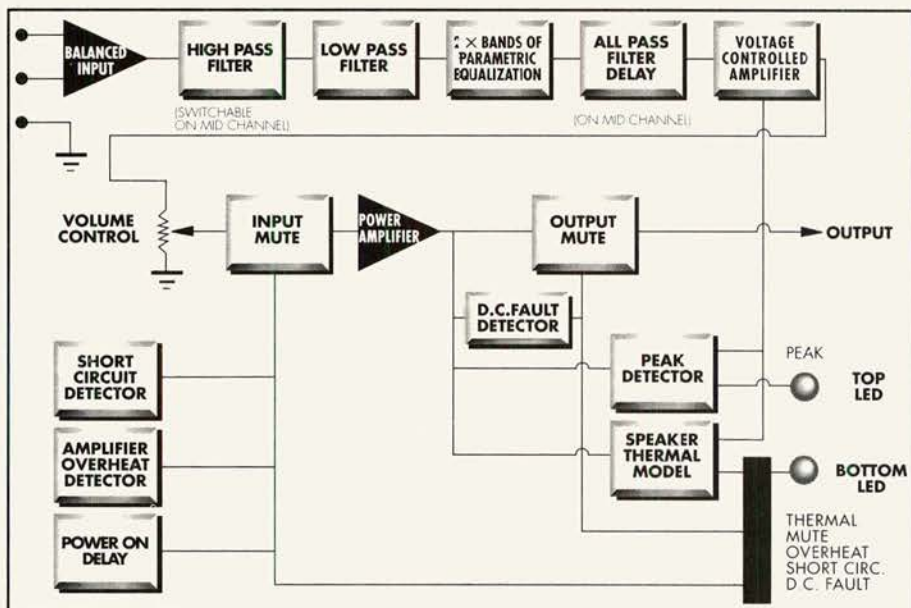
create a user friendly system, after his earlier experiences as distributor of the ill-fated Renkus Heinz Smart System left something to be desired.

The system comprises two cabinets, the mid/high box is loaded with a 12" speaker and a 2" Emilar h/f driver on a custom flair. This loading makes for a small and light trapezoidal cabinet that comes with flying points. George utilised these by flying the mid/high boxes at venues like Patricks (Sydney) and the Old Lion (in Adelaide). The bass cabinets are loaded with 2 Etone 15" woofers, and reasonably compact. "I just put them on the floor", George added. "I'm very happy with the system, I don't care about specification, just how it sounds. It's very smooth and clean, a slightly different sound to Meyer. There is plenty of bottom end with the TSW's here".

The mid/high boxes have an amplifier dedicated to them, which is essentially bi-amped. Two or four mid/high boxes run from each amplifier in mono, offering the option of full range two way, or via a back panel switch, 3 way operation where the separate bass amplifier and bass cabinets are used. The bass amplifier is dedicated to two or four bass cabinets, and operates in stereo. Accordingly no external crossovers, limiters or processors are evident - full range, full bandwidth signal is run direct from the front of house third octave equalisers to the EHT power amps, which then sort out what will be amplified and processed.

George Gorga ran 8 EHT mid/high boxes and 8 EHT bass boxes with 4 Turbo TSW-24 subwoofers for Margaret Urlich's shows. The TSW-124's were run from an auxiliary send as a supplementary low-bass drive where required.

At front of house George mixed on his "favourite console", A1 Audio's Soundcraft Series Four. This is the predecessor to the new Europa, it is a concert console, and a touch large for these smaller gigs. It has very comprehensive EQ facilities.



< EHT amplifier/processor block diagram.

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Flock Festival!

A commercially successful Rock festival is held at a utopian site every year - great facilities, music, no overdoses, no nudity - and plenty of lighting and sound. It's the Blackstump, held near Sydney every October long weekend. Read on.....

It is raining, the grey sky relentless, and mud everywhere. 8,000 people are camping here, miles from anywhere. This is a full blown rock festival not unlike the events of yesteryear, except as I drive down an access track to the stage, the flock of young punters actually MOVE out of the way. And what's this? WHERE are the mountains of empties, the wasted corpses lying oblivious in a puddle of body fluid? What's worse, it's beer o'clock, and the surrounding 14,000 hectares are beer free.

You got it in one, brother, this is the Blackstump Christian Arts Festival, held over the October long weekend at a site 60k South-West of Sydney. The site you would cry over if you were a promoter. This is God's gift (sorry Christians) to the Rock Festival. Imagine - a site away from neighbours of any kind, it is within the Sydney Water Board's Cataract Dam catchment area. There is a stage area that would comfortably accommodate 20,000 punters, pitched just right and the hill nicely grassed.

Then there are facilities galore - toilets, showers, sheds, offices, buildings, helipad, parking, camping areas, water, gates, fences - the whole box and dice! Surely ready to be exploited for a commercial rock festival you think - but then there is always the problem of red tape. The site was prepared by the Scout Association for the 1988 Jamboree, where 60,000 scouts flew in from around the world. With resourcefulness they put the infrastructure into place for not much money, utilising the Army and calling on local community support. For example, Appin Colliery provided tonnes of fill and road base materials.

This is not to create the impression the Blackstump is anything other than a commercial venture - the cost at the gate for a weekend of fun, sessions and music is \$80. For that, you attend different lectures, wander the site and get down to music of all kinds, with mainstream (Christian) rock things happening at night on the main stage. Mainstream means Tommy Emmanuel and Spy Vs Spy, who have both in the past lived tough rock and roll lives, but now appear committed to Christian ideals.

I am struck again by the paradox here, but my paradox means nothing to the thousands of happy punters who seem unperturbed by the rain. We think of the music industry in mainstream terms, with charting acts selling platinum albums and touring large venues. The Christian rock industry works this way too, with acts

like Amy Grant and Tommy Emmanuel crossing over to appeal to non-Christian music lovers. Not being an 'arts' reviewer, I am thankfully not required to dig into the culture and content that this whole event embodies. But I did go to see Amy Grant earlier in the year in Sydney, and I was mighty pissed off with the heavy 'God Vibe' there. I wanted entertainment, not 'Praise The Lord', smarmy stories between songs and fists raised clenched in the air. I left very early - but enough of this!

At the Blackstump the production is extensive, the main stage is blessed with a complete concert system provided by The PA People, who have always provided the Blackstump with production. They have an arrangement with the organisers that works well for all concerned, to the extent that "we underwrote the first few years" said PA People chief, Chris Dodds. Dodds is very versatile in that he heads the company, engineers a great many concerts, and along with brother Ken (Ken Dodds, not Brother Ken in a religious sense) oversaw all the pre-production arrangements at this festival.

The 'Big Top' is a second stage, similarly



PA People boss, Chris Dodds at Soundcheck

endowed with production facilities, as are a further two tents around the site. In total there are something like 20 sound systems of one kind or another, ranging from PA People's little brown boxes with inbuilt power and amplifiers, to the Turbo concert rig at the main stage.

Lighting is part of the contract too, with the main stage featuring PA People's concert lighting rig, and with Golden Scan moving lights supplied by Lots Of Watts and driven by a Jands Event Plus. Similarly Lots Of Watts subcontracted the lighting system in the big top, while another lighting firm 'Poprock' handled one of the other tents.

"We have people here on the crew who aren't

Christians, but they have similar attitudes", continued Dodds. "You have to be at least sympathetic, it's not sex drugs and rock and roll, just rock and roll!" I venture there probably is plenty of sex too, Dodds says he hasn't really noticed, which is a fair comment.

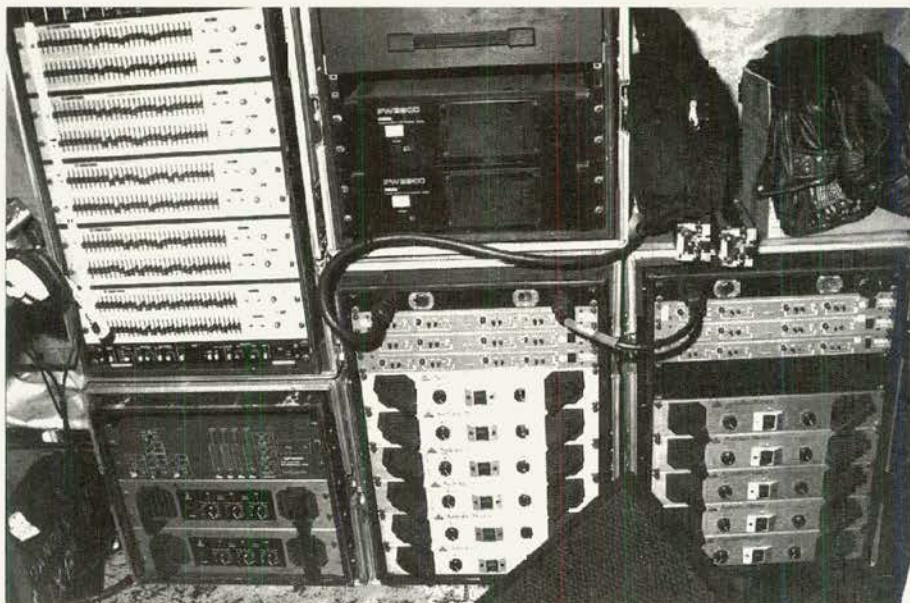
"I don't think anyone comes out of the womb a Christian, everybody takes their time. Numerous Christians in the community want to be a part of a festival without the stigma of God Squadding. It's recognised that our crew are prompt, kind, courteous and efficient, we don't work too much rock and roll because we don't get there commercially" he said.

As to the suggestion that The PA People don't pay commercial rates to their crew, some of whom work 'for love', Dodds bristled. "We pay real wages, we are just as much a part of the award restructuring negotiations as anyone. We see ourselves as a serious contender in the market, we have a lot of customers and we intend to keep them".

"This side of what we do is less known. This is a commercial job and these systems are as good as you'll get". Certainly the technical specifications of this festival are complex, a radio station broadcasts in FM to the masses for the extent of the festival, this is a fully blown broadcasting effort with all that opens and shuts. The site is lit, power is provided by generators, stages are built and dressed. "We supplied a duplex radio system with 30 stations", continued Dodds. "We have the technology".

Completely off the subject, I ask Chris Dodds about the forthcoming summer touring season. "We have plenty of work on our books, much of it things most people wouldn't know about." New consoles? "Now is not the time to have a specialised console, we do a lot of symphony work and need to link consoles which we can do with the PM3000 and 1800. I'm not all that keen on the PM-4000 though." In the interests of unbiased editorial, it must be said Dodds expressed reservations about Soundcraft's new Europa as well!

"I have to strike a balance between what the international market - that is, the guys who pull the strings - want, and functionality that enables us to do the sort of work we do." I ask if The PA People feel pressured by the current wave of investment by several other firms. Dodds replied: "We've been methodical with our purchases, we have a long term plan. Perhaps at least



Foldback equalisation (Klark Teknik, top left), BSS Turbosound crossovers and two AM-2200 tri-amp's (bottom left), PM-2800 power supplies (dual) top centre, DDA stereo 2 way crossovers and 2 AM 1K2 amplifiers centre and right.

one other player in the business doesn't have a plan or the methodology to stay in business". This dig we will leave alone!

So for three days the weather vacillated between glory and tempest, the punters wandered about the fabulous site with happy, rather than vacant, faces. Blackstump will be back again next year, for the eighth year - and chances are, The PA People will be there again, just like the year before, and the year before that!

-By Julius Grafton.



Greg Kean & Steve Leiter

Technical & Crew - The LIST!

Ken Dodds:
Site & Production Manager.

Mainstage:

SPEAKER SYSTEM: 32 Turbosound TMS-3, powered by 16 Australian Monitor AM2200 power amplifiers (developed for The PA People), and 8 Turbosound TSW-124 subwoofers, driven by 4 AM 1600 amplifiers.

MONITOR SPEAKERS: 4 TMS-3 (flown as sidefill, one pair each side), and powered by 2 AM-2200 amplifiers. 2 Creative Audio CA3821, and 16 CA3831 wedges, driven by 12 Australian Monitor 1K2 amplifiers.

CONSOLES: FOH: Yamaha PM3000/40, Broadcast mix: Yamaha PM3000/40, Monitors: Yamaha PM 2800/40.

STAGE: 80' x 40' Butlers Hire stage with full wings, 2 Jumbo-semi pans for storage and broadcast studio, truck dock and 40' x 20' backstage area. Several video game machines were in evidence, along with a fridge that contained copious quantities of Solo. The only coke within 27 miles was the thick black liquid variety.

LIGHTING: 150 Par 64, 32 ACL, 8 Golden Scans, Instinct 60 & Event Plus 48.



Christine Hellman inside the FM radio station

CREW: Chris Dodds FCH, Scott Barry MONS, John McConnell BROADCAST ENG, Jeff McKenzie & Garry Beavan SYS. ENG Steve Leiter LD, Greg Kean MOVING LX CP, Barbara McKenzie LX SYS ENG.

Bigtop.

SPEAKER SYSTEM: 8 TMS-3 flown 4 AM 2200 amplifiers powering, 4 TSW 124 subwoofers and 2 AM-1600.

CONSOLES: PM3000/32 FOH Soundtracs M32/12 Monitors.

LIGHTS: 80 Par 64, 4 Mini Scan, Instinct: 48, Event 24.

CREW: Ecoss Ford FOH, Gary Morley MON, Philby Lewis LX, Andrew Winnisla MOVING LIGHT OPERATOR.

Gympie Country Music Muster

One of the endearing things about our industry is it's diversity. Here is another major gig most of us know nothing about!

Reporter: David Timmins

I would never regard myself as a country music fan, and when I hadn't heard of the Muster I wasn't surprised. What I wasn't ready for was the size of the event in terms of the logistics required to entertain over 45000 people for 3 days.

The Muster is held every year in the Amamoor State Forest about 34 kms South West of Gympie (North of Brisbane). It is organised by the Gympie Apex Club, and relies heavily on sponsorship to raise funds used to improve the site and "provide fund raising opportunities for the benefit of the community". Sponsorship was always obvious, and overpowering at times.

The forest is about 55 acres, and while there are no campsites as such, there are permanent toilet and hot shower facilities. All accommodation (performers included) is temporary; most are tents but some better prepared campers arrived with caravans.

The focal point of the area is the main stage, which is a permanent structure purpose built into two full independent stages, allowing one act to set up while a second is live. This ensures the punters get almost continuous live entertainment throughout the entire programme. In addition a pair of 2000 seat circus tents provided alternate entertainment for those not interested with what is on the main stage. A talent quest ran for the three days in one (the BigTop), while the other had a second performance from some of the acts on the main stage (The CrowBar).

Main stage

Having the two stage setup with one live at any time necessitates almost two complete systems, with the only exception being the PA stack each end. Bracketing the stage on each side was a large screen video projector for the audience at the back. The centre area between stages provided a convenient position for the foldback equipment, set up in a U shape with the bottom of the U toward the audience. In front of the foldback a small stack was used to provide fill for punters close to the stage.

The same philosophy was used out front, with the two FOH consoles separated by the effects racks. Stage #1 consisted of a Soundcraft Delta 32, 2 x SPX90, DMD2000, and Yamaha 2408 for foldback, while stage #2 used Soundcraft 200B 24, 2 x Ibanez STR1000, Yamaha D1500, and a Peavey 1545S for foldback. Stereo Outputs from each FOH console were mixed together using Roland SEQ331 eq, processed with F1040 crossovers and DBX 160s, and fed via 16 H&H M900s to

(Continued over)



Here we go - main stage audience view looking over the Peavey wedges. Count the chairs! These punters are ORGANISED.

the 16 FOH boxes.

Yamaha C4 delay stacks placed about half way up the hill provided the necessary sound fill. Steve "Flo" Law was on hand to operate FOH whenever needed, and only a handful of acts provided their own engineer.

As with the sound, the lighting was separated into two systems. Each consisted of an 86 can show - pars and rays. Stage #1 used an Event 24 in wide mode driving 3 digital roadpaks, while stage #2 used an Aurora, driving 2 Strand MiniPaks and a similar Q Engineering copy via an analogue link. The DMX lines was run using a spare audio multicore lines.

The Show

The opening was at 6 PM on the Friday with the mandatory fire-works, but activities began the day before with the annual pre-Muster party at 10 AM the Thursday morning. A clear night meant almost sub zero temperatures by the time the acts finished, and most people huddled around the bonfire remains.

Saturday was overcast and muggy, starting at 9 AM, and continuing through lunch and dinner to finish at around 1AM. No less than 21 acts performing mostly 45 or 60 minute

sets, resulting in continuous live entertainment the entire time. This had all the ingredients for a long and disastrous day, but to the crew and organisers credit, only one delay occurred in the late afternoon. People had been switching the direction signs around on the road from Gympie, causing one of the acts to get lost. However they somehow found their way and went on only about 10 minutes late.

Light drizzle during the

night and morning didn't seem to dampen too many spirits, as a gospel show at 8AM Sunday morning played to a surprising number of punters. LADA sponsored the Muster, hence a car was given away to a lucky ticket holder at 1:30 PM. A performance by John Williamson followed, and main stage entertainment was complete. Donna and the Moderation played a couple of sets in the Crow Bar to a very receptive crowd. A fun weekend!

**David Timmins is a research scientist who works in the Jands DMX-512 cage. They let him out for some R & R sometimes!*



Random photograph of unidentified personnel at FOH area. Guy on left contemplates Roland EQ's, Yamaha 1040 crossovers and DBX limiters. Girl contemplates intrusion of pesky cameraman.

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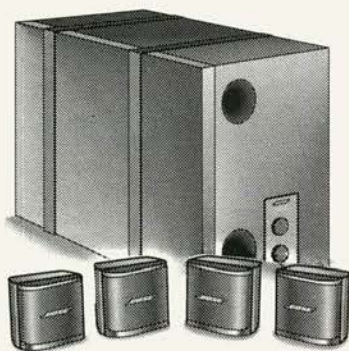
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The bass module can be placed almost anywhere, and contains the systems amplifier. This produces stereo 50 watts for the cubes and 100w bass. Bose have trained the amplifier to 'match' the bass to the level of the system, presumably at low levels the bass output is higher than when the system is run up.

Speaker overload protection is included, and the whole package retails for \$2,850 inc. tax.

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Anatomy of a disaster

"I would never have attempted to get this place started if I had have known I'd have all these hassles", the owner told Channels, adding that his \$1 million dollar nightclub had cost \$1.5 million to date- and he doesn't even own the building! The venue, in a major city, is the subject of separate disputes with three installation companies, so we cannot identify it. To do so would put Channels offside with all concerned.

The story started with the owner of the venue locating a terrific site, and proposing a nightclub offering live music for a reasonably large audience. The formula was right, he needed a workable sound and lighting system that would allow a DJ to keep the punters boiling, and also be able to use the sound system as a PA for disco acts and fashion shows. Six installers quoted, the winning bid was \$150,000 - more than some, less than others.

In this situation the owner was naive as to specification, and relied on the proposals put before him, which of course included some references as to past work. The references from the winning contractor checked out fine, the work started with a \$15,000 down payment and within a week of the start a \$100,000 progress payment was due.

"I had three D.A.'s (development applications) knocked back, and in the end had to go



Who is responsible for the wiring? The first installer had the job wired then pulled it out. In any case, these terminal blocks atop the lighting truss show signs of hasty installation.

to the Land and Environment Court to get approval for the venue", said the owner. "The landlord was contracted to kick in \$350,000 towards the fitout, and there were delays all round. Notwithstanding this, the installer demanded his progress payment and I told him I would make it in a week. In the meantime the kitchen installer prematurely banked

his \$50,000 cheque, three days before I told him it would clear, and of course it bounced!"

"Both the kitchen guy and the installer then removed everything from the premises- two weeks work was ripped out in just 2 hours - I was left with nothing. I called the installer and said: 'well now you've got a pile of secondhand equipment,

and I've got nothing'. As it transpired, I contracted to replace his equipment for a lot less money".

This was the start of the middle of the problem, if you get the drift, because the next installation was split between a lighting company and a sound company, for a total amount of around \$100,000 - ostensibly for the same equipment. Now these two installers were aware of the previous installers actions, after all, the owner needed to explain the presence of much of the wiring, and stray dynabolts in the concrete roof.

Needless to say, (and quite reasonably) the lighting company demanded cash up front, which wasn't forthcoming until the day after a pre-launch function. Faced with a co-op-



Venue licensee: "I've never seen anything like this!"



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CASUAL (includes engineer) **\$40 P.H.**
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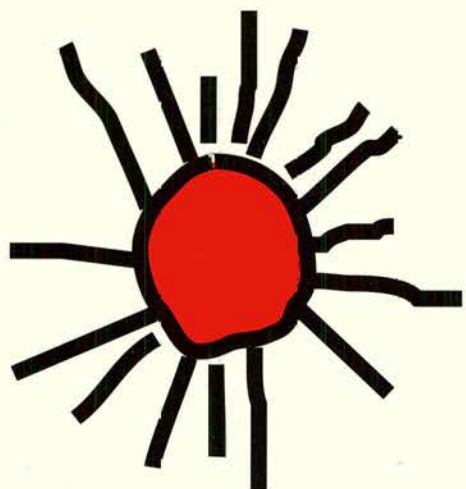
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These are the **best** rehearsal studios in Sydney. We also offer individual storage cages, **free** tea and coffee and the most helpful, friendly service in the industry. Bookings can be made on either a permanent or casual basis.

Book Now!

CALL **684 1152**



Summer

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Use until Winter 1993

PERFORMANCE RANGE

Microphones Wireless Systems

SHURE[®]

New T6 wireless systems - FROM \$595 :	Page 2
SM 58 & Beta 58 Diversity wireless systems:	Page 3
Dynamic and condenser microphones:	Page 4
Beta and new Beta Green microphones:	Page 5



Speaker Systems Components

MR series compact loudspeaker systems:	Page 6
MR series foldback wedges:	Page 7
M series instrument systems and speakers:	Page 7

SPIRIT



by Soundcraft

Mixing Consoles Live & Studio

LIVE: 8, 16, 24 channel mixers	Page 8
MONITOR: 16 and 24:8 mixers	Page 8
LIVE FOUR: 14, 20, 28, 36 channels	Page 9
STUDIO: 16, 24, 32:8 in-line mixers	Page 10
AUTO: Automated studio mixer	Page 10

Australian Amplifiers Lighting Equipment



104 & 107 Amplifiers:	Page 6
Lighting: Colour gels, Fog fluid, Par Cans, Lighting system:	Page 12

**Better sound & lighting equipment -
ONLY where you see this sign.** →





SHURE®

Wireless Microphone Systems

SYSTEMS FROM \$595 !

Shure have complete VHF 200meg systems available in various different frequencies - you can buy a complete system for instruments, or a handheld microphone system with the famous SM-58 microphone head. That's not all - Shure have different microphone choices, and receivers for all applications, and you can **UPGRADE** your receiver without changing your belt-pack or handheld microphone! With Shure's L3 and L4 receivers (see next page) you can use up to 14 frequencies together.



T6 packaged systems

A complete package, ready to use!

Full 50 milliwatt power!

Here is what you get-

The RECEIVER - a simple yet fully featured receiver that features adjustable squelch, powerpack and velcro mounting provision, adjustable extending antenna, and 6.5mm line output to feed your amplifier or mixing console. Works with ANY SHURE belt-pack or handheld microphone operating on the same frequency! Even better - you can up-grade to a full Diversity L4 receiver at any time, and still use your belt-pack or handheld microphone.

TG for GUITAR - Receiver comes with a guitar belt-pack, just add a 9v battery, plug in your guitar - and play!

TV for VOCALISTS - Receiver comes with a handheld microphone, SHURE's famous SM-58 wireless!

TP for PRESENTERS - Receiver comes with a belt-pack and a tiny Shure Lavalier microphone for conventions, church services, and business meetings.

PERFORMANCE RANGE

Soundcraft



SHURE®

JANDS

JBL

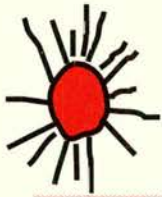
SHURE®

TG- Guitar package complete. \$ 595

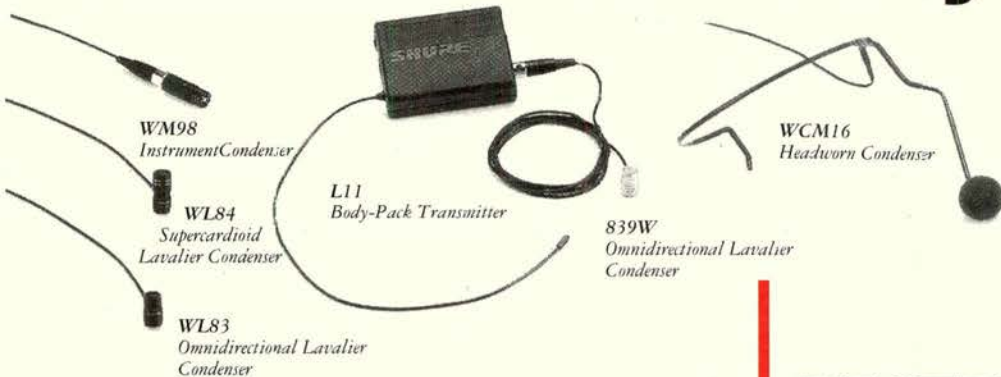
TV- Vocalist package complete. \$ 995

TP- Presenter package complete. \$ 795

NOTE: Stock frequencies - you must choose one of these:
176.2, 177.6, 186.2, 202.2.



L3 & L4 Professional Wireless Systems



TRANSMITTERS



Shure have three handheld microphone type transmitters. These offer different microphone capsules, the 'world standard' **SM 58**, the **Beta 58**, and the **SM-96** are the three types available. These transmitters accept a 9v battery that should provide up to 14 hours of operation, and have an inbuilt antenna that does not protrude outside the unit.

The **L-11 Body Pack Transmitter** also accepts a 9v battery, and has a plug connection for either a Shure microphone, or your instrument. All Shure transmitters come in various different frequencies. *You must have matching transmitter and receiver frequencies.*

The L-11 Body Pack Transmitter will accept a variety of inputs aside from instruments. There is the SM-98 Instrument Condenser, or the Countryman WCM-16 Headworn Condenser. Lavalier microphones are available in three models, the 839, SM84 (Supercardioid) or SM83 (Omnidirectional).

RECEIVERS



There are TWO Shure Wireless Receiver types. **DIVERSITY** (L4, above) and **NORMAL** (L3, at top of page). The difference is signal reliability - the DIVERSITY system has Shure's MARCAD™ circuitry, which continuously monitors the signal available from two antennas and blends the received audio in the most advantageous way. The NORMAL system has one antenna, and is used for less critical applications. *These transmitters are available in various different frequencies.*

FREQUENCIES

Shure offer a great number of convenient frequencies- we have chosen 8 standard and 6 optional frequencies that can all work together at the same time*, these are the same 14 frequencies used together for Jesus Christ Superstar!

STANDARD FREQUENCIES

- 186.6 MHz
- 189.0 MHz
- 190.6 MHz
- 196.6 MHz
- 200.3 MHz
- 202.2 MHz
- 203.0 MHz
- 209.0 MHz

OPTIONAL FREQUENCIES

- 174.5 MHz
- 176.2 MHz
- 177.6 MHz
- 186.2 MHz
- 213.0 MHz
- 213.8 MHz

*They can all work together at once in most circumstances, however you must satisfy yourself that the frequencies you choose will not interfere with or receive other transmissions. Check as to the legality of your chosen frequency also.

SHURE®

PROFESSIONAL GUITAR & INSTRUMENT SYSTEMS

ELS 113 Normal receiver & body worn transmitter.

Retail inc. tax

\$845

ELS 114 Diversity receiver & body worn transmitter.

\$1195

WIRELESS MICROPHONE SYSTEMS

COMPLETE systems, Retail including tax

NORMAL (Non Diversity) SYSTEMS:

ELS113/16 Headworn Condenser System 1,495

ELS 23/58 SM 58 Microphone System 1,195

DIVERSITY SYSTEMS:

ELS 114/16 Headworn 'Countryman' System 1,795

ELS24/58 SM 58 Microphone System 1,495

ELS 24/BETA 58 Microphone System 1,795

ELS 114/83 Omnidirectional Lavalier System 1,395

ELS114/84 Unidirectional Lavalier System 1,495

WA 400 ANTENNA DISTRIBUTOR:

Distributes 1 set of antennas to 4 L4 receivers 1,375

PERFORMANCE RANGE

Soundcraft **SHURE** **JANIS** **JBL**
SPIRIT

Individual Wireless Products available. Ask your Performance Range dealer for prices.



SHURE[®] MICROPHONES



Pictured above: (from left) Prologue 14, 10, 16L, 22, 12, 24

PROLOGUE RANGE

- 10L : Great for instruments like drums, horns & amps. **\$59**
- 10H: Hi impedance version. **\$66**
- 12L : Vocal mic, 80-10kHz, with switch. Chrome finish **\$69**
- 12H: Hi impedance version. **\$76**
- 14L : Vocal mic, 40-13kHz, with switch, Black body **\$89**
- 14H: High impedance version **\$96**
- 16L: Condenser for instruments, recording. 50-15kHz **\$139**

Prologue mic's come with swivel adaptor, and accept a standard microphone cable.

SM 87

Vocal Condenser mic that the world's top entertainers choose. Supercardioid pattern, 50 - 18kHz response. Requires phantom power from your mixer. Vocal brilliance! \$669 retail.



Ultimate Condensers for drums

SM 98A (below) **\$519** & SM 91A (right) **\$579**



SM 98, miniature system & optional mounting kits for drums and brass. SM 91 (right) unidirectional surface mount, great for piano!



515SD Value!
Drum mic **\$99**

588SD - vocal mic with switch \$129



THERE'S A SHURE MICROPHONE FOR YOUR APPLICATION

SHURE have been building microphones for longer than many of us have been alive - including the World's favourite

Microphone, the SM-58. Shure have a microphone for every application, and the name SHURE means reliability

AND performance!

A SHURE MICROPHONE FROM JUST: **\$59**

SHURE[®] SM 58



The world's favourite Dynamic Vocal mic

Retail inc. tax

\$258



Shure SM 57: the professional choice for close miking drums and instruments.

\$209

Genuine SM-58 Copy - by Shure! The **SM-48** looks exactly like the classic (above), feels the same - but costs a lot less. Naturally it doesn't quite SOUND the same, so use it for background vocals or DJ applications! Just **\$149** retail

Some more selections from the world of Shure- CLASSICS-

- 520D 'Chicago' type harmonica mic, the 'green bullet' **\$199**
- 55 SH-II The 'Buddy Holly' mic, stand mount with switch **\$369**
- HEAD MIC-
- SM 10A Headmic for drummers or moving sources **\$279**
- CONDENSORS-
- SM 85 Vocal condenser, needs phantom power **\$619**
- SM 96 Vocal condenser, Cardioid, battery or phantom **\$419**
- SM 94 Recording condenser, unidirectional **\$419**
- GENUINE SHURE MIC CLIP-
- With brass collar, lasts longer than the copies! **\$9.95**

PERFORMANCE RANGE

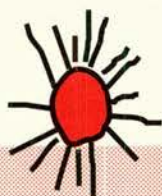
Soundcraft



SHURE[®]

JANDS

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SHURE® BETA - the NEW voice!



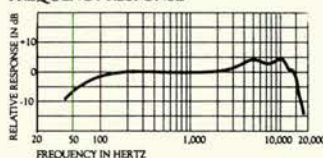
BETA 58 offers more gain before feedback, with a Hypercardioid pattern. The neodymium magnet gives more output than conventional magnets, so BETA means better! The SM 58 set the standard, now BETA 58 offers more- more output gain, more feedback rejection, and even LESS handling noise than the 58 - if that is possible!

BETA 58 : (Pictured far left).

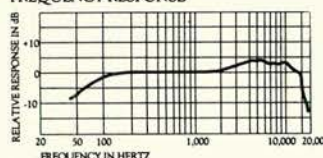
BETA 57 takes up where the famous SM 57 leaves off. Even more bass response means Beta 57 is the ultimate dynamic drum microphone, suited to miking acoustic and electric instruments. Supercardioid pattern rejects feedback, and the hardened steel grille accepts rough stuff.

BETA 57 : (Pictured at left).

FREQUENCY RESPONSE



FREQUENCY RESPONSE



BETA 57: \$399

BETA 58: \$439

New BETA GREEN - now extra BETA choices!



BG 1.0 Vocal, dynamic, cardioid pattern (left)

BG 2.0 Vocal neodymium, cardioid (right)

BG 3.0 Vocal neodymium, extra power (below, left)

BG 4.0 Instrument condenser (below)

BG 5.0 Vocal condenser, high output (below right)



\$149

\$99



\$219



\$369



\$369

All BETA GREEN microphones are finished in black/teal, and have an on/off switch.

BG 1.0 - cardioid, 30- 12kHz. -77.0 dB output.

BG 2.0 - Neodymium, cardioid, 80 - 14kHz. -76.0 dB output.

BG 3.0 - Neodymium, cardioid, 60 - 15kHz. -75.0 dB output.

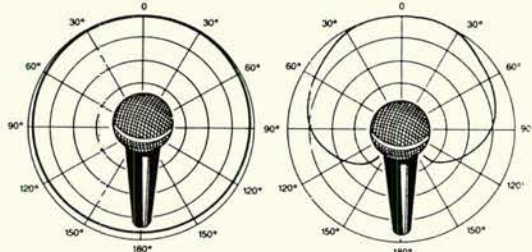
BG 4.0 - Condenser, cardioid, 40 - 18kHz. -68.0 dB output.

BG 5.0 - Condenser, cardioid, 40 - 18kHz. -69.0 dB output.

Pssst!

We don't expect everyone to know all the jargon, so here we explain-

First, the polar pattern of typical microphones is shown below. On the left is an omnidirectional pickup pattern, on the right a uni-directional. This is also known as cardioid. Supercardioid and hypercardioid have even more side rejection. The tighter the pickup pattern, the more important it is to stay 'on axis'.



The other thing to understand is that Dynamic microphones (like the SM 58) are different to Condenser microphones. Dynamic mic's use a magnet and a coil of wire to convert sound to electricity. Condensers use an electrical process, so require a preamp, and need to be powered by a battery or phantom powered from the mixer. Basically Dynamic microphones are rugged and handle conditions well. Condensers can be made small, and have high output.

PERFORMANCE RANGE

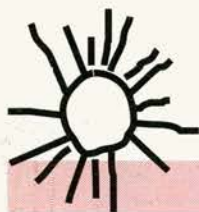
Soundcraft



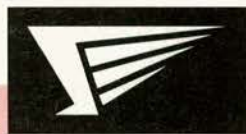
SHURE

JANIS

JBL



SPIRIT LIVE



**8ch, 16ch, 24ch MIXING CONSOLES -
built in the U.K. by Soundcraft. From \$2695**



**Professional features,
affordable prices!**

**8 ch, 16 ch and 24 channels - with
optional expander!***

Soundcraft Spirit LIVE is the entry choice for anyone serious about sound. Superb features and superior specifications, along with genuine U.K. construction put Spirit LIVE ahead of any other mixing console in it's category.

ALPS FADERS

The 100mm faders are smooth action, long throw ALPS type.

GREAT SWEEP EQUALISERS

Soundcraft are famous for EQ, and with LIVE you can EQ any frequency between 40Hz and 8kHz. The troublesome area between 250Hz and 400Hz is overlapped. A fixed 10kHz equaliser handles ultra-highs, and a 100Hz high-pass filter can be switched in too.

*Expander for 8 & 16ch only.

FOUR AUXILIARY SENDS

For foldback or effects.

EXTRA MONO BUS

More than just a Mono output, the Mono Bus is a third output that can feed a centre cluster or a subwoofer, or if your PA is mono, you can use the left & right outputs as subgroups!

FOUR STEREO RETURNS

You can connect up to 4 CD players, effects, tape players- any line level device- to these four separate inputs.

RECORDING OUTPUT

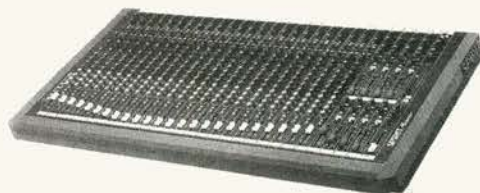
Record your gig!

RACKMOUNT OPTION

For the 8 channel unit.

8 CHANNEL EXPANDER

When you need more inputs for your 8 channel or 16 channel consoles, just add another 8!



Spirit MONITOR

Monitor consoles are specialised, because professional performers need individual mixes. Spirit MONITOR can produce 8 separate mixes, with an engineers listening system that accesses any input or output without affecting the final mixes. Extensive equalisation enables supression of feedback, and produces full- fat - sound for demanding musicians. Dim switch on each output helps find feedback, every input channel has a linear fader for master control, as well as eight 'send' faders. Equalisers can be inserted over the eight outputs. Complete PFL and AFL facilities and insert points on every input mean SPIRIT MONITOR is ready for work!

Spirit MONITOR retail prices
(including sales tax:)

Monitor 16 - 8 (16 inputs) \$8,995
Monitor 24 - 8 (24 inputs) \$11,995

PERFORMANCE RANGE

Soundcraft



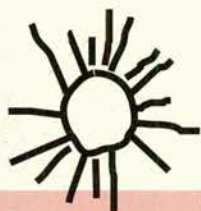
SHURE

JANIS



Spirit LIVE retail prices
(including sales tax:)

8 channel: \$2,695
16 channel: \$4,495
24 channel: \$6,995
EXPANDER: \$2,495



Soundcraft

SPIRIT MIXING CONSOLES



SPIRIT LIVE 4

NEW

**4 sub groups - Extra
STEREO inputs!**

**LIVE FOUR. 14ch, 20ch, 28ch, 36ch.
More inputs; more features;
surprisingly low prices!**

LIVE FOUR CONSOLES

Retail prices including sales tax

14 channel \$4,995*

20 channel \$7,495#

28 channel \$9,995

36 channel \$12,495

EXPANDER: 8 ch: \$2,695

*2 stereo channels, 12 mic/line inputs. #4 stereo channels, 16 mic/line inputs.

Superior Specifications-

(Typical, for 20ch console, RMS, 22Hz-22kHz bandwidth)

Mix noise- -82dBu

Group noise- -84dBu

Aux noise- -84dBu

Crosstalk- -103dB

(Channel on Switch isolation)

Equiv. Input Noise- (EIN) -127dBu

Phantom Power supply- 48 volts

Refer product pamphlet for exact specifications and methodology. E&OE, subject to change.

No one knows more about sound mixing than Soundcraft. New Spirit LIVE FOUR - a professional mixing console for live PA and multitrack recording alike.

4 subgroups stereo PLUS mono

With Live Four you can send each channel to subgroups and/or the main stereo outputs. A separate mono output allows a subwoofer feed of the combined stereo mix.

More outputs than you imagined

Each subgroup has a direct output, as does every mic/line input channel, so you can connect directly to processing equipment or multitrack recorders.

Five auxiliary sends

You can run foldback and send signal to external effects processors with Live Four's 5 auxiliary sends.

Unsurpassed Equalisation

Soundcraft are famous for

their EQ, and Live Four carries on this tradition. Sweep equalisers allow you to access any frequency between 40hz and 8kHz, with extensive overlap in the critical 250hz-400hz region. A GENUINE 15dB of cut and boost is provided, with a h/f control centred at 10kHz. A 100Hz high-pass filter can be switched in.

4 pairs of Stereo inputs

Each stereo input is controlled by a linear fader, with EQ and auxiliary sends. Four separate stereo channels are featured on our 20ch, 28ch and 36 channel consoles.

Extra balanced returns

As if this isn't enough, Live Four has four BALANCED inputs for external console connection or auxiliary returns.

Much more including:

Inserts, optional 8 ch.EXPANDER, talkback, full PFL/AFL, full metering.

PERFORMANCE RANGE

Soundcraft



SHURE

JANIS

JBL



Soundcraft

SPIRIT STUDIO CONSOLES



16, 24 and 32 : 8 INLINE Studio Consoles

In line design means no shortage of inputs with Spirit Studio. In fact, as many as 72! (On 32 channel model) Mixdown is easy, you needn't patch again. Eight subgroups, 6 auxiliary sends, and Soundcraft's famous 4 band EQ (with 2 mid-sweeps) make Spirit Studio irresistible!

Four stereo effects returns with EQ, Phantom power, External power supply, 100mm long throw faders,

and quality throughout. Insert points, talkback facility, and split EQ on each input.

Spirit Studio offers more facilities, more flexibility and certain Soundcraft performance and reliability. What more could you ask for? IDEAL FOR multitrack studio's, from 8 to 24 track, and Post-Production Suites.

Audition today!

SPECIFICATIONS:

Bus Noise (Masters Down) -98dBu
 Bus Noise (Masters Down) Mono or Group -98dBu
 Mix Noise: -80dBu. Frequency response +/- 0.5dB
 CMRR (Measured at 1kHz) mic input maximum gain -90dB, Line input unity gain -55dB.
 Distortion (THD 1kHz at +20dBu) line in to Mix out, Aux out or Group out: <0.006%. Crosstalk >100dB.

Spirit STUDIO 16-8-2: \$8,495 24-8-2: \$11,995 32-8-2: \$15,995 (including sales tax)
 16-8-2: \$7,080 24-8-2: \$9996 32-8-2: \$13,330 tax exempt. These are retail prices.



MIDI in and out, dedicated software, great Soundcraft EQ and performance!

VCA Automation of Channel faders, channel mutes and monitor mutes - automated mixing of multitracked and sequenced instruments is now possible!

Dedicated automation software designed for Soundcraft by Steinberg will run on Atari, Mac or IBM PC. Spirit AUTO features all Spirit Studio features, plus Snapshot button, Autochase switch, and Protocol switch.

Auto is a specialised Studio product from Soundcraft, offering power & flexibility!

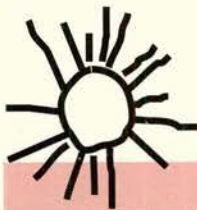


Soundcraft Spirit AUTO:

Auto 16: \$13,495 inc. tax, \$11,246 tax exempt.
 Auto 24: \$19,995 inc. tax, \$16,663 tax exempt.



NOTE- Spirit Auto available from specialist dealers. Software not included in prices. Call Jands for details.



MR Series Loudspeaker Systems

JBL

Excellence is another word for JBL - the world's leading manufacturer of loudspeakers. MR Series are modern designs, with tough but efficient JBL components - 100% JBL throughout!

New 100° x 80° Flat-Front Bi-Radial® horn for wide pattern control of high frequency information.

Double lacquer-dipped curvilinear cone minimizes cone break-up modes for lower distortion.

SHG™ magnet design for a symmetrical magnetic field, resulting in lower distortion.

Thermoset Composite™ voice coil assembly for high structural integrity and reliability.

16 lb. magnet structure for maximum efficiency and heat dissipation.

18-gauge painted steel grille for maximum protection of low frequency transducer.

Glass-reinforced Lexan® interlocking corner protection.

Engineered Strand Board (ESB™) hardwood enclosure material assembled with high temperature adhesives and clamped in a 10-ton press (patent pending)

Pure titanium diaphragm compression driver with patented diamond pattern surround for clean, crisp high frequency reproduction.

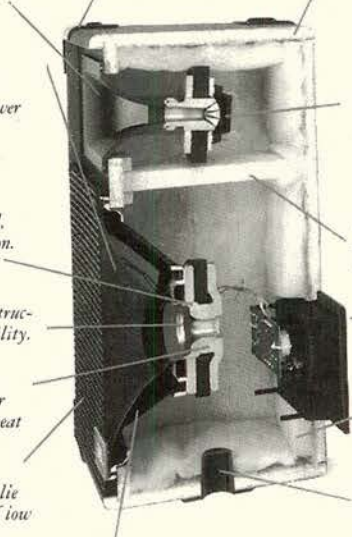
Hardwood bracing to eliminate enclosure resonance.

Precision crossover network for seamless transition between system components.

Absorbive glass wool lining to neutralize internal standing-wave.

Integral 35 mm standmount for use with the optional JBL model MT4712 tripod stand.

Newly designed high strength diecast aluminium frames for high reliability under heavy road use.



Trapezoidal P.A., Disco & Stage cabinets - full frequency response



MR822 (left) and MR825

MR-822 - 250w RMS

2 way 300mm (12") woofer & h/f horn. Trapezoidal
60 - 20kHz. (-10dB) 100dB sensitivity. \$1295
(Comes complete with stand socket)

MR-825 - 250w RMS

2 way 380mm (15") woofer & h/f horn. Trapezoidal
50 - 20kHz (-10dB) 101dB sensitivity. \$1595



MR-835 - 250w RMS

3 way 380mm (15") woofer, 8" mid & h/f horn. 38 - 20kHz (-10dB) 100dB sensitivity \$1895



MR-838 - 250w RMS

3 way 460mm (18") woofer, 10" mid & h/f horn 38 - 20kHz (-10dB) 100dB sensitivity \$2295

18" Sub-woofer



MR-818 - 300w RMS

460mm (18") sub woofer system, 35 - 4.5kHz, 100dB sensitivity. \$1595

Jands Amps



104: 400 watts. \$1,495

Just 2 rack units tall, the Mosfet 104 will drive any MR Series cabinet with a 12" woofer. 104 features signal clip warning, XLR inputs and silent operation.

107: 700 watts. \$1,795

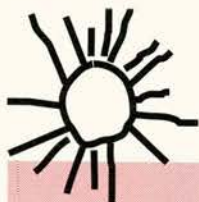
MR speaker cabinets with 15" & 18" woofers can be run by the 107 amplifier, 3 rack units tall and featuring XLR inputs, signal clip warning, and silent operation..

PERFORMANCE RANGE

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Loudspeakers for Musicians

JBL



Thermoset Composite™ Voice Coil Assembly:
JBL's new Thermoset Composite™ voice coil design is not only extremely rugged, but also places more conductor in the magnetic gap through the use of edgewound ribbon wire and a 3 inch diameter former for greater efficiency and control compared to other more traditional designs.



MR812 and MR815 Loudspeaker System:
M121-8 and M151-8 transducers are available as part of the new MR Series as models MR812 and MR815, respectively, for your convenience.

M series loudspeakers

M121-8 300mm (12")

Power: 300 watts
Sensitivity: 102dB
Freq. range: 60 - 6kHz
Encl. volume rec: 28 - 85 litres
Voice coil dia: 76mm (3")
Coil Material: Edgewound aluminium ribbon.

Retail price: **\$425**

M151-8 380mm (15")

Power: 300 watts
Sensitivity: 102dB
Freq. range: 40 - 5kHz
Encl. volume rec: 56 - 170 litres
Voice coil dia: 76mm (3")
Coil Material: Edgewound aluminium ribbon.

Retail price: **\$475**



Remember the K120?

Now JBL introduce the **M 121 and the M 151 loudspeakers - M for Music!**
Available as components or ready to go!

MR- 812 : 1 x 300mm (12") M121-8 loudspeaker, loaded into a rugged, fully finished cabinet. 300 watts RMS, 100dB sensitivity, 60 - 5.5kHz (-10dB). **\$695 complete.**

MR- 815 : 1 x380mm (15") M151-8 loudspeaker, loaded into a rugged, fully finished cabinet. 300 watts RMS, 100dB sensitivity, 55 - 4kHz (-10dB). **\$795 complete.**

JBL

MR Foldback Wedges



MR-802 - 250w RMS

2 way 300mm (12") woofer & h/f horn, 50 - 20kHz (-10dB) 100dB sensitivity \$1295

MR-805 -250w RMS

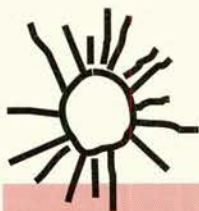
2 way 380mm (15") woofer & h/f horn, 55 - 20kHz, 101dB sensitivity \$1595



PERFORMANCE RANGE

Soundcraft **SHURE** **JBL**
SPIRIT **JANDS**

JBL: World's Favourite Foldback!



M Series Electronics

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JBL M644



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3 way stereo,

4 way mono.

M553 \$1295

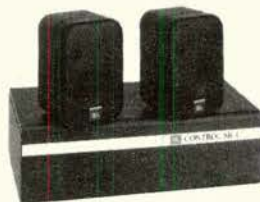
3 way Stereo, 4 way Mono, Balanced XLR in & out, variable freq. centres, 24dB slopes, JBL horn EQ & L/F sum-output

Gating Compressor Limiter \$995

JBL M712

2 channels, with complete control over Threshold, Attenuation, Attack & Release, Gate function with independant Threshold for each channel, blanced XLR in & out, link

JBL Monitors



Control Monitors - for Professional applications and Home Listening alike... 100 watts each - power!

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Packaged with a Control SB-1 subwoofer: \$995 total.

Control 5: \$895 pair.

Packaged with a Control SB-5 subwoofer: \$1,495 total.

Options: Control 1 MTC-2 wall or ceiling brackets, \$229 pair. (Control 5 brackets available)

4200 Series Nearfield Monitors



Optimised acoustic centres for hi and lo frequency elements, new 25mm Titanium tweeter with special filter lens for great 1.5 - 3 metre dispersion.

4206 Nearfield Monitors (6" woofer) \$895 pair inc. tax

4208 Nearfield Monitors (8" woofer) \$1195 pair inc. tax

PERFORMANCE RANGE

Soundcraft

SHURE

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Pro Colour Gel \$7.50 per sheet

Pro Colour is conveniently numbered the same as LEE, and comes in 20 x 24" sheets.

Jands Fog Juice \$15 per litre

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Lighting Package for EVERYONE!

- INCLUDES:
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 - ▶ Jands 4 Pak dimmer controller,
 - ▶ 2 Jands 'T' Stands,
 - ▶ 2 Jands 'T' Bars,
 - ▶ 8 Par sized sheets of ProColour Gel.

\$2977

Package is IDEAL for small venues, clubs, pubs and schools. The 8 Par 56 cans will run through the 4 Pak from one 10 amp power point. Aussie made for Australian conditions.

All products offered by Jands are serviced and supported by Jands. Standard manufacturers warranty terms apply. JBL: 5 years. Jands manufactured products: 2 years. Shure and Soundcraft warranty terms as applicable at time of purchase.

ABOUT THIS CATALOGUE!

Jands are the sole distributors of all the equipment in this catalogue. The Performance Range comprises selected equipment from the best on offer around the world today. Jands also distribute a Professional Range of products not shown here, which include the new SR-3000 Split Rail Technology amplifier, JBL loaded System loudspeakers, JBL V.C.G. loudspeakers, Soundcraft Delta, Venue, Vienna and Europa consoles, Rane processing equipment, Jands Lighting Control products and a whole lot more. Professional Range Products are available from selected dealers. Not all Dealers are Professional Range Dealers - call Jands for details.



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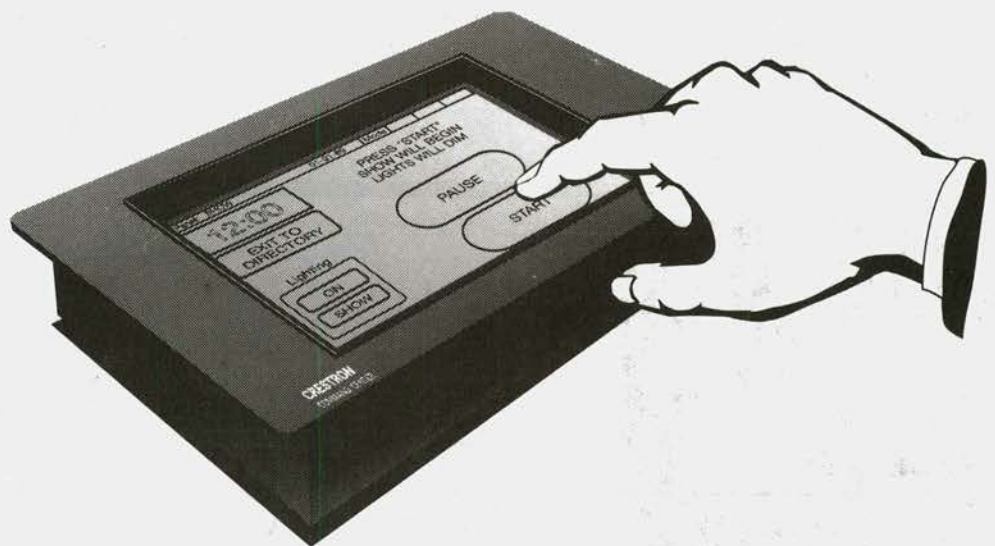
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Or just touch this screen.



CRESTRON

Tomorrows touch control system is here

Crestron is the system that operates other systems, a command centre that can be programmed to perform elaborate sequential tasks, or simply remotely open a curtain, dim a light, or fade up a microphone.

The touch sensitive screen can have up to 99 pages of customised commands, programmed to suit your application. (Or just one if you want!)

The Cresnet II modular rack has a module for almost any command protocol, and can be addressed by remote infra-red hand held controllers.

The system is Crestron, the applications are as diverse as the world we live in.

JANDS

TOOLS

KLARK TEKNIK HAS JUST released the DN-728 Digital Delay Line (pictured below). The purpose of the device is synchronisation of sound paths in multiple signal distribution systems, and for this purpose delay settings can be set in distance or in time.

Very useful is the ability to set delays to one of 64 memories, and you can program lock-out to different levels, so the end user in an installation can't dial up a disaster. Equally useful is the ability to choose 'Stereo' for three ganged outputs, 'Dual' to assign each of the six outputs to either input, or 'Mono' to assign all six outputs to one input.

In the distance mode you enter the actual distance and the DN-728 works out the milliseconds, adjusting for temperature variations thereafter. Up to 1.3 seconds delay comes standard. *More from Mark IV Australia, (02) 648-3455.*

erative sound company, a working sound system and no lights, the owner asked the sound company to help out. What then happened, according to the owner, is that his lease company paid the sound company an amount greater than the amount due. This was expected, and the arrangement was the sound company would refund the difference - some \$20,000 - to the owner. This they did - minus \$2400 for hire of lighting equipment.

Meanwhile the lighting company had been paid up front, and rushed to install the equipment. At this point it became clear that the installation was to be - well, rushed. The owner claims the original quote detailed things that didn't happen, like the 36 pinspots being supplied with mains plugs. Instead, they are hard wired into junction boxes that are either cable tied or taped to the truss.

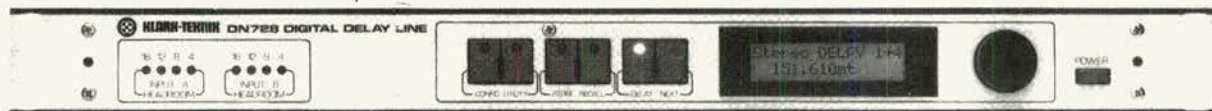
"They'd been paid, they didn't worry about the job" is the owners lament, evidenced by the fit of the controllers in the console and the hasty construction of a ceiling mount for

the fog machine.

The owner had a lot on his plate during the frantic days around the opening of the venue, and didn't really think too much about why the sound and lighting installers hadn't formally handed over their work. "I certainly didn't sign for any of this" he says, and adds: "just as well, because there are things missing!"

As the situation washed up at presstime, the owner claims the lighting company and the sound company short changed him, the sound system supplied is certainly a little different to that quoted, and some of the lighting equipment isn't installed - a dispute is in full progress. Meantime a fourth installation company has been contracted to pick up the pieces - and get things working that didn't ever work in the first place, according to the aggrieved owner.

NB- On October 31st, we became aware the lighting company & the venue had made peace.



DN-728 dual input, six output professional delay line

inside

Contracting & Components

AV Contracting

ONE OF THESE WILL COME TRUE IN THE NEXT CHANNELS ISSUE

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Qualifications?

Too many people are in the market, according to Les Jones.

Trying to analyse why a venue owner chooses an installation company is a regular pastime for Les Jones, who has built up Les Jones Designs into an impressive entity during this recession. "Basically the guy getting the quote is a wood duck - he doesn't know what you are quoting for", Les says. "For example, a vendor tells a venue owner a Taiwanese mixer is equal to a Soundcraft - now that's a blatant lie, and chances are the club owner won't know any better".

The market is loaded with people selling inferior brands, "quality and pricing have hit the deck", Les asserts. "I quote quality equipment like Clay Paky and JBL - for example if someone wants Par 36 scanners I install Alpha, which never fail. Someone else quotes a cheap Taiwanese brand (model identified but withheld following legal advice) and the thing is lucky to be still working on opening night!"

Les Jones isn't having a whinge here, rather he is critical of the dabblers who hamper the serious players. He insists his firm can - and sometimes does - operate on service work alone. "Martin Blunt (Jones' technician and right hand man) is one of the most experienced guys around. He has been in the installation and service business for 12 years. I've got 60 clients, and someone is on call 24 hours a day so we do a lot of service work, anything from video to paging systems."

"The thing is, there is no essential qualification for anyone wanting to start up as an installer", Les said, "we only use a Gold Card



electrician for our work, high quality cabling and labelling. Martin is a graduate from an Electronics Communication Course." Les himself has been around for a long time, originally running Soundco in the 1970's, hiring PA's to the likes of INXS back then.

Soundco operated with a chain of partners until Les broke the retail link by establishing Les Jones Designs two years ago. As a dedicated installation/service outfit, the firm has completed various large jobs around NSW, including Paradise nightclub at Parramatta, North Ryde RSL and the Tall Timbers Hotel at Ourimbah.

"I've got three jobs on the go now, for \$120k, 90k and 40k, with a 40k almost ready to commit. We've done video wall installations and at North Ryde have a virtual reality machine installed. The hardest thing is to establish your credibility in the marketplace". Les Jones has with certainty, done that.

TOOLS

Peavey are expanding hard and fast in the contracting market, with the IDL-1000 their latest Digital Delay Line. Offering. This device has two inputs and three outputs, the delay can be set in 20ms increments, up to a maximum of 1.3 seconds - enough for more than 500 metres of delay.

To make life easier, the IDL-1000 can be set in units of milliseconds, feet, or metres.

Peavey say the unit runs at full bandwidth, using a 16 bit Delta-Sigma analogue to digital converter, and a 48kHz sampling rate. Inputs and outputs are electronically balanced, and use XLR's. Balancing transformers are an option. Each output has a mute button and LED, the gain controls can be locked behind a panel.

Details- Australis (02) 938-3466.



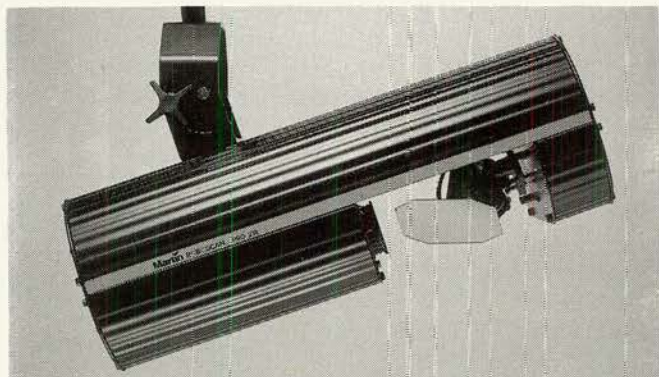
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- 4 **More gobo's** than Trackspot & Microscan combined!
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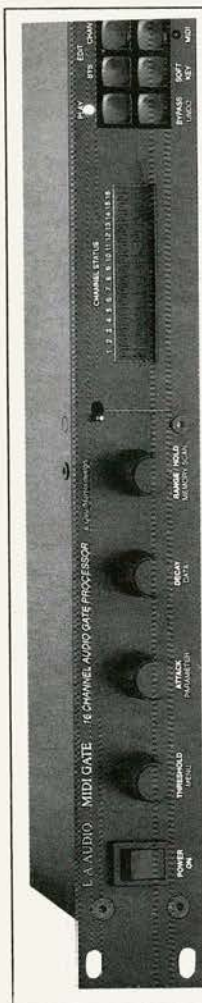


FEATURES

- * 18 Gobos
- * 17 Colours, incl. 2 quad colours
- * Dimming from 0 to 100%
- * Micro-stepped motors
- * Strobe Effect
- * DMX 512 option
- * 2000 hour lamp life
- * 5600° Colour Temperature
- * Rich colours
- * Variable speed control on all functions
- * Can run without controller
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TCP COMMISSION ANA

*\$700,000 contract doubles during work,
Sydney firm find solutions & expand*



TCP's Tony Musico, beside the head end amplifier

Solutions to problems come easier after you've been in business for a while, according to Total Concept Productions' Director Tony Musico. The firm has just completed and commissioned a \$1.4 million contract to provide audio visual equipment for Sydney's latest 5 star hotel - the A.N.A., overlooking Circular Quay.

The original contract was for half this amount. According to Tony Musico the job grew once it started, with the builders offering further contracts once TCP demonstrated some ability on site.

"The original consultant left the job early, and we were then asked to finish the specification" said Tony, adding that it was, by that time, too late to change the choice of mixing console for the ballroom audio system. The consultant had, inexplicably, specified a Yamaha 2408 - foldback console!

TCP witnessed the hard reality of performance on site, when another contractor was forced to pull down and remove hundreds of thousands of dollars worth of slightly substandard timber wall linings- to which TCP had already fitted connector panels. This work was redone as a variation - and for a fee- by the firm, but the fate of the other contractor, left Tony in no doubt as to the seriousness of contracting!

"If my work is commissioned late, I pay liquidated damages of \$70,000 per day - and one day or so would wipe out the profit", he said, as we travelled by lift to the top floor. A building site near completion is always a wonder, and this one was no exception. Two lifts were working, each has a driver who you call on an intercom located in the lift lobby on each floor. The wait for a lift could take 20 minutes, and when it did arrive, half the workforce was already in it, hard hats and steel capped boots adorned.

Temporary power leads run everywhere, carpet is laid but covered by mats, marble is covered by ply, and trash is everywhere. How the whole catastrophe transforms into a luxury hotel is almost beyond imagination - but it does!

TCP decided to establish metalwork facilities once they won this contract, "with 30

equipment racks to supply I am saving a lot", Tony said. The work included customising patch panels, and even providing steel support frames for some internal lobby wall fixings. "They saw we were capable, so they asked if we wanted to quote on that". Clearly the fact that Tony Musico was on site at least a full day every week helped him win extra business there.

Dave Doyle is TCP's technical adviser, and is credited by Tony with much of the success of the job, which includes the head end system for the TV distribution, located on the top floor. This is the main point for all video distribution to the hundreds of hotel rooms, and essentially takes the signal from the masts on the roof and distributes it. Along the way the system offers FM radio and music, with TCP responsible for the generation of the signals, which are then connected to cabling run by another contractor to each room.

The design of the stage lighting system in the ballroom is interesting. TCP devised a way to provide a hanging and patching point for trussing at regular intervals through the room. A circular plate, about 300mm in diameter sits flush with the decorative ceiling, and has a small hole of about 25mm in the middle. Into this hole you push a rigging rod with a threaded end, that you then use to push the plate up into the ceiling, and screw the rod into a thread. Thus the ceiling plate is captive within the ceiling - and can't get lost - and you have access to the ceiling where the lighting circuits are available.

364 circuits run from the room to the dimmer area, where each is terminated in a male 240v socket. Short extension leads then allow the required circuits to be patched to any of the 48 dimmer channels. This method is favoured by TCP over traditional patch tails, because "why would you want 364 tails hanging down here?" Right, Tony.

TCP operates from modern premises at Guildford in Sydney's geographic centre, with equipment hire, laser systems and sales. The firm was established nearly 10 years ago as Disco Roadshow - and has come a long way since.

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JANDS CUTBACK

Contracting Division Curtailed, Theatre Projects Unaffected.

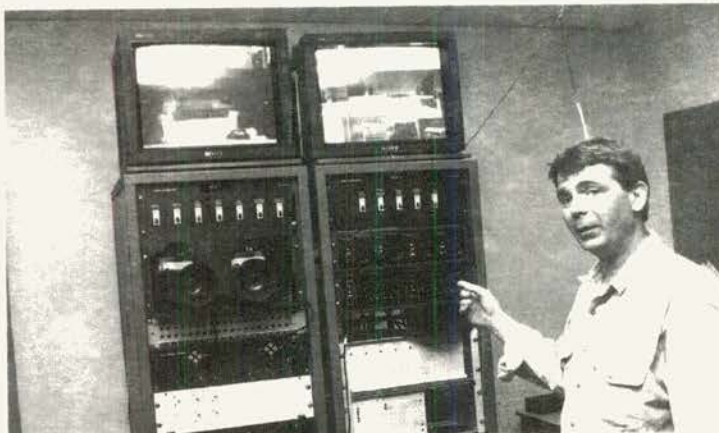
"Jands' first contracting job was a sound system at Wrest Point Casino in 1972. I quoted the job, helped build the equipment, and installed it", said Paul Mulholland, head of Jands. "Now it's 20 years later and changes at Jands and in the market have resulted in the decision to curtail Jands AV Contracting activities."

Paul Mulholland went on to add that the Theatre Projects section is not affected in this reorganisation. Under Chris Johnston and sales person Fiona Blackett, this stand alone division will continue to provide stage furnishings and machinery. Theatre Projects operates a large curtain making facility and supplies a wide range of stage fittings, machinery, blacks and suchlike to both dealers and end users.

Peter Grisard, who headed the Jands Contracting Division, states: "Changing times and circumstances means the AV Contracting market will, in future, be dominated by small specialised local companies who can offer individual attention necessary in this high-tech age. A company the size of Jands, undertaking many jobs around Australia found offering this service priced us out of the market."

Another factor in the change has been the new products Jands represents in Australia, Crestron and Shure in particular. Crestron manufactures a range of programmable remote control equipment that will interface with almost anything electronic, enabling centralised user control.

The recent addition of Shure products added to the need for Jands to rethink their AV Contracting business. Shure's Automatic Microphone System (AMS) is almost entirely a contracting product. Jands also represents Rane, whose signal processing equipment,



Peter Grisard

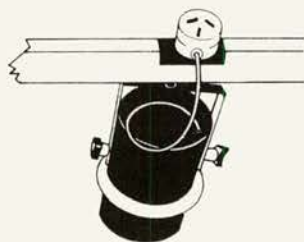
crossovers and equalisers were recently voted 'most reliable' in an American contractor survey.

"Many potential customers for these products perceived us as competitors, and so were reluctant to use these brands", said Paul Mulholland. "In future when Jands becomes aware of a potential installation - which we do on a daily basis - the client will be offered information and technical assistance, but will be referred to a dealer for quoting and hopefully installation."

Peter Grisard and Engineer Garry Rutter will be available to provide information and engineering support for Jands Contractors products, along with assistance to consultants. Jands asserts that 20 years experience has given them products and expertise that are now very competitive and available direct to dealers and contractors alike.

The final word on this comes from Theatre Projects head, Chris Johnston, who is keen to be seen as a separate entity. "No job is too big or too small for Theatre Projects. We can supply drapes, curtains, counterweight systems, orchestra lifts, machinery, spotbars - whatever." Johnston added that while doing so, he can act as a referral service for dealers when any of his jobs need AV facilities.

TOOLS



Circuit Tube is an idea that had to happen, it makes for very neat lighting installations. The extruded channel is 2" OD (50mm) so a lighting hook can be hung over it. The channel can also be drilled for an M10 suspension bolt. Then the fun starts, because you can place HPM or Clipsal outlets almost anywhere along the top of the channel. The top and bottom come apart, so you lay your cabling inside and wire the outlets. In one go you have lighting mounting point and cable duct, so you don't need truss or spotbars and duct. Just so much nicer, and Aussie designed too!

Details from Herkes- (02) 319-3133.

All we can do is apologise. SORRY.

If you have just purchased Trackspots, Microscans or Samurais- all we can say is sorry to ruin your day. The ROBOSCAN PRO 218 has just made them obsolete. Don't make things worse by checking out our advertisement on Page 29.

TOOLS

RANE PROFESSIONAL AUDIO PRODUCTS have added to their AC series of active crossovers, which encompass a pair of models - the AC 22 stereo 2 way or mono 3 way, and the AC 23 stereo 3 way, mono 4 or 5 way. These units employ 4th order Linkwitz Riley filter alignments, with 24dB per octave crossover slopes. The latest variation offers XLR connectors in place of standard ring tip and sleeve jacks. The XLR variant is the 'B', so you specify AC 22B or AC 23B, and get a balanced device for your bucks.

12v DC POWER FOR RANE- the new VC 12 is a DC power adaptor for Rane devices that enables you to drive same from a car battery. The VC 12 outputs 15v DC via two RJ-12 outputs, so 167 milliamps is available, which is enough to run a pair of AC 22 crossovers, for example. The adaptor comes about after Disneyland started using Flex Series modules on their parade floats. Most - almost all - Rane products have RJ-12 power connectors. *Jands do Rane: call (02) 516-3622.*

inside

Contracting & Components

AV Contracting

DYNALITE ACTIVE IN ASIA

Sydney Lighting Control Firm Expanding

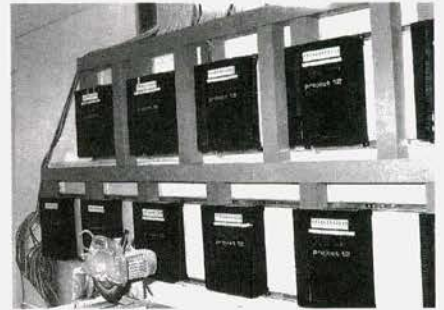
Dynalite has established a strong presence in Asia, where expatriate Ray Bond's new firm TeDeum is representing their products, according to founder John Gunton. Architectural dimming is the company's backbone, and this is evidenced by one recent installation where at least ten Project 12 dimmer racks are installed on each floor of the high rise ANA Hotel in Sydney.

Dynalite has been established since the early 1980's, when John Gunton returned from a world trip taken on the proceeds of the sale of his previous (and similar) business, Ceitex. The new owners of Ceitex had ignored the basic rule of niche manufacturing and failed to keep Gunton involved, subsequently the firm folded when he left.

Today Dynalite operates from premises in Marrickville, where they manufacture a range that revolves around lighting control. "I'll never build memory consoles, Jands have got that by the balls", John Gunton says.

Contact Dynalite on (02) 564-1551.

Dynalite founder John Gunton (right). Dynalite Project 12 dimmers on site at the ANA.



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Channels

NATIONAL STUDIO GUIDE - WHO & WHERE

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ARTIST:..... PRODUCER:.....

ENGINEERS:..... NOTES:.....

ARTIST:..... PRODUCER:.....

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ENGINEERS:..... NOTES:.....

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ASK FOR NEIL SMITH, NEIL OHLBACK OR JEFF DUNN

Mark Moffatt

Truly a quiet achiever, Mark talks about recording and imported talent

By Julius Grafton.

Mark Moffatt has been producing albums for over ten years now, his most recent success is the Tribal Voice album for Yothu Yindi, which was recorded on a shoestring budget. It can be frustrating having a major success born from a compromise, Mark admits, but he is still happy with the album and enjoyed working with the band.

"The band insisted I spend sometime with them learning about religious and cultural aspects of their lives", he explains, adding that as far as he is concerned, a producer needs to spend time with an act before making an album. "I see a band a lot before I go into the studio, and even get a lot of ideas just playing along with them like another member". To this end Mark is an accomplished guitarist, but insists you don't need to be a musician to be a producer.

On the subject of producers: "I admire Arthur Baker, who did some tracks for Kate Cebrano. He's a New Yorker who looks like a bigbikie character. Then there's Bill Laswell who's just been here doing some stuff with Judge Mercy, he works with a lot of American funk bands, and that can be a tall order. Robert Racic comes from a DJ background, and then Mark Ovenden is a keyboard player who really understands technology".

A major issue facing the recording industry here is imported talent, notwithstanding the fact Mark really admires some foreign producers. "Basically since the mid 1980's there has been little regeneration of producers here. There has been Mark Opitz, Charlie Fisher, Ross Fraser and myself. The record companies were not giving anyone else a chance. Then there was a shortage so they started bringing in Americans in great numbers, there is nothing to stop this."

Aside from a lot of top projects going to overseas producers, Mark mostly is concerned with producers royalties for Australian albums going overseas, and at up to 4% of gross sales this can be a lot of money. A top American producer will ask for between \$30,000 and \$50,000 for a project as well, which will often result in

a budget that cannot return royalties to the act.

"A couple of years ago record companies thought that if you didn't spend \$150,000 recording an album, something was wrong with it! Nowadays there is a complete rethink on this, because artists have been conditioned to believe they won't make anything from artist royalties."

"Well, you can do a lot in a Midi suite that isn't costing \$1500 a day like a major studio. Yothu Yindi's album cost \$60 - \$70,000 to record, which is a lower to middle budget for a mainstream company."



In fact Mark did much of Yothu Yindi's recording in his project studio, 'The Vault' located in a Sydney harbourside suburb. The Vault has a 2" 24 track machine and all of Mark's equipment built into a compact and cosy area that has a small voice studio attached. The facility allows Mark to do overdubs, so a project can be recorded in a major studio, then polished up and finished in The Vault.

"I think the 2" analogue 24 track is the standard still, the digital explosion hasn't happened

to any great degree. 2" is still the transportable format I can take from studio to studio". In fact Mark takes his entire 24 track machine out of The Vault sometimes, not for fresh air, but somewhere else, to record on. "I've been recording Ana Christensen at Damien Gerrards, Sony Music paid to make a loom for the 24 track so I just put it into a station wagon and go up there". Damien Gerrard at present have a 16 track recorder installed.

Typically a recording session starts with a lot of attention being spent on the drum sound, and this can entail hiring in a good kit. "I can spend a lot of time getting a road kit to sound right. How it sounds through a PA and in the studio is totally different, you don't have that live factor of space and power. Usually you spend your time trying to get the drums sounding as tough in the studio as they do live. Usually 'The Edge' appears live from any sort of kit, in the studio I

Continued on Page 41

Studio NEWS

CHANNELS ISSUE 17

Icons & I Ching.

Cover Story continues.

high technology. A Mellotron and a Moog Synthesizer were evident when we sat in. "Everything's natural and organic, live, powerful and emotional", said Rickster.

"We just get everything setup, get killer sounds for everybody, get incense and candles burning - and cut it! We get in at midday, have lunch, start working up a song, then cut it. Jim will add background parts - it's all live, no click tracks. 'Sweat it out' is the theme!"

22 songs were cut in 12 days before overdubs began, so clearly this project had some real pre-production. I wonder out loud at the duration of time taken to get the drum sound happening, "about half an hour", says Rickster! "If it takes too long the drums aren't right. We replaced the kick drum with a DW. It's the best sounding kick there is, I use it on every record. If it takes too long the drums aren't tuned right - or it's the wrong drum."

"I use a tube mic (U67) and Sennheiser 421 on kick, stereo room - made up of five mics - an SM 57 snare, 421 on hi-hat, stereo toms (with Sennheiser 421's) stereo overheads (414's) plus a ride mic. That's 10 tracks of tape." The toms are double miced top and bottom and Y-cabled together out of phase." This is to get both sides of the head, and the true resonant pitch, says Rickster. "I don't have to use gates, I don't like gating drums. I don't have to do that with the Y cables, because all the interference is good interference!"

But enough of this. Drums are drums, right? Back to the room decorations: "I take all the cartoon characters, and candles and shit all over the place wherever I go, in a roadcase. Jim brought the moose and the dog from home." The dog is the worlds largest stuffed dog, and it snarls at me when I look up at it.

"The painted walls are no problem", adds Mark Thomas, "we did it the second day. We'll leave it up for the next act, if they don't like it we'll repaint. Most of it's on paper anyway! I don't mind turning the vocal room into a beach. Tupperware- anything you like. One band bought their bedrooms down here to make it like home for two weeks." If this is work, why don't I become a recording engineer, I ponder? Then there is food. Lunchtime is seriously underway, and Jimmy Barnes brings food from the farm each day. "Food and Family," according to Rickster, "that's what Jim is into. Cakes, food"

The 32 track Mitsubishi Digital at Festival is fed by the main console, and for these sessions a Soundcraft Spirit Live 16 channel mixer was bought in and used for sub mixing. Mark Thomas rules the roost. As house engineer he knows the place inside out. "I started in the factory actually, just by knocking on the door and taking any job on offer. I used to work from 7 - 3 downstairs, then hang around here observing it all. You learn more this way. I spent 4 months in the metal factory downstairs, then graduated to the cassette dubbing room!"

"I did a lot of band demo's and band developments in downtime in studios back home, and ended up getting some of the bands deals, they evolved, I worked with Ziggy Marley, then met Don (producer, Gehman). I started off mixing live. I'd love to go out and do a tour

► It's the ProPhile, from **Australian Monitor** - a studio version of the K7. This outputs 350w at 4Ω, and was just shown at the AES, where it is reported to have run as near to silent fans as possible. Designer Stuart McLean resisted producing a studio amplifier for some time, perhaps the K7 and 1K2 gave him the base he needed. Gold connectors are an option for the ProPhile. Funny name, that. *Details- Australian Monitor, (02) 816-3544.*

► **Apogee Electronics** have just received a TEC award for their AD-500 analog to digital converter! TEC awards are dispensed by MIX Magazine, and are highly coveted. The other TEC Award-ee's will doubtless fax the world media as we go to press. Apogee products have been the object of several features in these pages in the past. *More details from Shane Morris, (02) 953-0020.*

► **ADAT NEWS**- Firstly the big news broke at AES that **Postex** have been licensed to use the ADAT system, and they will release a compatible machine real soon now. Sooner than you think, methinks. Then there is the impending visit of an **Alesis** heavy, Mark Frederick, who will conduct clinics here with the ADAT and the BRC - Big Remote Control. Thus the 8 channel digital recorder that uses S-VHS video tape and can be linked together to make more tracks can be demonstrated properly. Alesis say you can link ADAT machines until you have 100+ tracks, the inside word is that 32 tracks work quite well. Go and see for yourself. The clinics are on November 9 and 10 in Melbourne, and November 11 and 12 in Sydney. *To get invited, give the Electric Factory in Melbourne a call on (03) 480-5988, or ask your Alesis Dealer.*

now. Don mixes live, he's done Mellencamp, Live Aid I think it's better to have a live background."

The duo has been to Australia quite a bit of late, working with all sorts of acts. "In Sydney we work here, in Melbourne at Platinum" says Rickster, "and this is the best sounding room anywhere". Festival was re-designed a year ago, "we knocked the walls down and started again", according to Mark Thomas. "It's great working here with Mark, he's happening!" says Rickster.

Our interview timeslot has passed with the arrival of Jimmy Barnes and producer Don Gehman. Rickster and Don embrace fondly,



Don has been surfing all morning at Bondi. A harp player has arrived for some overdubs. Down to business, so I leave.

Now it's all over in Sydney, the mix down is underway in LA as you read this. No doubt Elumbia studio is decorated in like manner!
- Julius Grafton.

(Gehman, not Goeman. Our cover is produced earlier due to colour, the gremlin renamed Don at the start of the story. Cheeky bloody thing!)

Rickster Will and Mark Thomas at Festival

► Toivo Pilt is representing **Behringer**, and he is making a lot of noise about their De-Noiser. (Who writes this?) Toivo says these are very good devices for cleaning up noise, and that acoustic masking is the go. He saw them in Munich, EMI in Sydney has one. They start at under \$1000, Turramurra Music are dealers, and Channel's columnists and resident studio testers The Blind Duo have one to write about soon. Call Toivo- (02) 316-9935.

► **LA Audio** has developed a new system, called DGP, for retrofitting gating, compression and filters to audio consoles. It is a modular, card based design and a 3U mother unit can incorporate up to 18 processor cards offering a total of 96 channels of gating, compression & filters. The VCA's are mounted in blocks of 4 channels with hard bypass and are designed to be incorporated into the consoles that the DGP system is to be fitted to. These are then linked by means of IDC

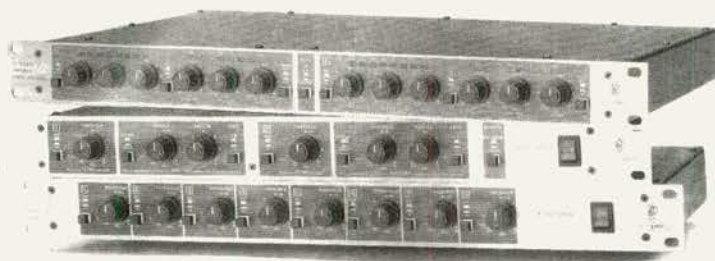
cable to the external processor rack. Control is provided by a small remote control box on a thin serial cable and features an LCD display and rotary encoders for ease of use. Finally, a meter unit is available for full visual indication of compression etc in a 1U high shallow box, again connected by means of a thin serial cable.

DGP is totally modular and the user will be able to select any number of combinations. Budgetary price indication is as follows:

1. -a basic 16 channel noise gate system at approximately \$4900
2. -or 32 noise gates, 16 filters and 16 compressors at approximately \$11,692
3. -to a full 96 channel gating, compression and filter system at approximately \$39,000

The DGP system is due for release at the AES exhibition at San Francisco in October and should be available in Australia shortly after that.

Call Southbank Trading- (03) 699 7809.



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BLIND LEMON PIE REPORT

Yamaha YPDR put through its paces. Will the CD recorder replace the microwave oven?

**Studio
NEWS**
ISSUE 17

Twelve months ago there was a flurry of excitement in 'Studio Land' regarding the advent of Compact Disc Recorders. For the first time studios would be able to produce in house C.D.'s capable of being played on standard C.D. players. Brilliant! So after all the hype has died down, why aren't more people taking advantage of this technological breakthrough?

Last November, thanks to a joint venture with Turramurra Music Centre, we did take advantage of this technology, using Yamaha's contender in the C.D. recorder market, namely the YPDR-601 Professional Disc Recorder. In this article we look at the specifics of the Yamaha systems and touch on the principals it employs.

BASIC BITS

A basic Yamaha system comprises a 3 r.u. Laser recorder, a 50 pin S.C.S.I. cable and the RC-601 tabletop remote controller. We use the term basic system due to the fact that it is possible to run up to 7 recorders "in-syn" from the one remote controller.

The laser recorder itself has no transport controls and indeed the only features present on the front panel are a disc drawer and 4 status lamps. These lamps indicate single-bit errors, record function, the presence of a disc and the all inspiring error condition. Fitted to the base of the chassis is a sliding lever which engages a transport locking system thus protecting the highly delicate laser-diode mechanism from damage in transit.

The real fun of connection begins at the back panel, with Mr. Yamaha generously providing more interface options than we've seen on any other C.D. recorder. Both inputs and outputs are accessible via digital AES/EBU and balanced analogue (settable +4dB or -9dB) using XLR sockets. You may also input S-DIF-II format digital signal using B.N.C. connections. Two further B.N.C. connections allow faithful data transfer by synchronising word clocks between recorder and source machine. Present also on the back panel are a drive I.D. select for designating which location the unit will take in a chain of recorders, power switch, cooling fan and a 15 pin and a 9 pin D connector for the input and output of transport control messages to and from external devices. Brilliant! (There's that word again. -Ed)

This brings us to the mandatory RC-601 remote controller. Physically the remote is no larger than your average drum machine and to look at resembles something of a cross between the control sections of a tape deck and a C.D. player. On its back panel is a 5-in S.C.S.I. port for connecting the laser recorder, a pair of input selection switches, adjustable headphone output and a pair of switches to select how and when a disc will format its Table Of Contents (T.O.C.). Also available is a 'dip' switch selection of emphasis, meter peak hold, copy guard and external word sync.

Status of the aforementioned 'dip' switches is shown on the top panel alongside the TRACK and INDEX numbers, the minutes and seconds display and alarm indicator. The clock can actually be viewed in a number of ways; as absolute time from the beginning of the disc; as programme time from the start of the current track; as time remaining on the disc; or as TOC indication which will show how far after the start of the disc the new track will begin. This display is also capable of disc condition updates and error diagnostics.

Of the push buttons on the RC-601, 10 are immedi-

ately recognisable controls such as PLAY, REC, PAUSE, STOP, TRACK SEARCH, INDEX SEARCH, and PROGRAM SEARCH. There is a STAND-BY button for entering RECORD READY mode and in conjunction with the REHEARSAL button you can check the beginning of tracks without committing them to disc. Other control options are REC MUTE, INCREMENT buttons for advancing track or index numbers, and a MONITOR SELECT button.

TOC, PRE AND POST

Before we proceed, two important points must come to light! 1. You cannot erase anything once it is on a disc, this is called a 'write once' medium. 2. In order to play a recorded disc on a standard CD player, it must contain a 'Table Of Contents'. The T.O.C. is a set of data recorded at the beginning of each track, as well as at the start - and end - of a disc.

There are two methods of recording a 'TOC' on the Yamaha system, both are different, and will ultimately affect both recording technique and playback. These methods are as follows:-

POST TOC - In order to produce a disc which compares to a commercial C.D., you must record all the audio programmes prior to the TOC process. Once all the programme material is on disc, (up to 74 minutes), including desired program gaps and track/index numbers, a table of contents may be recorded. In this mode the recorder can assign each track its own unique length and consecutive track number. Now it's just like a bought one. Brilliant!

PRE TOC - In its simplest form, this is recording the table of contents onto a disc before any audio programme is present. The key point to this is that you can record audio program onto a disc, play it on a standard C.D. player, and still record more at a later date. Unfortunately, pre-TOC'ing the disc limits the record time to either 16 minutes & 30 seconds, or 49.5 minutes - as it pre-labels the disc to a maximum of 99 x 10 second tracks OR 99 x 30 second tracks. So if you record a song in the 30 second track mode that is, say, 4 minutes 25 seconds long as track number 1, the next song will actually be read as track number 10 according to the TOC. In either PRE TOC or POST TOC mode a disc is able to carry up to 99 tracks with 99 index points in each track.

THE CRUNCH PART

So here's that question again, "Why aren't more people taking advantage of this technology?" You may also ask; "Why isn't Joes Garage Band popping their demo's onto C.D. rather than clutching a handful of tape?" Well, it could have something to do with the fact that a blank CD-R costs nearly \$70 -! NOT brilliant! By the time you add this on to the rental/purchase value of the recorder (fair enough), and studio time to compile and record your material (fair enough), it's hard to keep costs as low as Joes Garage Band would like.

It must be said that all parties involved need to be absolutely sure of what they commit to disc, as there is no going back once the record light is on. This includes the integrity of any digital source data as in our experience interruptions or spikes in items such as DAT tape have been seen, at great expense, to arrest and void CD-R recordings. This leads to the advent of a striking and costly drink coaster collection!

Now before anybody bleats on about how they knew



it was too good to be true, CD-R is a very accessible and permanent way to preserve master recordings for future duplication. Current overall costs of making a CD-R are warranted in many cases such as backing tracks, recorded messages and archiving, however we feel widespread acceptance of end product will only follow a realisation of reduced costs. If this were to happen, things would be really "brill"!

Now having passed the time discussing the Yamaha system, and the pro's'n'con's of CD-R's, here's a short, basic explanation of how the discs work. A blank, or unrecorded CD-R comprises a reflective gold disc (is it really gold?) covered in a very clever organic dye. This is sandwiched within the 'plastic' which contains a continuous spiral groove which in turn carries a time code of sorts from the recorder to the track. Before recording, no reflection is possible from the playback laser to the photo diode which reads the disc, as the gold is totally obscured. In order to obtain a reflection from the gold disc at the correct times the organic dye is so designed that it will allow permanent holes to be "burned" through its substance. Here's the trick ... when recording, the laser in a CD recorder raises its power to a point much stronger than the laser in a playback system. Consequently the necessary holes are etched into the dye at the correct distance along the spiral groove. Our personal viewpoint on this brilliant!

As weird as it sounds there is a sense of true audio achievement in bringing a recording to a 'state of the art' medium. The Yamaha YPDR-601 system is definitely 'state of the art'. It's well built and it works. OK, so it probably won't replace microwave ovens, although it's certainly safer and just as easy to use.

COMING IN THE NEXT ISSUE, we will look at the Behringer range of noise reduction systems. On preliminary looks we should have lots to write about!

-By **Dave Macken & Bruce Wait**, "Blind Lemon Pie". The 'Brilliant' duo are a production team who handle song development & production, and obviously, burn C.D.'s for people on their YPDR. Their number: (02) 457-8304.

YPDR information from Turramurra Music, (02) 449-8487, or Yamaha Pro Digital 008 803-049.

NATIONAL STUDIO GUIDE - WHO AND WHERE

ARTIST	PRODUCER	ENGINEER/S	NOTES & DETAILS
New South Wales			
Art Rage Recording	Contact Peter Williamson & Ian Chambers	(02) 564-2509	24 Track
93-D	Ray Vanderby	Ian Chambers	Demo's
George Yang	Sam McNally/Chambers	Ian Chambers	Album
Ted Yanni	Ted Yanni	Ian Chambers	Album Tracks
John Carr	John Carr	Ian Chambers	Album Tracks
Sweet Lip	Sweet Lip	Ian Chambers	Album Tracks
Bush Traks Recording	Contact Ruth Miller	(066) 89-1290	24 Track
13th Floor	Dave Highet	Dave Highet	Demo's
Great Divide	Geoff Dutton/Hank Vann	Dave Highet	Album
Yossi Suprpto	Dave Highet	Dave Highet	Album
Elizabeth Lord	Elizabeth Lord	Dave Highet	Album
Charing Cross Studios	Contact Gordon Hervey	(02) 387-8362	16,24 Track
Tim Leary	Electric Hippies	Martin White/Julian Slade	Album
Monroe's Fur	David Boyne	David Boyne	Album
Mataquali Music	JJ	Gordon Hervey	Album
Judge Mercy	Andy Cichon	Tim Powells/Gordon Hervey	B Sides & Demo's
Juice	Juice/Gordon Hervey	Gordon Hervey	EP
Cindy Ryan	Tom Colley	Ju lian Slade	Demo's
Damien Gerard Studios	Contact Elia Bell	(02) 660-8776	16 Track
Ana Christensen	Mark Moffatt	Ted Howard	Album
Amunda	Jim Milbun	Russell Pilling	EP
Died Pretty	Died Pretty	Mike Wood	Demo's
Gank	Cameron Giles	Russell Pilling	EP
Enrec Studios	Contact Ed Matzenik	(049) 36-1376	32 Track
Norma O'Hara Murphy	O'Hara Murphy/Steve Newton	Steve Newton	Album
Hullabaloo Music	Contact Glenn Heaton	(02) 684-2039	24 Track
Lost Time	Lost Time	Glenn Heaton/Blair Murphy	Demo's
Strum Jungle	Heaton/McGarvey	Glenn Heaton	Album Cuts
Various Artists	Heaton/McGarvey	Glenn Heaton	Disney Holiday Tracks
Main Street Studios	Contact Rob Specogna	(042) 83-4515	16 Track
Warwick Marsh	Warwick Marsh	Rob Specogna	Album
Eezee	Eezee/Specogna	Rob Specogna	Mini Cass. Album
Finn/Castle Mill	Rob McGregor/Specogna	Rob Specogna	Album
95 Nasty	95 Nasty	Rob Specogna	Mini Cass. Album
Megaphon Studios	Contact Shane Fahey	(02) 516-3917	24 Track
Midnight Oil	Nick Launay	Brent Clark	Album
Spy Vs Spy	Les Karsky	Guy Dickerson	Album
Paradise Studios	Contact Bill Field	(02) 357-1599	48 Track
Deborah Conway	Martin Armiger	Michael Stavro	Tracks
Trout Fishing In Quebec	Darren Atkinson	Mark Roberts	Tracks
The Silence	Rob Rolands	Rob Rolands	Tracks
Daisy Chains	Rob Rolands	Rob Rolands	Tracks
Ian McNamara	Ian McNamara	Glen Phimister	Tracks
Dig	Mat Hayward	Jim Bonnefond	Album
R & R Recordings	Contact Robert Zimola	(02) 624-4484	16 Track
Bottom Line	Not Advised	Paul Crooks	Demo
Dead Tree	Dead Tree	David Key	Pre Production
Tribe Maelstrom	Paul Crooks	Darren Jenkins	Demo
25th Hour	Robert Zimola	Jenny Hadley	Demo
Rich Music Studios	Contact Elise Huntley	(02) 264-7734	24,32 Track
Welcome Mat	Paul Kolderie/Sean Slade (U.S.)	Assist.Jason Blackwell	Mixing Album
You Am I	David Price	Not Advised	Mixing
Radio Freedom	Linsay Jehan	Scott Christie	Album Pre Production
TCN 9 Rugby 92'	Not Advised	Scott Christie & Peter Lees	Jingle
Julie Kemp	Lindsay Jehan	Scott Christie	Single

YOUR MUSIC IS SAFE WITH US



BASF

NATIONAL STUDIO GUIDE - WHO AND WHERE

ARTIST	PRODUCER	ENGINEER/S	NOTES & DETAILS
Radio Freedom	Lindsay Jehan	Scott Christie	Album
Avenue "K"	Lindsay Jehan	Scott Christie	Single
Zillion & The Zig Zag Men	Not Advised	Peter Lees	Re-Mix
Rhinoceros Recordings	Contact Robyn Cole	(02) 211-5833	24,32 Track
The Cure	The Cure	Martin White	Single
Phil Emmanuel	Emmanuel/Ted de Head	Melissa van Twest/David Lumsdaine	Album
Jenny Morris	Mark Forrester	Julie Gardner	Single
Club Hoy	Daniel Denholm	David Lumsdaine	Mixing
Skyhigh Recording Studios	Contact Rob Taylor	(049) 50-1574	8,16,24 Track
DefFX	Rob Taylor/Sear Lowry	Rob Taylor	2 by 12" Re-mixes
Golden Section	Rob Taylor	Rob Taylor	EP
Rag Monster	David Henderson	David Henderson	EP
Wirra Willa Studios	Contact Will Rout	(02) 605-1203	8,16,22 Track
Thats Right	Thats Right	Leigh Randall	2 Song Demo
Minoo Chouh	Minoo Chouh	Noel Brading	2 Song Demo
The Essence	Steve Robinson	Noel Brading	2 Song Demo
The Agents of Crunt	Steve Robinson	Noel Brading	2 Song Demo
Malcolm Baxter	Malcolm Baxter	Will Rout	Album
Queensland			
Grevillea Recording Studio	Contact Malcolm Jacobsen	(07) 262-8422	24 Track
Frank Millward	Frank Millward	Dave Richards	Jingle
Timetrax Musis by Garry McDonald	& Laurie Stone	Lorimar Telepictures	Bruce Jacobsen U.S. TV Series
Rob Brock	Nick Coetzee	Malcolm Jacobsen & Murray Laylor	Album
Studio is		(077) 74-5439	16 Track
Bingcolman Community School	Lynda Ashton	Allen Castleton	Album
Greg Williams	Williams/Castleton	Allen Castleton	Album Tracks
Wayne Place	Place/Castleton	Allen Castleton	Songwriter Demo's
Victoria			
DEX Studios	Contact Dieter Bajzek	(03) 329-2877	16,24 Track
Solstice	Solstice	John Ruberto	Album
Alex Burns & Nick Charles	Burns & Charles	Daniel Desiere	Album
Leon de Long	de Long	John Ruberto	Album
Andy Rigby	Rigby	Daniel Desiere	Album
Gotham Audio	Contact Kerri Minchin	(03) 696-2111	48 Track
Lisa Edwards	Ross Fraser	Doug Brady & Spiro	Album
Shane Howard	Ross Cockle	Ross Cockle & Spiro	Album
Metropolis Audio	Contact Kerri Minchin	(03) 696-2111	48 Track
Round The Twist	Andrew Duffield	Mathew Thomas	TV Series
Romper Stomper	John Clifford White	Doug Brady	Film Soundtrack
Channel 10 Theme	Keith Moore	Rodney Lowe	TV Station Theme
Bad Loves	Doug Roberts & Band	Doug Roberts & Greg O'Shae	Album
Things of Stone and Wood	James Black	Doug Roberts & Greg O'Shae	Album Mix
Tommy Emmanuel	Tommy Emmanuel	Cameron Craig	Demc's
Mike Rudd	Mike Rudd & Doug Brady	Doug Brady	Album
VFL Grand Final	Ern Rose/Hayes/Sjoquist	Rodney Lowe & Ross Cockle	Live TV
Platinum Australia P/L	Contact Gary Moorhead	(03)827-7483	48 Track
Rocky Horror Show	Garth Porter	Chris Corr	Cast Album
Donald Cant	David Cameron	Chris Corr	Album
Margot Smith	Eddie Raynor	Chris Corr	Album
The Catalinas	Catalinnas & Tony Escie	Tony Espie	EP
The Reels	Filthy Lucre	Simon Polinski	12" Mixes
Earthmen	Earthmen & Laurance Maddy	Laurance Maddy	EP
Sing Sing	Contact Mark Wood	(03) 428-4622	24,48 Track
Andrew Sefton	Kaj Dahlstrom	Kaj Dahlstrom	Single
Friends of Carlotta	Not Advised	Trevor Reading	Single

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NATIONAL STUDIO GUIDE - WHO AND WHERE

ARTIST	PRODUCER	ENGINEER/S	NOTES & DETAILS
Victoria (Continued)			
Tony Hicks & Shane O'Meara	Not Advised	Phil Butson	Album
John Duval	Not Advised	Kaj Dahlstrom	Album
Studio 52	Contact Paul Higgins	(03) 417-7707	24 Track
Waterfront	Paul Higgins	Paul Higgins	Nu-Music Series 5
Legal Aliens	Trevor Carter	Trevor Carter	Album
Bloodstone	Zoran & Band	Trevor Carter	Album
Call of the Wild	Trevor Carter & Band	Trevor Carter	Nu-Music Hard Rock/Metal Comp.CD
Golden City Jazz Band	Herb Jennings	Paul Higgins	1985 RE-Mix for CD Release
Studio RB-X	Contact Ross Burton	(03) 429-6199	16,24,32 Track
Broderick Smith	Ross Burton	Martin Pullan	Album
Let the Blood Run Free	Media Arts	Grant Vogler & Martin Pullan	TV Series
Lisa Miller	Gordon Blake	Gordon Blake	Demo's
Keith Glass	Keith Glass	Gordon Blake	Demo's
Bruce Ruxton	Tony Manse	Mark McDougall	Rap Track
Urban Beat	David Lord	Stewart Day	Dance Track

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EXTRA-CK

By Caroline Grafton

Once again thanks for your participation in our National Tracking Guide. It's been a bit of logistical nightmare sending faxes, receiving faxes and generally hoping that the only reason for a studio not appearing in the guide is that they haven't bothered to respond. If you have not been contacted, sorry!!!! but please could you give us a buzz, we might not even know you exist. To make things a little easier we've invented a new form for you to complete, ON PAGE 32. Now tear or cut it neatly from the magazine, (or just photocopy it) fill out the spaces with the required information and fax or mail it back to me, please!!! Remember it's free advertising for your studios. If there's not enough room fill out a second or third sheet in roughly the same format and send that as well. Ta.

The usual BIG THANKYOU to BASF for sponsoring the National Studio Guide.

Anyway I'll shut up and get on with EXTRA-CK.

Planet Sound Studios in W.A. have always had a reasonably large Japanese clientele base recording 19 Japanese albums to date. Well one of the artists was so impressed he bought the studio, truly. John Vallani is still the studio manager, the in house techs are still there, but the new investor has provided funds for improvements, \$600K approx. on inboard and outboard equipment and \$60K approx. on decor in both the A and B studios and reception areas. You can take your pick of 48 Track Digital, 32 Track Digital or 24 Track Analog. Give John a ring on (09) 382-2211.

Bush Traks Recording Studio in Nimbin-Northern NSW is celebrating its 10th birthday having

grown from an 8 to a 24 track studio working with some of the North Coasts most celebrated musicians. Co-owner Dave Highet is this years North Coast Engineer of the Year. Congratulations on both events Dave and Ruth Miller (066) 89-1290.

Damien Gerards latest acquisition is a Soundcraft 2400 Series 32/24 split console and after a few structural renovations it is now resting comfortably in Studio B. Their 2 by Postex 16 Tracks can now be synchronised to produce a total of 30 tracks, (2 tracks being lost in the coding) in either studio. Mark Moffatts 24 Track is also currently residing at DC's while he's working with Ana Christiansen. Call (02) 660-8776.

Skyhigh Studios, Rob Taylor would like the world to know that "Peter Strohkorb is the best tech in the universe" (unquote). If anyone would like to debate this call (049) 50-1574.

Enrec Studios are currently recording their first major label (Festival) project since their big move in August this year, from Tamworth to Kurri Kurri (near Newcastle). Enrec tell me they were responsible for 77 chart records including 13 at No.1. Not bad, guys!

Charing Cross Studios in the never ending pursuit to please their clients have purchased some valve equipment old and not so old including EQ's, Compressors and Mic's. Oh, when everything old is new again. (02) 387-8362.

Troppo Sound in Broome W.A. now have a fully operational Soundcraft/Postex 24 track studio with Digital Mastering (091) 92-2394.

Triple D Studios officially opened the doors to their new dual studio's, with 24 track digital facilities on 12th October. Mark Carolan tells me the party is yet to come. All the best for the future

guys (02) 212-3101.

Wirra Willa Studios have a new studio using Tascam M3700 32 channel board. Also new a Video/Audio Synch studio with 8 track Tascam SMPTE triggered reel to reel, CD, Cart., and Midi System. Call (02) 605-1203.

Grevillea Recording Studio Q'land had an interesting 2 days on location recording the "Vox" vocal group at the beautiful St. John's Cathedral in Brisbane. Pretty diversified guys. (07) 262-8422.

Megaphon Studios in Sydney have upgraded some gear with a Raindirk Console and LN1 Symphony in Line. This studio is the talk of the town, having attracted Midnight Oil for their latest tracking sessions. Are the top studio's sweating this? Also upgraded for their growing client base is a new control room with an area to 45 sq.mtrs. with diffused and natural lighting and city views. (02) 516-3917.

Studio 52 recently had the privilege of working with Steve Smith (the King of the Hammond Organ) while doing a session for Waterfront. They still managed to pull that classic sound by using their inhouse B3 with Lesley speakers. So if you need that sound just use Studio 52 facilities and of course Steve Smith. (03) 417-7707.

Under New Management (see the story page 41) is a company formed by Mark Moffatt which has pooled the resources of some of our countries finest Producers and Engineers. If you want a particular sound or feel one of these guys will be able to help you, Call Susan Whitted on (02) 953-0332.

Be In EXTRA-CK! CALL Caroline- (02) 876-2612, or FAX (02) 876-5715.

UNDER NEW MANAGEMENT

The Engineer & Producer booking firm in Sydney asked - are imports valid?

Under New Management looks after Australia's top Engineers and Producers, with a roll call of talent that can handle almost any project. The company is owned by Gary Rabin and Mark Moffatt, with Susan Wittred running the operation. Susan is a New Yorker, who has a good perspective on the industry here.

"Australian Producers and Engineers shouldn't be dismissed too quickly", she says. Gary Rabin takes it further: "I don't have a problem with overseas producers coming into the country, we can learn from the good ones. The problem arises when they're not too good."

"There are a number of Producers who either haven't had any success for a long time or who have never had any success, and treat Australia as a paid holiday - they take the money and run having raped and pillaged record company funds and artists careers".

"Against that, nobody here fails to deliver - they can't because they have to live here and their livelihood is dependant on their current work - if there is one criteria, it is that our people do what they are great at. We never have to apologise for the people we represent."

"Some people seem to think an American Producer can come and sprinkle fairy dust and magically produce hit records - they can't. The record companies are pretty realistic. For example, Peter Karpin at Sony is great. He might use American producers, but he also recognises the talents of the people we have here and uses them accordingly."

Under New Management say they have a role not just booking people, but also helping to develop careers too. Susan says it's important to place the right people with the right artists, and that the chart success achieved by their people is testimony to that. This year talent handled by Under New Management has gener-

ated four #1 singles, ten top 10 singles, six top 10 albums and a USA #6 - in all, well over 20 successful records including alternative and dance chart actin.

The hardest thing is to break Engineers into producing, but record companies are beginning to look beyond the CV and recognise talent, so a few are making the break.

Gary Rabin manages acts like Ross Wilson, and The Poor Boys, so he's no stranger to the machinations of the industry. "I think success overseas is usually with indigenous product, and that it can falter when an Australian act recording deviates from what they do best", he says, perhaps inferring travelling offshore to record isn't always the answer.

"I'm proud of the industry here, rock and roll is the only area of the arts that has grown with no government assistance. It is a level playing field, a Ross Wilson album sells for the same money as a Prince or Madonna album. The Australian rock and roll industry is a good economic model, one that is incentive based. An act works, gets charting, everyone is motivated, the benefits flow through".

Call Under New Management on (02) 953-0332.



Gary Rabin and Susan Wittred

**Studio
NEWS**
ISSUE 17

*Moffatt.
from page 34.*

get a lot of different snare drums in anyway."

"The snare dictates the feel, or the attitude, of the song, the intent - whether it is a gentle or a hard feel. Whatever the snare is, a piccolo, 5" or 8" - what's throwing out into the room mic's dictates the vibe. I switch snares between takes, vary tuning and types."

"While you are tracking you're there mainly to just get the drums right. You might use three or four different area's, one for guide vocals, for example. Getting a big guitar sound is, to me, defying the law of physics, however it's really easy if you have a (mic) capsule that's going to take that sort of sound pressure".

Faced with a standard drum mic-up, Mark suggests an SM-57 on snare, without a bottom mic. On toms it is the Sennheiser MD 421, with a valve Neuman U67 on the floor tom. Kick would get a 421 or Beyer M88, with a Neuman U47 on the beater skin, and another at the end of a carpet tunnel running about 300 - 500mm out from the front of the drum for isolation. Overheads would be any decent pair - be they AKG 451 or 414 or whatever.

"Going into various studios you get to know what works where". As to EQ at the tracking session, it depends on the console. Sometimes outboard gear is used, and certainly tom's are the most demanding channels for EQ, just like in live work.

"Big studios are becoming like assembly houses, and they need MIDI suites to take the pressure off the \$1500 a day facility upstairs". My overdub studio (The Vault) hasn't put the big studios offside, because I still go and track with them. After 5 or 10 days tracking, I'll bring a project back here for up to month".

"A problem in Australia is peoples availability, usually a band will be available for tracking, then work live, so overdubs are done when people are available. Economics dictate this.

At present Mark is using a Roland DM-80 hard disk tapeless 8 track, which he counts as his favourite item. "I mainly use it as a slave, mixing down 24 tracks onto it so I can make a fresh 24 track tape. I've got a synchroniser here to sync the 24 track with the DM-80. I also use it for doing vocals. It's a whole new thing, working without tape!"

Mark names various recording engineers he enjoys working with here in Australia, and a couple of live sound engineers, like John McConnell and Jim Blackfoot. "Talking to John McConnell, he's been working with a band I've recorded recently, and they've pared the whole thing down, weeded out the unnecessary parts of the arrangements as a result of their studio experience!"

The final word here has to be the process for miking a didgeridoo - or a Yidaki, as the performers call it. "They hose it down before they play it, so you need to watch out for moisture being sprayed through. Live they use a Sony Lavalier clipped in the opening. In the studio I use an EV RE20 right in the opening". So there you go!

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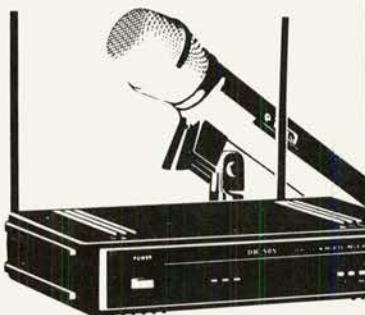
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**NEXT DEADLINE
NOVEMBER 30th**

The Decibel (Continued)

The decibel fundamentally relates to power ratios, and we can use voltage, current, and pressure ratios as they relate to power. Electrical power can be represented as:

$$P = E^2/Z$$

Because power is proportional to the square of the voltage, the effect of doubling the voltage is to quadruple the power:

$(2E)^2/Z = (4E^2)/Z$. As an example, let $E = 1$ volt and $Z = 1$ ohm. Then, $P = E^2/Z = 1$ watt. Now, let $E = 2$ volts; then $P = (2)^2/1 = 4$ watts.

The same hold true for current, and the following equations must be used to express power levels in dB using voltage and current ratios:

$$\text{dB level} = 10 \log \left(\frac{E_1}{E_0} \right)^2 = 20 \log \left(\frac{E_1}{E_0} \right), \text{ and}$$

$$\text{dB level} = 10 \log \left(\frac{I_1}{I_0} \right)^2 = 20 \log \left(\frac{I_1}{I_0} \right).$$

Sound pressure is analogous to voltage, and levels are given by the equation:

$$\text{dB level} = 20 \log \left(\frac{P_1}{P_0} \right).$$

The normal reference level for voltage, E_0 , is one volt. For sound pressure, the reference is extremely low. 20×10^{-6} newtons/m². This reference pressure corresponds roughly to the minimum audible pressure for persons with normal hearing.

We now present a table useful for determining levels in dB for ratios given in voltage, current, or sound pressure:

Voltage current or pressure ratios	Level in dB
1	0
1.25	2
1.60	4
2	6
2.5	8
3.15	10
4	12
5	14

6.3	16
8	18
10	20

This table may be used exactly the same way as the previous one. Remember, however, that the reference impedance, whether electrical or acoustical, must remain fixed when using these ratios to determine level differences in dB. A few examples are given:

1. Find the level difference in dB between 2 volts and 10 volts. Directly from the table we observe $20 - 6 = 14\text{dB}$.

2. Find the level difference between 1 volt and 100 volts. A 10 to 1 ratio corresponds to a level difference of 20dB. Since 1 to 100 represents two such ratios (1 to 10 and 10 to 100), the answer is $20 + 20 = 40\text{dB}$.

3. The voltage input to an amplifier is 1 volt, and the input impedance is 600 ohms. The output is also 1 volt, and the load impedance is 15 ohms. What is the gain of the amplifier in dB? Watch this one carefully! If we simply compare input and output voltages, we still get 0dB as our answer. The voltage gain is, in fact, unity, or one. Recalling that decibels refer primarily to power, we must take the differing input and output impedances into account and actually compute the input and output powers.

Input $P = E^2/Z = 1/600$ watt. Output $P = E^2/Z = 1/15$. Thus, $10 \log (600/15) = 10 \log 40 = 16\text{dB}$.

The level difference in dB can be converted back to a voltage, current, or pressure ratio by means of the following equation:

$$\text{Ratio} = 10^{\text{dB}/20}$$

SOUND PRESSURE AND LOUDNESS CONTOURS

We will see the term dB-SPL time and time again in professional sound work. It refers to sound pressure levels in dB above the reference of 20×10^{-6} newtons/m². We commonly use a sound level meter to measure SPL. Loudness and sound pressure obviously bear a relation to each other, but they are not the same thing.

Loudness is a subjective sensation which differs from the measured level in certain important aspects. To specify loudness in scientific terms, a different unit is used, the phon. Phons and decibels share the same numerical value only at 1000Hz. At other frequencies, the phon scale deviates more

or less from the sound level scale, depending on the particular frequency and the sound pressures. Figure 2-2 shows the relationship between phons and decibels, and illustrates the well known Robinson-Dadson equal loudness contours. These show that, in general, the ear becomes less sensitive to sound of low frequency as the level is reduced.

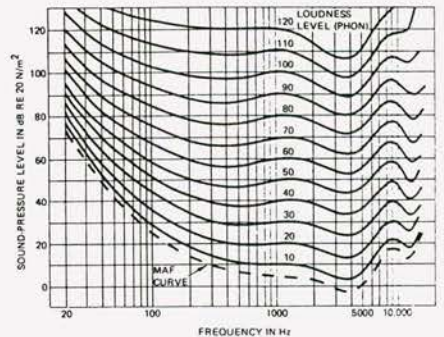
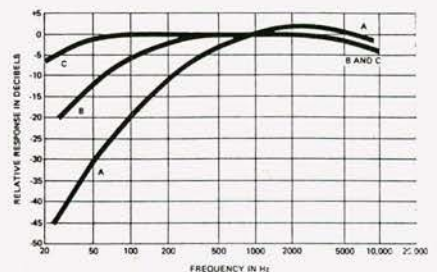


Figure 2-2. Free-Field Equal Loudness Contours

When measuring sound pressure levels, weighted response may be employed to more closely approximate the response of the ear. Working with sound systems, the most useful scales on the sound meter will be the A-weighting scale and the linear scale, shown below. Cheap sound level meters that can't provide linear response over the full range of human hearing, often have no linear scale, but offer C weighting scale instead. C weighting rolls off at frequency extremes. Precision sound meters offer A, B and C scales in addition to linear response. Measurements made with a sound level meter are normally identified by noting the weighting factor as dB(A) or dB(Lin).

EDITORS NOTE: This is an area of great contention. We have stopped quoting dB figures unless they are fully identified.



(Continues next issue)

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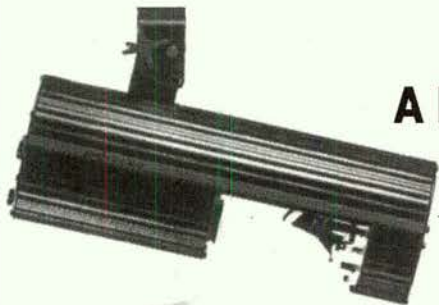
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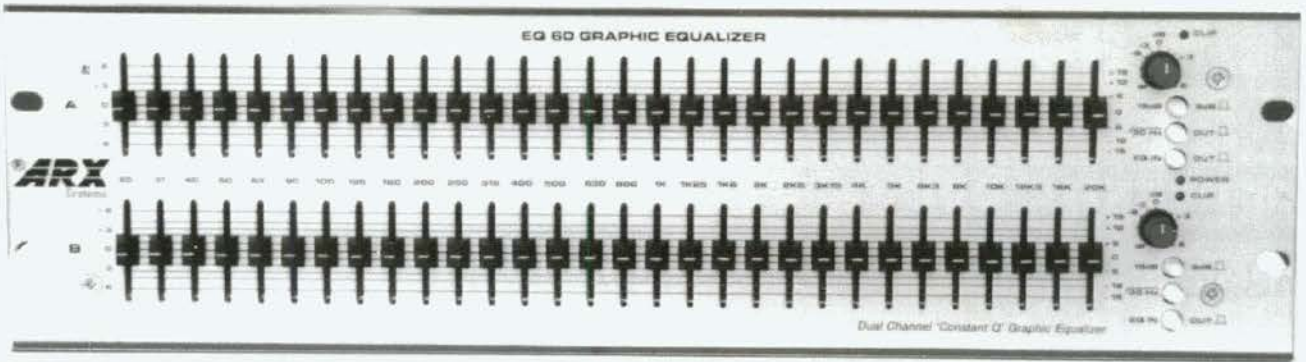
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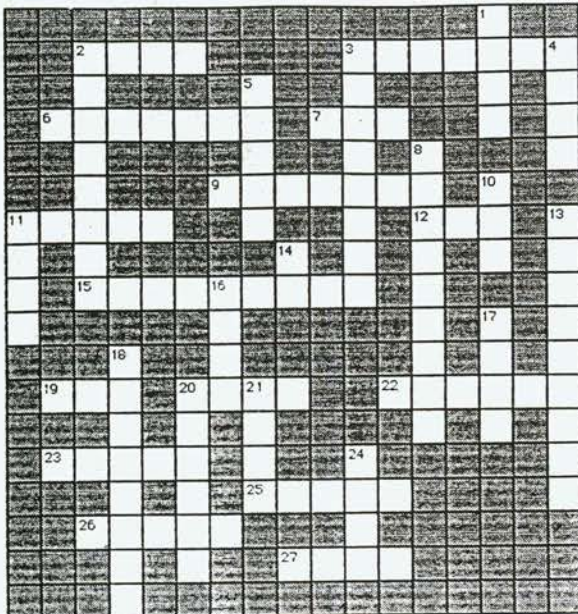


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Submitted by The Punter. Who is this turkey?



Across

- 2.pass me by.
- 3. Bacon comes from
- 6. Rocky....
- 7. Happiness is a warm....
- 9.man
- 11. pie
- 12.king
- 15. Yellow
- 19. I want
- 20. Cry cry
- 22. my dear
- 23. days a week
- 25. Sexy
- 26. Yer.....
- 27. Fixing a

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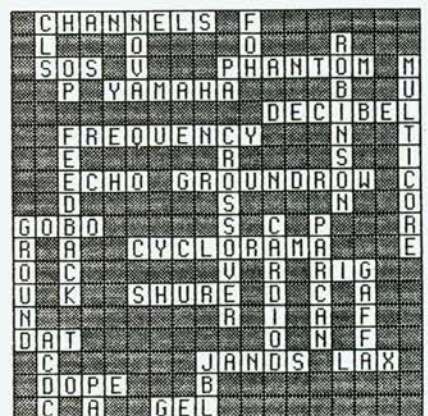
Entries must be received by November 30th, 1992.

Remember to place your name & address on the entry!

Down

- 1. For the benefit of Mr.....
- 2. Lucy had them in the sky
- 3. Dear....
- 4. And your bird can....
- 5. Glass....
- 8. Not today
- 10. The....
- 11. She's leaving.....
- 13. Act....
- 14. Ob-La-.....
- 16. There's one more thing girl
- 17. The meter maid
- 18. Bill's house
- 20. Getting....
- 21. Not girls
- 24. ...there was you.

LAST ISSUE ANSWERS (#16)



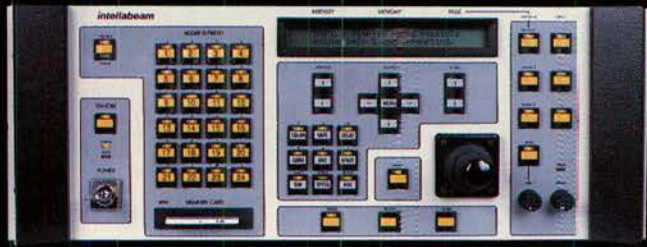
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Duncan Fry

JESUS CHRIST, NOT MORE SUPERSTAR!

Sometimes I wonder just what is behind the current success of recycled shows like Jesus Christ Superstar? I don't wonder too much, because I know what the simple answer is - Money. An awful lot of money. Let's face it, 80 odd shows, 10-15,000 seats per show at \$40+ per ticket adds up to quite a bit of loose change, doesn't it. It's certainly good for a few performers and promoters, but is it any good for the industry? I don't think so.

Firstly, I should point out that I haven't gone to see the show; I thought it was pretentious quasi-religious crap in the seventies, and now it's incredibly well produced pretentious crap in the nineties. But nearly a million people have been to see it, and the money they have spent has been at the expense of local bands and the local music industry in general.

Explain yourself, Dunk, I hear you say. OK, here we go. Let's assume I had gone to see the show and forked over my contribution to Harry M. Miller and Andrew Lloyd Webber's pension fund. \$41.60 in Melbourne, I don't know what it is elsewhere. Add to that the cost of getting there, parking the vehicle, a couple of drinks, maybe a souvenir program me or a T-shirt; we'd be looking at maybe \$60 or \$70.

For that price I could have gone to 4 or 5 gigs at local hotels and seen some good bands, bad bands, new bands, established bands, all of whom probably need my dollars far more than Harry M and Andrew W. In turn this would benefit the pubs, the smaller PA rental companies, the local

manufacturers, just about everybody connected with the music industry.

Multiply that \$60 by nearly a million people and all of a sudden we're talking about an enormous chunk of disposable income lost to the local music industry. And the local music industry, with new talent, is where the future of Australian music must lie, if it is to have any future at all.

Sure, not all of the people going to JCSS are regular gig goers; a lot of them are old farts who saw it the first time round and have been waiting for the second coming ever since. The ones who sing "Ho Zanna Hey Zanna, Zanna Zanna Ho" while they polish the Volvo.

But a lot of them aren't. Even if only 30% are young people who've spent their next month's live band seeing money, that's still an enormous loss to the grass roots end of the business.

People only have so much disposable income. In hard times like now they have even less - I know I can only afford to go out for lunch now when the restaurants have special Pensioner discount days!

Of course, all this regurgitating of previous success stories is welcomed by the major record companies. Since the new recording of Superstar has gone mega platinum, it has saved them all that bothersome risk and trouble of having to find new acts to bleed dry, sorry, I mean record.

Incidentally, I saw the CD single of "Everything's All Right" the other day (the song from JCSS, not the Mojos). The colour scheme looked sort of familiar, and then I twigged; it looked like a wafer thin bar of Cadbury's Dairy Milk! Check it out for yourselves if you don't believe me. As

Julius Sumner Miller would say - "Why is it so?"

When I was young and foolish, (as opposed to now, when I'm just foolish) I worked for a major record company for a few years, and a more tight fisted, short sighted, greedy, grasping bunch would be hard to imagine.

Picture this; me as a fresh faced young record rep, (*This is stretching the bounds of credibility. Ed*) and I'm up in Sydney for my first sales conference. The National Sales Manager asks the question 'Who can tell me what our business is?' Eager beaver Dunk shoots up his hand 'Making records and tapes?' I answer. 'No', comes the reply, 'Making money!' The whole conference pisses itself laughing at me as I slump dejectedly back in my seat. The Sales Manager continues, rubbing it in as I squirm there listening. 'At the moment we make money by selling records and tapes, but that can change. We'll make whatever people want to buy, so never forget that the main business of the company is to make money, not records.'

It's a lesson I never forgot, and a comment that shows the true nature of large record companies.

So the next time you hear them bleating about how they are being crippled by home recording, DAT tapes, second sourced imports, the Trade Practices Commission and copyright laws, remember this: When the Sales Tax on records, Tapes and CDs dropped from 30% recently, did anyone notice a sudden drop in prices? No, because at the same time, by a remarkable coincidence, all the companies put their wholesale prices UP by the same amount. Why? Because they knew that people would pay it.

When I was a record rep, my territory was the

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city. It was April 1st, and I was keen to have some fun at the retailers expense. Retailers were continually bitching that they were stuck with whatever stock they bought, unlike in the States, where they could return records that didn't sell.

So, I walked into my first call. "Great news, Mike," I said to the guy behind the counter, "From now on the company has decided that all stock you buy will be on Sale or Return! Whatever you don't sell, just send it back, the same as in the States." His greedy little eyes lit up like a jackpot on a one arm bandit. "At last," he said, "Your company's finally learned how to do business, and about time too." He disappeared into the back of the shop, returning with an order that would have filled my budget for the next 6 months! Then he hesitated. "Hadn't I better have something in writing?" he asked. "Yes, sure," I replied, "I've got the paperwork here; I'll just fill it in for you." I opened up my briefcase, and shielded from his eyes by the lid, I scribbled 'APRIL FOOL' on a piece of paper, folded it in half and gave it to him. "Here it is," "Thanks," he said "Here's the order"

I started jotting down record numbers, watching out of the corner of my eye as he sat down on a stool and idly opened up the sheet of paper and read it. His eyes popped out of his head and he leaped off the stool. "Get out," he yelled, "Get out, go on, out out out!"

Laughing so much I could hardly stand up, I closed my briefcase and staggered out of the shop while he continued haranguing me down the street, yelling abuse at me until I was out of sight. It was two weeks before he let me back in. Some people have no sense of humour!

***Duncan Fry's book: "Live Sound Mixing" is in its 2nd edition, and available from Roztralia Productions, (03) 555-7859.**

AES continued from Page 9

mourn the passing of the former great audio magazine, **REP**. RIP REP.

Not to be outdone, the mixing console makers have been more than busy, with new types from **Soundcraft** including the Spirit Live Four. A new Vienna monitor console has 18 sends. **Yamaha** had a PM-4000 monitor console on show. **Crest** debuted a range of mixing consoles, likewise **Mitec** displayed the Performer Live range. The high end of the console market is crowded and competition is rife. 6 manufacturers were offering mega buck live boards, and if rumours are correct they will shortly be joined by at least two more. All the majors were on display, with Soundcraft's Europa, Yamaha's PM 4000 in FOH and Monitor versions, the **Crest/Gamble EX-56**, **Midas XL3**, **ATI Paragon** and **Amek SR-9000** all after a piece of the huge US live market.

Ex Jands Head Sound Engineer Howard Page (who is now a director of Texas based Showco) was also seen looking at the new monitor boards, and confessed that he has now become closer to being 'Americanised'; he has just had cable TV installed in his Dallas home!

GLOSSARY Biz talk **A B C**

R **Recovery Time:** The time a compressor/limiter takes to restore the gain to normal when the signal is reduced.
Resonance: Tendency of a physical body to vibrate due to excitation of a sound.
Reflex enclosure: A loudspeaker enclosure that uses the resonance of its internal air volume to assist the loudspeakers motion, extending low-frequency.
Reverb: Multiple sound reflections.
Reverb time: When reflected sound has decayed by 60dB, or a real lot.
Rig: To install & setup equipment.
Ribbon microphone: Fragile, with care!

DRUMMER JOKES

Q: How can you tell if a drum riser is not level?

A: The drummer drools from only one side of his mouth!

Q: You are HOPELESSLY lost in a forest, you come to a clearing where you see a really good drummer and a 10 metre high pink rabbit. Which one should you ask for directions?

A: Neither! They are both figments of your imagination!

Thanks to Neale Mace for these. Neale wins a T Shirt. Send us your Drummer Jokes!

Fax to (02) 876-5715, or mail to P.O. Box 439, Epping 2121 NSW. **Win a prize!**



Mini Turbosound Flashlight system for centre arrays in mobile homes, or even large van cabins. The 12v chain motor is not shown.

The next international AES show is in Berlin next March, and I am looking forward to it!

Q. What do these leading case and cabinet manufacturers have in common?

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Haidin Demoj & Gayle Fitzgerald, at the recent Jands Array Series function in Melbourne, held at the World Congress Centre.



Rob Damon of Queensland, Mr. Beyma Australia.

It's the Blind Lemon Pie duo, Bruce Wait and Davic Macken. Dave is also a drummer, which is why he needs the sign. To remind himself.



Kellie & Steve Anderson, from Conference Recording Services in Croydon, caught at Metropolis, viewing 420c series JBL Moritors.



Late, late at night, after the Simply Red Sydney show, and the crew wander out for a quiet drink. 'Flakey', Robbie and John are joined by Channels' Caroline Grafton. Quiet drink.....?

Roger Clapton (CC's) & Colin Spencer



These legs have done more loadins than almost any other. They now live in Brisbane. Whose are they?



Sven Langebeck (Warehouse) talking with Tricia Maddock (Soundcorp) in the corridor at Metropolis.



Bruce 'Get Down' Turnbull, with John & young Tiffany Baron.

Noe: Anthony, Tim Buckholtz & Dale Kennedy. The three North Qld PA Kings.

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Northern Sunshine

Derek McCarthy, erstwhile offside to Phil Cullen (Electric Sunshine) has dropped the Doctor a line telling me he has set up shop in Coffs Harbour. If you need to get in contact you can get him on 066-523-536, or just drop in and check him out at 10/322 High St, Coffs Harbour.

SM-58 Lights Up

Following my tale of Jana Event and her trials and tribulations in the land of DMX, and the attendant dangers of using 5 pin AXR (DMX standard) to 3 pin XLR (Audio standard) adaptors, I have had calls posing the question. Namely, what DO YOU GET when you plug a microphone into the desk lamp output of a lighting console? Well, the short answer is: A ROOTED MICROPHONE!

In reality I think it would be unlikely that this would happen. I mean even an audio guy realises the difference between a lighting desk and a sound desk, although judging by a couple of pub gigs that I caught lately, I don't know! I'm sure the guy mixing the Slug F--er's had add/kill buttons on his JM-8.

Protocol Standards

I'm sure the debate will continue to rage about connectors and DMX, however many manufacturers seem to have given up and surrendered, in particular, makers of moving lights, almost all of whom use XLR 3 pins. This, I am sure will lead to further problems, dare I say warranty voiding ones! No sir, I'm sorry but this Astro Wobbly Scan is not designed to be controlled by the Aussie Monolith 6000!

Feel The Power

A mate of mine in the strange jobs dept. at Jands was asked to design a sound system for a Mime Theatre. His first question was: "How many mic's do you want?" Next: Lighting the blind.



Lyciar. Clubspot

This is Doctors favourite followspot this month, a package that comes with six colour magazine, dowsers, iris, colours, stand and lamp, for not too much cost. It's a neat device, plenty of output, and call me in the morning if symptoms persist.

GUVT For Joseph

Paul Beck reports that GUVT's professional lighting sales dept. will supply Joseph's Technicolor Dreamcoat's forthcoming Australian run. They will provide mainly Selecon profiles and fresnels, with Rainbow Colour Scrollers. Control and dimmers will be supplied by Melbourne based Bytecraft.

Creative Lighting

The Brisbane firm have won a Qld Small Business Award. Good stuff Lance 'Boll' Stewart!

Mind My Toes!

Things have not been going too well for the latest David Atkins dancing spectacular at the Hills Centre in Sydney's Northwest. Mr Atkins injured himself backstage, spraining a finger. Further misfortune beset the production when a lighting bar fell, narrowly missing the cast.

Kosmic shift ETC to Kalgoorlie

The Kalgoorlie Arts Centre has gone ahead with the purchase of an ETC Microvision FX, the latest in a range from ETC. There are 30 Vision consoles in Australia, users include Barratt Lighting (SYD), Burnie Civic Centre (TAS) and Brisbane TAFE. Contact your dear Doctor for more details!

Mike Tanner is a long serving Jands person who has intimate LX knowledge

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Great Mistakes

Bathurst Bokie Riot Cause Revealed - It Was The DRUMMER!

This tale has been a well kept secret. Your appeal for Drummer Jokes now prompts me to correct the history books by revealing the real reason 2,000 bikers went berserk and trashed a police compound, burning cars and media equipment, resulting in the permanent termination by Parliament of a major annual race meeting. The blame for this catastrophe that almost equals the Eureka Stockade lies with just one person. Yes, you guessed it, a drummer.

The year was 1981, and I was trading as a P.A. owner/operator, with one system in an old F350 truck. The business was reasonably new, the equipment likewise, and I would do any gig, anywhere, provided the price was met.

On the phone was an agreeable bloke - Big Mick, whose band had an engagement at Bathurst on Easter Saturday. "It's an outdoor concert", he told me, "and the stage is supplied. 8pm till midnight". For an extra \$20 I would collect band leader and backline gear from Drummoyne, and carry the lot to the town, 4 hours west. Because I had a gig on Sunday at Port Kembla, I would drive straight back home, leaving Bathurst by 1am - or so I thought.

The guy I collected looked like a fitter and turner in the vinegar works, and on the way he expanded on the nature of the gig, which it transpired was some campsite amusement for a motorcycle riders club. The campsite, of course, was on the top of Mount Panorama, which hosted the (then) annual bike race.

Arriving at dusk, the stage turned out to be a slab of concrete at ground level in the camping area. One power point in the nearby kiosk was the power. There was no roof, nothing. The solution was to put everything in the truck, amp

racks, desk and processing - and just run cables out to the speakers and mics on stage.

The riders were keen to boogie, and the band started to setup while I got the PA going. Chaos broke out when the drummer realised he'd left the traps case, with all his stands and his pedals behind - at Drummoyne.

The riders were gathering in ever increasing numbers, the Doors tape was locked onto endless loop in the cassette player. The drummer was in panic mode, with two riders careering about town trying to find someone - anyone - with pedals and stands. No luck.

Faced with no option other than certain death, the band found \$300 in cash - my fee, it transpired - and chartered a Cessna at Bathurst Airport, which flew the drummer to Bankstown. A Taxi to Drummoyne is a one hour round trip, he made it and back to the waiting plane and pilot with the offending case.

Meanwhile up on the mountain the riders were pissed off. Well, pissed, anyway, and were masterfully restrained by a tribal leader who made reassuring noises like "if we trash this PA, there won't be ANY music!" Very reassuring. Some of them were not impressed, and passed comment by way of passing water that had been filtered through their livers first. This was a real problem for the wedges.

Bored and ready for fun, the assembled mass turned it's attention to the Kiosk building nearby, reverse engineering the brickwork, which was then hurled en masse at the HUGE floodlit police compound. This just over that way a bit, about 200 meters away, and it was where half the Tactical Response Group and several TV camera crews were holed up.

Meanwhile the Cessna was circling the airstrip, unable to land as an Air Ambulance was on the tarmac loading a critical case for immediate uplift.

When the goddam drummer finally arrived at the entrance to the camping area in a taxi, the Police had reinforcements blocking the way. Nothing came in, nothing came out.

He perhaps realised what he had done, and in a brave flush of integrity went bush with the traps case, arriving at the top - some kilometers away - to a scene from Hell.

Burning cars, missiles raining down, baton charges, all under the harsh floodlights of the Police Compound, and occasional brave bursts of TV Crew floodlighting when they put their heads out for some quick footage of the carnage.

In the middle was a little oasis, containing a slab of concrete, a band, a PA and a truck, with yours truly in the back.

In mere seconds the band started playing amongst this chaos, drawing most of the warring participants away from the battle. Music pacified the punters, who had run out of bricks anyway. Just as well, the next ammunition could have been foldback wedges and mic stands!

Of course the riders were not greatly happy with the band, who felt obliged to play without a break. For quite a while. In fact, all night. Naturally they didn't get paid, so all I had was a promise that 'a rider' would come by with the coin next week.

Instead of getting home by 5am, it was after lunchtime, and straight on to Port Kembla for a gig that next night. Luckily my wife came along to help load and keep me awake.

- Name withheld, NSW

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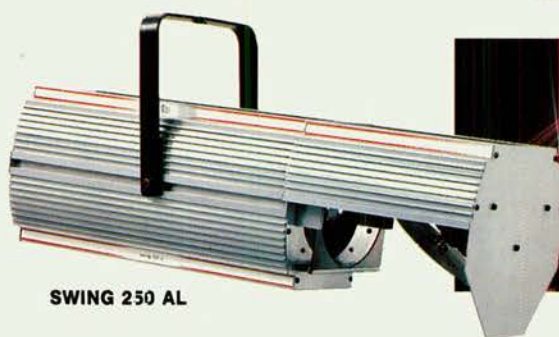
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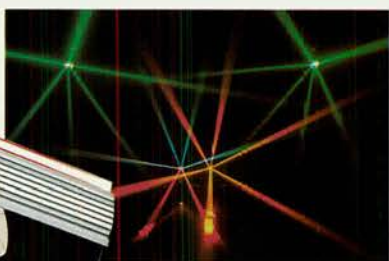
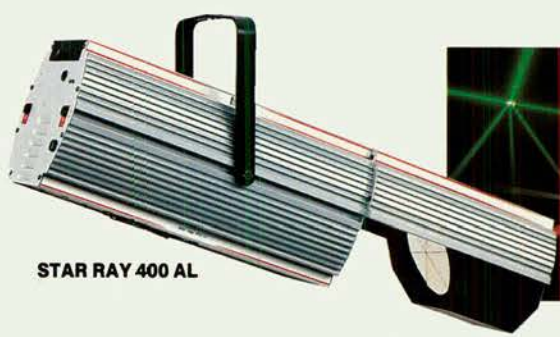




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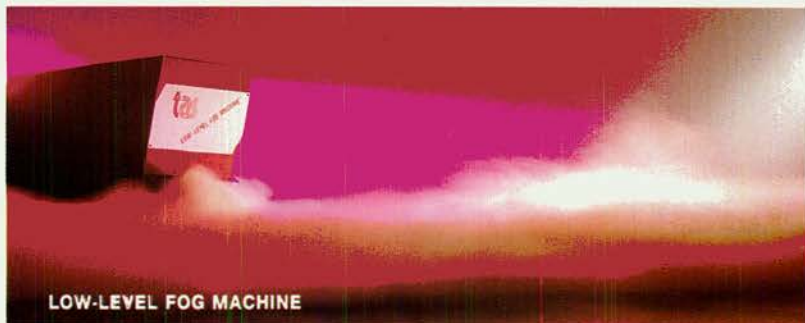
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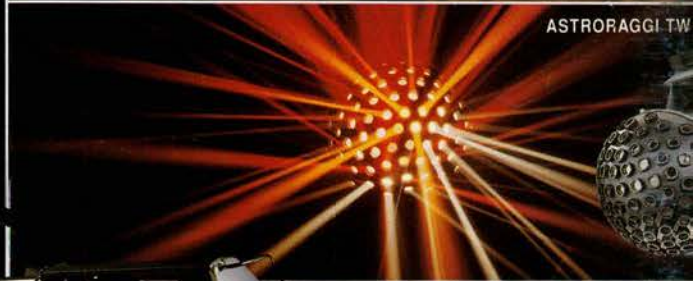
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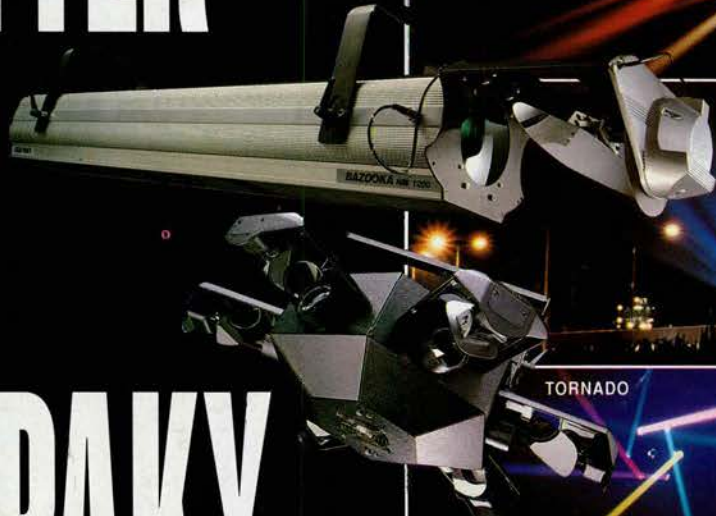
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