

Channels

Big new Studio
& Broadcast
supplement

Free

The professional Sound and Lighting magazine

Number 13

1st May : 15th June 1992

LIFE: THE BIG GIG

Hospital gets
proceeds



SYDNEY: The Concert for Life was Australia's biggest scale charity concert, held in late March in Sydney's Centennial Park. The event was pulled together by people close to INXS, who wanted to stage an event upon completion of recording their next album.

Punters paid \$20 plus booking fee to spend an afternoon on the grass with a mean bill headed by INXS dishing out chops, all of who waived their usual performance fee. Estimates of the gate gross went as high as \$2 million dollars,

(Continued on Page 9)

Moving Light makers say: Dont copy us!

ITALY: Moving Light manufacturers Clay Paky and Coemar have come out shooting after High End Systems, the American makers of Intellabeam, effected a shock intrusion into the Italian marketplace. (See World Supply Line)

Clay Paky's Pio Nahum told Channels: "Our company is the most copied company in the world. We have EXACT copies of our product made in the United States. We are unfortunately heading down the same road of being innovative and giving our ideas to other people to copy. We have, with Coemar, made the light industry in the World for show light. We have for the past four years specialised in manufacture of intelligent lighting, the Golden Scan is the most famous of the scanning units we build, and is copied by many other manufacturers".

(Continued on Page 16)

Rod Stewart Sound problems plague tour

ON THE ROAD- Lars Brogaard finished a year as Rod Stewart's FOH engineer in Sydney, where the world tour ground to a halt with a show big on sentimentality but a little wanting in audio finesse. Lars is unusual in that he owns the FOH console and effects that he uses, indeed a formidable array, based around a new 56 input Midas XL-3 console.

Sitting before something like half a million dollars worth of equipment, the tall dutchman ran the house mix around the tour weary voice of the star, who truly put on a worthy show.

A tour that has already encompassed the world at large will ordinarily result in a show that runs like clockwork, and the elements were all there - yet still this writer felt the mix was lacking.

It is on record that Lars was not at all happy with

(Continued on Page 8)



Johan Schreuder with Lars Brogaard's FOH gear

INSIDE YOUR FREE COPY:

UNFAIR!

Paul Kent couldn't get a U.S. work visa as Roxette's Vari*Lite operator yet international crew work here unhindered.

Editorial - Page 2.

RIMINI

More than a Disco Show - the 10th Annual SIB Sound & Lighting show is just over. We were there for the fireworks. -Page 16.

Moving Lights Compared - P 36.

and much more.....

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"Can we work please?"

Roxette were impressed with Australian Vari*Lite operator, Paul Kent, so they asked him to do six weeks in the United States. He was all set to go, but the United States Government rejected his application for a H1 Work Permit. End of job.

It wasn't because Paul was deemed un-savoury - rather the crew list supplied by Roxette comprised foreign content, the number of foreigners had to be cut down. This is despite the ratio of foreigners to American crew being 1:1.

Meanwhile here at home, up to 70 foreign people, (excluding performers) work on tours, all of whom are rubber stamped into the country by the immigration department. Why so many? Can't Australia supply crew?

Australian crew are renowned around the world as some of the hardest working and most inventive people in the entertainment industry. This is an internationally accepted fact, every overseas technician I've spoken to has praised our local crews.

Look at an average international tour. The essential personell comprise the artists, manager, family, tutor, agent, tour manager, tour accountant, production manager, production assistant, nanny, wardrobe assistants, security, makeup person, backline roadcrew for instruments (usually four), Front of house engineer, Monitor engineer, Vari*Lite operator, Scroller operator/crew chief and maybe one other per-

son. 20 - 25 people, plus artists. Up till recently, that is.

A local crew would also work on the tour, and comprise 2 PA riggers, a system engineer, monitor system engineer, monitor rigger, Head electric, Head lighting technician, 3 lighting riggers, a Vari*Lite technician, Projection engineer, 2 Camera-persons, Video director, 3 carpenters, 4 stage riggers, Promotors tour manager and Promotors production manager. 24 people - aroind a ratio of 1 to 1.

What really sucks is the ratio swinging against local crew when artists bring in their own sound and lighting systems. Some recent tours have had as few as 4 Australian crew out of 48, the entire balance comprising foreign crew.

If Paul Kent can't tour America as an essential member of Roxette's entourage, where the ratio of foreigners to Americans is 1 to 1, then why should we allow so many foreign crew into Australia?

The artists will tell us they must use 'their own' PA and Lighting Systems. The tour accountants will tell us the world tour is so huge that a couple of jumbo jet loads of gear won't break the bank. And while they tell us this, we just cop a situation that is robbing the cream of our roadcrew the opportunity to work.

Let's think real hard about this one.

-Julius Grafton.

Opinions herein are not necessarily those of the Publisher.

Channels

Produced by Grafton Services Pty-Ltd, for the publisher, Jands Electronics Pty Ltd.

All EDITORIAL correspondence (but not circulation) to:

Grafton Services Pty Ltd,
P.O. Box 439, Epping 2121, NSW, Australia.
Phone: (02) 876-2612, fax (02) 876-5715.

Readership: 12,000+industry professionals.

Contributions are welcomed!

Send your item by mail or fax, if you'd prefer to discuss your idea first, give the editor a call. Advertising and circulation, mailing list changes: Dayle Schirripa, (02) 516-3622.

All other enquiries: (but not circulation) to the editor, Julius Grafton (02) 876-2612, (018) 295-944, Fax (02) 876-5715.

Computer help: David Mulholland.
Printed by Lionheart, Phone (02) 666-5162.

Aldus Freehand diagrams by C & D Graphics.

Subscription details: See below & back page.

New Zealand enquiries: (09) 366-7021

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A.C.N. Jands Electronics Pty Ltd 001 187 837

A.C.N. Grafton Services Pty Ltd 002 964 591

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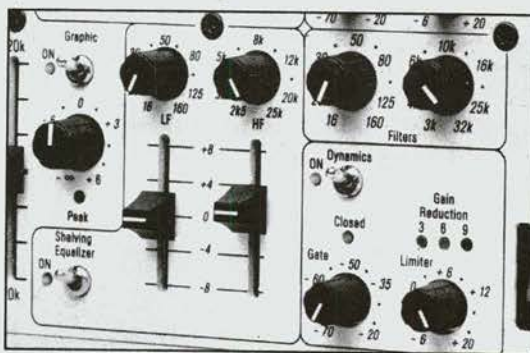
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Here's proof that some equalisers are 'more equal' than others

The SCV 231SP is a new all-in-one dual 1/3 octave equaliser with unique built-in advantages for greater control and flexibility of sound.

It combines the unsurpassed quality of SCV's graphic equaliser with a compressor limiter-gate, (incorporating genuine dbx circuitry) a variable frequency shelving equaliser and variable low-pass filters.

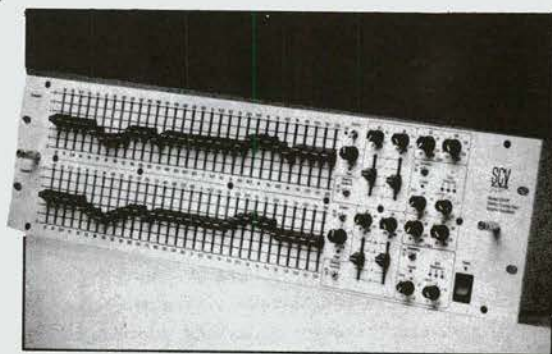


The SCV has a price tag that beats buying individual units without compromising the stereo control quality. As a special introductory offer, Australia's sole distributor will arrange a limited number of FREE trials of this extraordinary unit.

To secure yours, call Tony Russo at AR Audio Engineering OR your local SCV stockist.



Phone: (02) 281 5252
Fax: (02) 281 6969
Level 7, 12-18 Little Regent Street
Sydney NSW 2000



SCV

AUDIO

le son

New Sound Reinforcement console shown at Euro AES

Soundcraft debut Vienna console



AUSTRIA- The 22nd European AES ended on a high note, with well over 7000 industry professionals pouring through the (Northern) Spring event, this year held in Vienna. Soundcraft somehow kept the synergy going following the release of their top-line Europa console last year, by releasing the 8000 series replacement at Vienna, named Vienna!

Where the 8000 grew out of the 800B, the Vienna is a whole new console pitched fair and square at the market now using PM-3000's. Vienna comes in a new chassis more compact than Europa, the 40 channel model is just 2142mm wide.

Vienna is bestowed with the sort of features the PM 3000/Soundcraft 8000 market expect - like 8 auxiliary sends with one direct Aux out, full 4 band sweep EQ (with switching bell on h/f and l/f), and comprehensive mute and solo. 8 VCA groups are supplied. At the master end of the console (which can be in the middle if you run 40 inputs) the auxiliary masters are on their own module, with each group module offering a stereo input for effects returns or lines.

Every channel has 8 Mute buttons, for the standard 8 mute groups to operate a preset style channel switching matrix. Additionally, provi-

sion is made for up to 4 Matrix modules to be fitted, allowing matrix mixed outputs for zone feeds or taping. A mono bus is standard.

A link option panel allows other Vienna or Europa consoles to be slaved together, either the Vienna or another Vienna or Europa may be defined 'Master' or 'Slave', a family of dominants! An optional auto-switching power system provides comfort for those who've traditionally bought a second power supply for their PM-3000 or SC-8000 in the past. The auto-switching facility removes the need to think in a flap, like when you are in Lithgow and they switch off the mine, sending the power grid up to 290v!

Ergonomics are first class on Vienna, the frame is built like a brick proverbial, with hidden handles and the usual relaxation armrest you've come to expect from Soundcraft. Vienna offers bells and whistles a-plenty, and seems set to carry the Soundcraft name where FM-3000 rules today.

Importers Jands plan a demonstration tour of Vienna, details soon.

**Our spy at the Vienna AES reports Soundcraft have a new Delta SR console in the pipeline - we'll bring you news as it comes to hand.*

Sabine FBX Feedback Exterminator



ADELAIDE- This is an interesting device, built by Sabine in Florida, and distributed here by Quintrix Communications in Adelaide. (Phone Bruce Cattermole on (08) 348-1680.

What the FBX does is impose six one-quarter octave parametric equalisers onto your signal chain. Three are fixed on the strongest feedback frequencies, according to Sabine, while the other three filters are called 'dynamic filters', and control intermittent feedback by 'locating' the

problem frequency and notching it! A micro-processor selects the centre frequency for the dynamic filters and the depth for all six. The depth can be as much as -30db of cut.

Sabine make some strong claims about the FBX, so we at Channels are keen to get a hold of one and try it out!

The sensitivity level is adjustable, so the device can distinguish between sounds that are part of the program, and feedback itself.

Commiserations to the fellow sitting on an inflatable donut cushion while reading this. Poor David Arbon, the Adelaide soundperson has had his bottom end worked over. Yep, the roadies curse, readers piles. Out they came, and so concerned were his fellow industry folk that they called Aux 1. You see, old Aux had the same treatment some years ago, and lived through the cheap jokes and even the funny ha ha stunts. The best one was perpetuated by the dear chappies at LSC, who upon learning that the operation had been performed just days earlier, invited Aux to lunch ... down the road. Of course we walked. Of course it was way down the road!

In Newcastle 'Your Move Lighting' was an action spot during the late 1970's, now the proprietor is back with **CUSTOM AUDIO INSTALLATIONS**. Colin Rothapel can be reached on (049) 29-4996 or fax (049) 29-4942, the outfit do Sound & Lighting work alike, and

A national distribution company with branch offices in most Capital cities plan to open another - in Canberra. This is a rumour that will not die, the company concerned are known to be anticipating a backlash from a certain Canberra trade identity not known for subtlety.

It was Oscar Wilde who once said "There is only one thing worse than being talked about and that is not being talked about". The mild mannered Jands chief Paul Mulholland needed to travel to MusikMesse at Frankfurt to realise the significance of this statement in the eyes of the competition. First up, the ever reserved foreign head of Australian Monitor suggested in less than subtle terms that Mulholland's new amplifier (SR-3000) and associated promotion was causing him concern. On the way back to the Jands exhibit the chastened Mulholland dropped by the Celco stand, where he was asked to leave. The worlds largest lighting console manufacturer must have thought some of their idea's might get copied by a competitor from down under. The story then escalated through the rumour mill, with Aux One getting late night reports of biff and mayhem, all (sadly) untrue!

Rod & Kylie Salmon have a second addition to the family, another girl - baby Lauren Michelle, born late and large during April.

YOGI has left Turrumurra Music after many years, and is now ensconced at multinational MarkIV. Yogi is, of course, Grahame Harrison.

Rumour mill working backwards dept. An international tour LD was said to have engaged in biff with local lighting identity last year overseas. When the Australian tour leg came up the presumption was the international LD would naturally enough avoid the local lighting identity, who fronts a lighting company. Guess who won the tour? The local guy, who is the best of mates with the international LD! Seems the rumour had no substance whatsoever, which gives credence to all kinds of bizarre theories regarding its origin.



ITALY: Just prior to the SIB show at Rimini, tensions were running high at Clay Paky, with a board split resulting in partner Giulio Savoldi leaving to establish a lighting distribution company to distribute High End Systems products ... in Italy. The new venture was named High End Systems distributor just before the SIB Show, and is called Sagitter Srl.

The relationship Giulio and his wife Gabriella have with High End Systems extends right back to the early days, when high End were Clay Paky and Coemar distributors in the United States. A ruction occurred about the time Golden Scan, a pioneering product, started to take off in the U.S., with High End losing the Clay Paky distributorship, but persevering with Coemar for some time.

It is now history that High End went on to release the Intellabeam, which outsells Coemar and Clay Paky product in the United States. Establishing Sagitter as Italian distributors for High End is the latest in a series of skirmishes between the three manufacturers, and by no means the last.

**See our interview this issue with High End Systems, and our story regarding Clay Paky's claims that people have 'copied their products'.*

OTARI have a 64 track recorder - sort of. The company has a way of interconnecting two 32 track machines 'in an intimate way', so the operator is presented with what is for all intents and purposes at 64 track recorder. Mitsubishi are on record as saying 'when the demand is there' they will build a single tape 64 tracker. **ALESIS** are showing a 24/24 mixer, the X-2 - which is offered to work with the very much awaited ADAT 8 track digital-on-a-video-tape machine.

TASCAM meanwhile plan a response to ADAT, with their own digital 8 tracker. It is thought some plans and prices were announced at the just completed NAB show in Vegas. We'll try to find out more.

DOD Electronics have some new small mixer products on release in the U.S., the company is now part of Harman, who own JBL and Soundcraft.

GERMANY is such a huge market. Steirs are a lighting wholesaler, who produce a catalogue-in full colour, with 200 bound pages! This is for Germany and Europe - with no intention of sales further afield. Another German wholesaler do the same for audio, with a larger catalogue again.

CELESTION INDUSTRIES have announced a pre-tax loss of £1.06 million for 1991, according to the March 31st issue of The Sunday Times. The company also make clothing and consumer goods, with sales down by 12%.

AMEK have shown their new Einstien 'private studio console' at the just completed Vienna AES show.

FOSTEX similarly debuted their PD-2 portable timecode DAT recorder at AES.

NCSA - an audio contractors show, is the next trade show of note, our man on the spot will report back for the next issue!

Low cost gates, crossovers and limiters

JBL M Series Electronics

SINGAPORE: JBL have released a new line of affordable processing units, which are available



downunder this Winter, according to the corporation. Importantly, the units break the magic 15 barrier, 15 being \$1500, all of these devices retail at substantially less than this.

Two Crossovers are offered, a 2 way stereo/3 way mono device, and a 3 way stereo/4 way mono. These units feature 24dB Linkwitz-Riley filters and JBL Bi-Radial horn pre-emphasis, along with variable centre frequency and XLR connectors. Subsonic & RF filters, 117dB dynamic range, THD at less than 0.005% and mono summing combines both channels for a mono subwoofer output if needed.

The Noise Gate, model M644, combines four independent channels of gates in one



rack unit, each with Threshold, Attenuation, Attack and Release controls, along with a key input for external gate triggering. Importantly, the threshold control range is nice and wide, at -60 to +20dBu.

Lastly, the M712 is a Two Channel Gating Compressor/Limiter, which offers dual mono or stereo link operation, 8 segment gain reduction ramps, controls for Threshold, Attenuation, Attack & Release, and a Gate

function with independent Threshold control for each channel. Input/output connectors are XLR and jacks.

All M Series electronics units have external ground link terminals for independent access to signal and chassis grounds, permitting greater flexibility in system grounding.

Looking at this family line of processors, one wonders when similar styled (and priced) graphic equalisers come along! *For more info, call, Jands, (02) 516-3622.*

MOVES & MOVERS

A.L.E. (Advanced Lighting Equipment) Sydney based rigging & engineering types are moving to 24 Shirlow St, Marrickville, call 02-557-4141 or fax 02-557-4135. **Wayne Haran & Peter Lazareff** await calls.

AVID, the Court people, have a new number, 075-933099, and a Court rig available.

SKYPACK LIGHTING in Brisbane have gone **Clay Paky**, with **Superscans** and **Goldenscans** for rent. Call **Craig Fussell** or **Brian Story** on 07-252-8910.

Channel 7 Brisbane has chosen **Superscan 1200's**, **David Lea & Steve Mitchell** from 7 say they look forward to new creative concepts in their shows. **Goldenscans & Superscans** are seen on **Fast Forward**, **Big Gig & Ray Martin** to name a few. **MEGATONE** announce they have the whole **6 model MARTIN** line of moving intelligent lights, up to the 18 colour, 18 gobo **1200MSR Roboscan 1020**. Call 02-564-2277.

AUSTRALIAN COMMUNICATION EQUIPMENT has just launched itself as new supplier of public address equipment who intend "holding stock and servicing the needs of the customer", which is a good mission statement, worthy of a test run, readers. At the launch ceremony, **Michael Pun** from **Philips** demonstrated the **Articulated Loss Of Consents** theory while **A.C.E.'s Robin Davis** looked on. I want some of whatever it is these guys serve at their functions. Call **A.C.E.** on 02-748-1341, or Mobile 018-463-748.

Neutrik connectors

K Series and **R Series** are new Neutrik connectors for printed circuit board mounting, the male and female **K** types can be mounted horizontally or vertically, the **R** types just horizontally. The female versions offer gold plated pins, males silver.



Congress reconsiders, but for now it's

US VISA HASSLES

WASHINGTON: The U.S. is reconsidering the new immigration act that severely curtails the number of visas available to musicians and crews. To gain a visa (enabling you to tour in the States) you must be deemed "Internationally Acclaimed", with the quality threshold not defined.

Reports from the U.K. indicate that up to 75% of visas issued to personnel from that country may be in jeopardy. The new law may generate a 'tit for tat' response in Europe, where industry parties have called on the U.S. to implement a proposed new format of visa which allows for free reciprocal exchange of artists not limited by numbers.

The new U.S. immigration act came into effect as this issue went to press, we will endeavour to keep you informed. Meanwhile, shoot a protest letter to the U.S. Consulate General, Electricity house, Park Street, Sydney 2001, or in your capital city.

Tradeshaw in July vitally important
Next Stop Singapore

Perhaps the most important Trade Show for Australasian companies is the Pro Audio & Light Asia '92 show, to be held between the 8th and 10th of July in Singapore. This is fourth annual show, and it has attracted a very strong list of exhibitors from around the world.

To date the likes of Yamaha, JBL, Soundcraft, and High End Systems have committed, to join over 200 exhibitors from around the region and indeed the world. The Italian Trade Commission have booked an entire pavilion, so a mini-Rimini style show is on the cards there. Drop by the Space Cannon stand and ask them to whack on their Rimini Dancing Girl show for you, and say gooday to Umberto Bonito from the trade commission.

DETAILS: Travel and accommodation can be arranged with the official agent, who is:

Associated Tours (Singapore)
204 Bukit Timah Road,
#05-00 Boon Liew Building,
Singapore 0922.

Contact: Martin Tan.

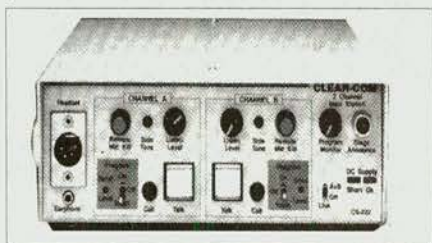
Telephone: 65 235 7222, Fax: 65 733 1269.

The tradeshow venue is the IMM Exhibition Centre, 2 Jurong East Street 21, #04-01, Singapore 2260.

The show is open between 10am and 6pm to Professionals only, and should be on your agenda if you are involved in equipment supply. We'll bring you a full report afterwards.

New Products

CLEARCOM offer a new range of two-channel Party-Line intercom systems, the MS-222 is a 2 channel rack mount main station, while the CS-222 is a 2 channel Portable Main station. New features include: separate channel "LISTEN" volume controls, individual "Remote Mic Kill" buttons, and selectable "Program Interrupt" on each channel. Up to 30 headsets can be supported on 2 ch. Contact: Jands 02-516-3622.



ARX offer a new series of compact trapezoidal "Powermax" passive speaker enclosures. The PowerMax-1 (right) comes in normal or Flying version, with a PowerPro Processor offering dual channel operation with protection. Info: ARX 03-555-7859.



Jands Amp Release targets competition

Seminar tour compares SR-3000 to other amps

A war of words has intensified between rival Australian amplifier manufacturers following the debut of Jands' SR 3000. The 3000 watt Split Rail Technology™ amplifier was released to the trade in a barnstorming series of seminars held in capital cities during autumn.

Jands adopted a provocative approach by running comparison tests at each seminar, against rival products from: Carver, A.M., Yamaha and others. Audio Products Manager W. Peter Twartz threw the agenda open during the seminars, challenging attendees with full level and clipping level comparisons, conducted into a pair of Jands/JBL System 1400 speaker cabinets run through a relay switching network for instant A-B-C switching of different amplifier outputs.

"I ran a CD player into a Soundcraft Spirit console with flat EQ, thence to a distribution amplifier which enabled input gain matching for each amplifier. All the wiring was in full view, there were no tricks - it was a clean comparison", Twartz told us.

The seminar tour opened in Adelaide, where a diverse audience of notable audio personages had the chance to question Twartz regarding the technology. Several rival product representatives were present, and some light-hearted curve balls were thrown at Twartz. Various music tracks were requested and run at different levels until fatigue set in.

As the seminar tour got under way, Melbourne manufacturers ARX released a thinly veiled statement in defence of existing mosfet amplifier technology, stating in part that manufacturers not using mosfets were maximising profits, and citing the cost of a mosfet at US \$10 vs "Mexican output devices available for 50c" as the choice of some US manufacturers. The argument faltered somewhat with the admission that mosfet amplifier designs are inherently simple and require less components than other designs.

Following Perth the seminar in Sydney was keenly attended, with manufacturer Australian Monitor providing factory fresh sample amplifiers for a shootout. "The test should be against the 1K2, not the AM 1600", A.M. designer Stuart McLean told Channels beforehand. "The AM 1600 is a six year old design, whereas the 1K2 is our newest product". Subsequently the Sydney based manufacturer provided one example of each, and asked Twartz to clarify the design age of the AM1600. Sensitive stuff.

In Sydney a broad industry cross section provided a sometimes volatile audience, with Twartz subjected to rapid fire questions during the Q & A segment. from Carver importer, Pro Audio's Nunzio Gambale and Australian Monitor designer Stuart McLean among others. Pro



Peter Twartz (centre) in Melbourne while punters probe

Audio & Australian Monitor are thought to have exchanged solicitors letters last year over an advertising matter.

Paul Mulholland of Jands refuted suggestions the company regarded the Australian amplifier industry as "it's birthright", rather he said that since the company decided to design its lighting consoles for the world market, the necessary improvements and product development lessons learnt on the export trail made new amplifier technology a must. He said Jands amplifiers have been a consistent part of the Australian scene for over twenty years, and the SR-3000 would be seen overseas soon, without elaborating on his amplifier export plans.

Up at Brisbane a smaller crowd were fairly restrained, the smallness of the venue (Bonapartes) meant Twartz couldn't push the listening tests into clip like the previous night in Sydney. A feature of the seminars was the last bit, when the formal listening tests were over. Twartz invited anyone with a CD to play a track, and a Brisbane punter proffered a real grunge/trash combination that prompted a wag to call out: "Which prominent Brisbane band was that?" to which another said: "All of them - at once!"

Melbourne's Grainstore Tavern hosted the last port of call on the seminar tour, and perhaps attracted the greatest interest, with around 100 industry types on hand, including at least four rival amplifier manufacturers. A moment of drama ensued when one punter, drink in hand, approached Twartz menacingly mid-presentation bringing things to a halt by demanding the Jands SR-3000 be dropped four feet onto the concrete floor. "Sure", said Twartz. "But we'll have to drop the other amps too", whereupon the owner of the Yamaha made it clear if his amp was dropped someone else would own it!

Jands conducted an informal exit poll across the country, where attendees were quizzed as to their impressions of the comparison. The company won't comment on the results, but your correspondent repeatedly overheard concerns voiced regarding the high level performance of the Carver.

-See Page 42, 'People'.

***SEMINAR WINNER:** Following the completion of the tour, the registration forms were entered into a draw, with Mr. Ray Godfrey of Perth drawn as the winner of a Jands SR-3000 amplifier. Congratulations!

The three biggest names in Sound together in one package that's perfect for PA- and can be expanded like no other! **Soundcraft Spirit 8** mixing console, **JBL MR 822** Speaker Cabinets, and a **JANDS 107** power amplifier. The biggest names, the best performance, the reliability and the resale value you expect - all together!

The perfect match -
the package for -

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- *Vocal P.A.'s *Schools
- *Hire Companies
- *Bands & performers everywhere!

Star Maker Package

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\$5,999⁹⁵ *Freight FREE*
anywhere in
Australia
(Rec. retail inc. tax)

Start now, expand later. The Star Maker Package is the beginning of your PA- need more inputs? **Bolt on** the Soundcraft Spirit EXPANDER. Need **more punch** out front? Add on a pair of JBL MR-818 subwoofers. Need **extra power**? Jands are Australia's largest amplifier manufacturer, with a model to suit you now and tomorrow!

Your Jands Dealer will help you get started and be there when you need help. All Star Maker Packages come with full Warranty! (See Standard product warranty cards for details)



Soundcraft Spirit: 8 mic/line inputs, 4 extra STEREO inputs, 4 auxiliary sends (outputs), famous Soundcraft sweep equalisation, Phantom power, Stereo PLUS Mono outputs, and of course the 8 Channel **EXPANDER** is available to bolt on *when you need more inputs!*



JANDS 107- the rugged, reliable 700 watt amp built in the tradition of the famous J600- Australia's *best selling amplifier ever.*



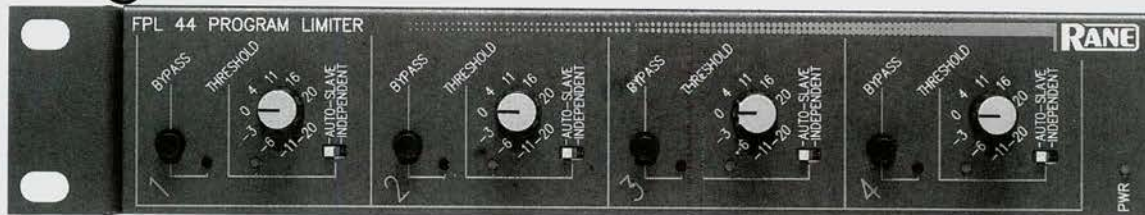
JBL MR822: The new trapezoidal speaker cabinet wholly built by JBL, fully featured with tough hardware, carry handles, speaker stand adaptor and variable h/f attenuation. *Genuine JBL* high frequency compression driver with pure Titanium diaphragm, Bi-Radial horn, and heavy duty woofer with 3" voice coil.

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SLAVE TO PERFECTION



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MOUNT

The FPL 44 Quad Program Limiter makes a difference you can't hear. Its four independent ServoLock limiters effectively guard against system overload, speaker damage and annoying feedback. Yet its program-dependent ratio assures just the right amount of gain reduction at each instant - no more, no less - so that you won't hear it working.

As if that weren't enough, the FPL 44 also includes a unique AutoSlave feature, which ties selected channels together so that they all respond identically to the limiting requirements of any one channel. Which preserves the tonal balance and stereo imaging of multi-way speaker systems. All this squeezed into a compact HR format.

Wow...

RANE CORPORATION 10802 - 47th Ave. W., Mukilteo, WA 98275. (206) 355-6000



Outboard Electronics offer rack mount or retrofit system

SS1 Moving Fader Automation System

The SS1 Moving Fader System is a processor based unit which, by interfacing to motorised faders, can record and subsequently recall the fader movements controlling audio levels. The fader movements are stored as "scenes" which are held in battery backed RAM; the data can be copied to a memory card. Up to 255 scenes can be stored and subsequently recalled. The system can control up to 64 motorised faders with a programmable fade rate for each scene. All primary record and recall functions are initiated by a straight forward single keystroke from the user interface. The SS1 stores scenes in two modes, static and dynamic. Each stored scene has a unique

number which appears in the SCENE NUMBER counter display on the control interface. A static scene records the target point of the fader and when recalled moves the fader from its current position to the target point. The rate of fade can be varied between static scenes. A dynamic scene records the movement of any number of faders. A total of 99 dynamic scenes, each up to 55 minutes long, can be interspersed with static scenes.

FEATURES: Up to 16 input by 16 output moving faders / 16 input to 16 output cross point switching matrix / recall of switching / recall of

fader settings / M.I.D.I control in-out 32 events per scene on a total of 128 M.I.D.I. channels / computer control via RS232/255 static memory scenes / 99 X 55 minute length dynamic scenes.

APPLICATIONS: Spatial sound effects, automated control of audio levels, signal routing, theatre sound reinforcement, auditorium sound

system reconfiguration, audio visual presentations, Rock & Roll F.O.H. presets including effect device changes, monitor mixing presets.

Up to 64 moving faders can be controlled by the SS1 processor. The faders **directly replace** those found in Soundcraft, Amek,

DDA, Yamaha, Soundtracks, and Midas consoles. Up to 512 cross point switches can also be controlled. SS1 processor is in a 4U rack mount unit for the processor with a separate controller and fader / switch interface cables.

PRODUCTIONS USING SS1 INCLUDE:

MISS SAIGON, LONDON
CRAZY FOR YOU, NEW YORK
DIE SOLDATEN, NEW YORK

RETROFIT INSTALLATIONS FOR:

AMEK 9000, PM3000, RAMSA, EUROPA

*For further information call Shane Morris
Phone and Fax 02-344-9946



Sound System Theft

On or about April 7, 1992, Australia's Wonderland at Eastern Creek, Sydney had the following sound equipment taken from a theatre in the park-

- 1 x Soundtracs MX32 mixing console - Serial No. 808178, with: 28 standard mic input modules, 4 stereo input modules, 8 sub-groups with 4 x 4 matrix sub-mix. Power supply unit: serial # 123470, 3 rack units high, rack mountable.
- 3 x Yamaha Q2031 Graphic Equalisers.
- 2 x DBX 160X Compressors.
- 1 x GC 2020 Yamaha Compressor/Limiter.
- 1 x SPX 900 Yamaha Multi-effects processor.
- 1 x Yamaha R-100 Reverb.
- 1 x Yamaha R-1000 Reverb.
- 1 x Otari MX-5050 BQ11 - 1/4", 4 track Reel-to-reel tape player, serial # 18500317J
- 1 x K200 Yamaha Cassette deck.
- 1 x Jands Stagemaster 24/2 Lighting desk.
- 1 x Shure SM 58 microphone.
- 1 x HD 1000 headphones.
- 1 x 16 way Multi-pin to tails cable (AWL design)
- 1 x Pyrotechnic firing box (4 channel, AWL design)

There are approx. 6 MX32 consoles in Australia and only two like the one above, the other is still at Australia's Wonderland.

If you have any information contact Rod Nielsen or Todd Coates at Australia's Wonderland on 02-830-9100, or Det. Sgt. Broad on 02-675-8611.

REWARD OFFERED.

LETTERS - ABUSE & AMBROSIA

Lady spot op's rule

Just received the latest copy of Channels and I'm not quite sure what you guys were trying to get at with your "Back Bit".

If you want to do an article on girls and follow spots you should contact Derek Watkins at the National Tennis Centre, Melbourne. I'm sure he will be able to tell you all about Ellis, Judy, Annie, Cathy, Jamie, Megan and Sue, these girls operate the Xebex 5k spots for acts such as AC/DC, Dire Straits, Elton John, Pavarotti, etc etc.

While I'm at it I heard a funny story the other day. My good friend Mark Dansie, who operates lights for me, was caught without a ticket on one of our Melbourne Trams. The ticket inspector looked down at him, demanding I.D.:

"So, no I.D.! What's your name son?"

"Ray"

"Got a surname 'Ray'?"

"Yes Sir, 'Ray Can'."

"Address?"

"64 Par street Sir!"

Well I laughed. Next time I'm in the wrong spot at the wrong time just call me Mike Stand!

-Mark Barry, Sound engineer/owner-operator, B.S. Sound Reinforcement, Elwood, Victoria.

**Right, let's get something straight. The caption on the 'Back Bit' picture must not be mis-construed as in any way derogatory towards women, especially followspot operators!*

I'm glad Mark Barry wrote his letter, because any ambiguity in Channels must be exorcised.

So accordingly we contacted Derek Watkins (pictured) at the National Tennis Centre, who certainly has an efficient followspot crew.

"I don't want to stir any hornets nests, but my operators typically arrive early, check the equipment and sites, and work together. If a support band's LD forgets to put on the headset, they'll work together and do the right thing." Aside from the previously mentioned females, Derek also employs Cindy and Karen. "The bottom line is,



they're less likely to scream back under pressure". We then called the LD for PRINCE, Mac Mosier, who had just finished working Melbourne. Justin Collie who calls followspots was very pleased, "The spot operators there worked very well with a lot of cues". That's praise!

Pyro Prankster

Anonymous Fax Department - Tongue in cheek division.

Greetings Channels-folk, thought you might enjoy this anecdote from the recent Wonderland event mentioned in issue 12!

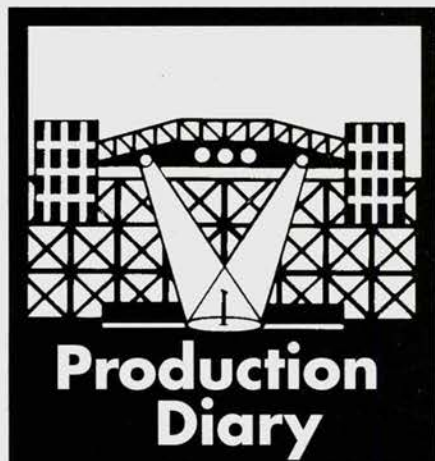
Who was the highly respected (and up until the loadout - ultra cool) member of the P.A. People's crew seen in mid air, leaping from stage to aisle, after an anonymous chap threw in a quick house-light blackout and set of a pyro shower over the unsuspecting loaders? Stood up, quickly changed undies and resumed the load with newly found vigour and zest. Of course he wasn't frightened. Never missed a beat.

Congrats on a great magazine. Love the info and articles but I bet it took a bloody long time to colour in No. 12 with red text. Is it really true you're going to include a centre-fold? Bah ... rumours ...

-Spod, Audio Dept, Australia's Wonderland.

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As we go to press the two largest tours of the year are powering across the land, both Paul Dainty presentations. Niel Diamond has the legendary Stan Miller as Sound Engineer, who we will catch for the next issue. On the night before we went to press we saw Prince, which is the most spectacular and surprising concert your editor has ever seen. A full review appears in the next issue, but some audio details:

***Prince** is touring with a complete Clair Bros. S4 Mark II system, with Clair Bros. sound engineer David Natale. The rig comprises the 48 S4 Mk II cabinets that Jands have toured through Summer, with 12 Concord cabinets - as front fill. Some of the remarkable facts to emerge from our review will surprise you, this high grossing tour at the forefront of available technology illustrates that what often works best is what's tried and proven, the line of Concord boxes along the front of the stage sat on the floor, providing both punch for bottom end, and front fill at the same time.

The Concord is a folded horn composite, kept relevant by JBL component updates. The bass section of this venerable cabinet is essentially half a W Bin, and certainly delivered the goods for Prince. David Natale is one of the world's top 10 engineers, who has some ideas that will in all likelihood surprise you. Watch for our next issue, out on about June 15th.

Strange Lane Productions (call 056-23-4009) have been busy with Craig McLachlan, James Reyne, Baby Dolls, Jo-Beth Taylor & The Zep Boys during summer. They offer a system with Yamaha consoles, ARX speakers, amps and processors. Monitors number 9 ARX wedges with 912 sidefills, while FOH is made up of KA118 subs and 212 mid-high packs.

McLean Audio (call 03-429-5381) are similarly hither and dither, with the likes of Divynals (some Easter country dates), Kate Cebrano and World Music to name a few recent jobs. The guys offer JBL Modular stacks, where a 2445 horn sits atop a mid box, atop a JBL W in a compact configuration. This is the same as offered by Jands Production Services, so quantity is not a problem.

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Rod Stewart Sound

(from Page 1)

the system upon arriving in Australia, exhibiting "a complete lack of diplomacy", according to Audio & Recording Australia's Ian Richardson. Whatever had occurred in the preceding five weeks down under, the sound at this final Australian and indeed World Tour concert didn't deliver.

"I've had letters from each City we did complaining about the sound", said Frontier Touring boss, Michael Chugg. "I don't normally get letters like these".

The system A. & R. Australia supplied comprised 6x MSL-10, and something like 32 MSL-3, with 18 subwoofers - which is what Lars booked himself prior to the tour, according to Chugg. On paper - enough audio. Perhaps.

Now the MSL-10 is a mother of a cabinet in size and performance, so it probably accounts for quite a number of MSL-3's, and on paper the spec. was more than adequate, but it is possible the MSL-10 (more suited to outdoor, ultra long throw applications) doesn't propagate too well in an arena like the Sydney Entertainment Centre. "I've heard that system with Carreras and it was the sweetest thing you've ever heard", said Chugg.

Whatever the cause, what was missing in the mix was subtly - each number went bang crash wollop, the dynamic range was squeezed up against the system limiters all the time, and the effect was not unlike this writer's sound engineering efforts, which are not world class by any stretch. Tour fatigue often means you don't hear what's happening, rather what you think is happening, which must have accounted for the dramatic level changes when a sax or guitar solo was wrenched over the top of the mix, then abruptly hurled into the background at finish.

A burst of low end feedback at the end of a song signalled a dropped mic, which went unchecked for a long 4 seconds or so, which is not what international standard performances are about. The volume of the mix was quite OK, running about 120dB at the console. It should be stressed the show sounded competent - indeed the audience loved it, and in likelihood probably wouldn't share this writer's view, which is after all, just the opinion of one person.

Milan Rakic- EZ LD

Rod Stewart's Lighting Director is looking fit and relaxed after a year on the road - despite his small son having a sleepless night, and a near fatal (and mis-diagnosed) appendix attack in the 'States. "They told me I had everything, I kept working then got carted to hospital when they burst. I was off for five weeks".

Milan is English, with a fair dose of Welsh, and very proud of this, his first total design effort for a large tour. "They contacted me and asked for a design, I pitched against some other people" he told us. The lighting takes the show to the people. Mr. Stewart evidently is pleased with the style of Mil's show, which is based on the premise that people come to see the man.

The rig down under is from ATS in Sydney, comprising LSD pre-rigged trusses, 100 colour changers, (LSD & Colourset), 12 Mole Mags, 6 Mega Mag colour scrollers each in front of a pod with 12 Ray's on stubbies inside. Followspots, curtains and a Celco console make up the rig.

Everything, rig and stage, is white, Vari*Lites, truss borders, colour changers, Mega mags, set floor, it must be a nightmare to keep clean. According to Mil, it has advantages and disadvantages. A colour wash you really do see - red is red, blue is blue, you see the true colours. But sometimes you can't make an area dark - although it all worked out well at end.

"The audience come to see Rod Stewart, I set a light out to each side of the arena to light the cheap seats - Mr Stewart is very aware of those people, he like to see them".

Nice guy - right attitude - good techniques!



ATS dimmer world with LX Engineer 'Squirt'

Tour ends - frolics start

SYDNEY - It was the last show of a world tour, so not entirely without surprise came the spectacle during the encore. It wasn't Jimmy Barnes, who by then had been on stage for over half an hour in all across two sessions.

It wasn't the various crew, wives and girlfriends popping up on stage to join Rod Stewart and his band. It wasn't even the continual discarding of clothing by the star, who was so intent on the tour ending he gave away most of his many expensive and colourful jackets to the crowd.

The thing that sticks in 12,000 people's memory the most is the figure that swaggered onto stage dressed in full Scottish regalia, complete with Kilt and sporran et al - with

Tam O'Shanter and sunglasses. This vision made itself useful dispensing champagne to the sundry personell on stage, as the band worked it's way through the final number.

Unfortunately the champagne ran out, leaving the lumbering vision with nothing much to do except wander about aimlessly. Perhaps a little bored by now, our phantom then decided to exhibit the lower sections of his anatomy which are usually tastefully hidden beneath the kilt.

12,000 punters now know what is worn under Frontier Touring Chief Michael Chugg's Kilt. Surprisingly some people thought it was actually Elton John but that was **before** the kilt was raised.

Brisbane Note

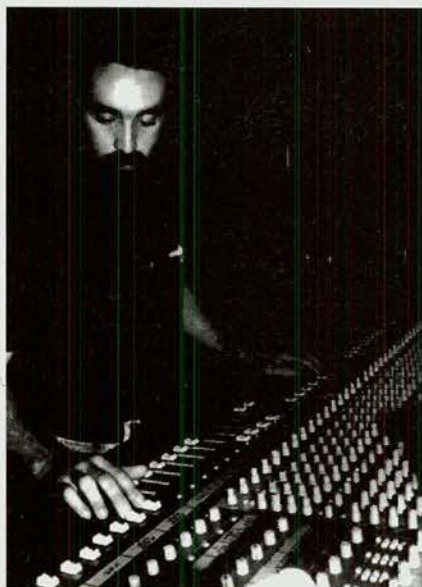
900 pretty young things are stacked knee to shoulder in Brisbane's Underground Nightclub, and one and all are having a screaming good time. It's 11pm, this band is a grab bag of

celebrity types, with names like Rick Price, Ally Fowler and Alyce Pratt (pictured - remember her?) fronting other TV celebrities playing covers. Almost too much to endure, and they're telling us Ray Parker Junior has flown home, so he will not be appearing! This is the Reebok Party Band or something like that.



Australian Concert Productions (ACP) are doing sound and I'm keen to hear their FOH configuration, which is based on JBL Soundpower cabinets driven by Jands' new SR-3000 amplifiers. Two box types are used, the top box is equal to JBL's 4750, which is loaded with 2 x 12" woofers and a 2445 2" compression driver and a 90° Bi-Radial horn. This sits atop a subwoofer based on the JBL 4785 TCB cab net, loaded with 2 x 15" woofers.

I'm impressed at the tight kick drum sound FOH engineer Ian Lofftos wrings from the rig. Monitors were driven by David Vinnicombe, who was having an easy gig. Consoles were Yamaha, a PM-1800 at FOH and a 2408 (24/8) monitor console, Yamaha graphics, BSS FOH crossovers and the whole rig was well prepared.



Ian Lofftos, FOH engineer, concentrates.



David Vinnicombe having an easy gig on Mon's

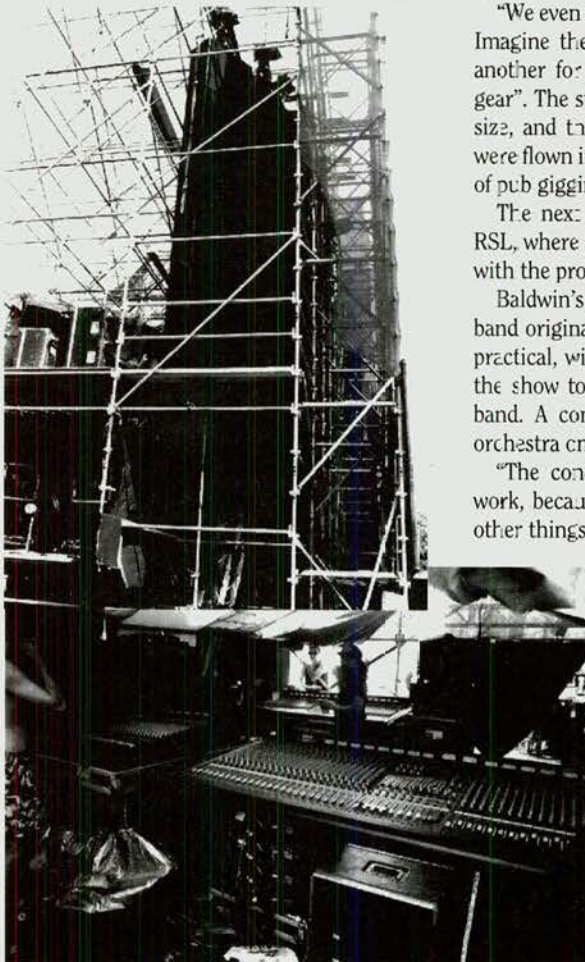
Production Spotlight

Concert for Life

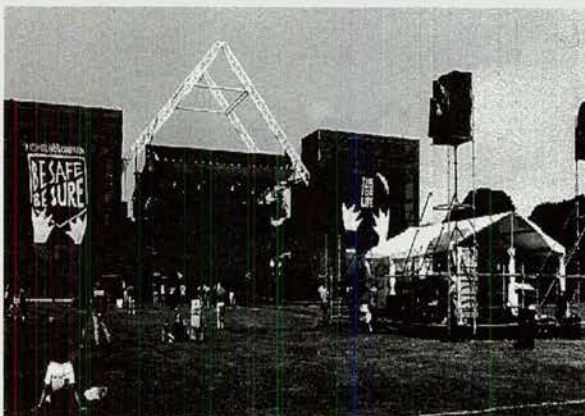
(from page 1)

which included merchandising and concession returns.

Colin Baldwin was appointed as event designer, and his company StageCorp provided a lighting system "for free, except for hard labour costs", he told Channels. "I enjoyed working with the band as their LD for the Concert, and the two warm-up gig's beforehand". INXS appeared at Sydney's infamous



Monitor consoles lined up, 2 PM 2800 (foreground) & Ramsa 47



Avalon RSL, billed as "The Farris Brothers", which was the band's first operating name a decade before they became international superstars.

"We even took down the Disco Rig at Avalon. Imagine the load in - an 8 tonner for lights, another for sound, and a semi load of stage gear". The stage at the tiny club was tripled in size, and the INXS's overseas roadcrew (who were flown in for the event) had their first taste of pub gigging down under.

The next warmup date was at Paddington RSL, where all tickets were sold at a premium, with the proceeds going into the Charity fund.

Baldwin's Stage Corp also built the set - the band originally had a concept that proved impractical, with the 75 piece orchestra used on the show to appear from a reveal behind the band. A compromise was reached, with the orchestra on a rise at the rear of the stage.

"The concert caused me some trouble at work, because I was donating my time, some other things suffered here", Baldwin said.

"For lighting I used 400 cans, of which 150 were A.C.L.'s, with 4 x 12k HMI's, and a followspot for each member of the band", said Baldwin. "The first half it was still fairly light (the show ended at sunset) so I ran just the followspots, in the last 20 minutes I ran the whole lightshow. Two thirds of the rig was open white".

"INXS are an international act, and used to working their own way", said Baldwin, explaining the decision taken by the band to utilise overseas production manager Lee Charteris. "Keith Bradley is the band's usual production manager, so Lee would have been his nominee".

The band rehearsed at the ABC's Studio 1, with the complete stage, for some time prior to the gig.

The audic side of the event was an immense undertaking, overseen by Jands Production Services, with equipment also supplied by The P.A. People. Jands organised a main system more over....

comprising 48 x Clair Bros. JBL loaded S4 cabinets, and 112 x Turbo Sound TMS-3's, with 48 Sub-Low cabinets and 24 TSW for low bass projection. To better 'locate' the mix father back in the crowd, a pair of delay rings were established, the first of which utilised 10 x JBL 4580 cabinets and 10 x JBL Ultra-Long Throw Horns (40° dispersion). The second delay ring had 24 JBL mid-modular boxes with 16 JBL high-modular's. At the front of stage 12 JBL loaded SLP monitors provided front fill for those punters too far forward to hear the main stacks.

Out front, the mixing console compliment ran to three Yamaha PM 3000's, 2 x 40 channel and 1 x 32 channel version, with a Yamaha DMP-7, while the monitor system was driven by 2 PM-2800, 1 Ramsa 40, a 2408 Yamaha and a 916 for keyboards.

Monitor compliment included 24 JBL loaded SLP wedges, 10 DLP wedges, 10 R3 composite boxes, and 11 System 80 subwoofers. This is virtually the same compliment as utilised on the two warmup dates (above), can you imagine this much foldback at Avalon RSL? The warmup dates used S4 and JBL modular speaker systems.

The P.A. People provided their whole Turbo System, with some extra consoles, again for no fee except hard wages, according to Chris Dodds. "No body got paid anything except hard wages and material costs" he told us. Various Lighting houses donated gear as well, according to Baldwin.

Isn't it nice to see all these production companies working together to help a cause?

Production Spotlight

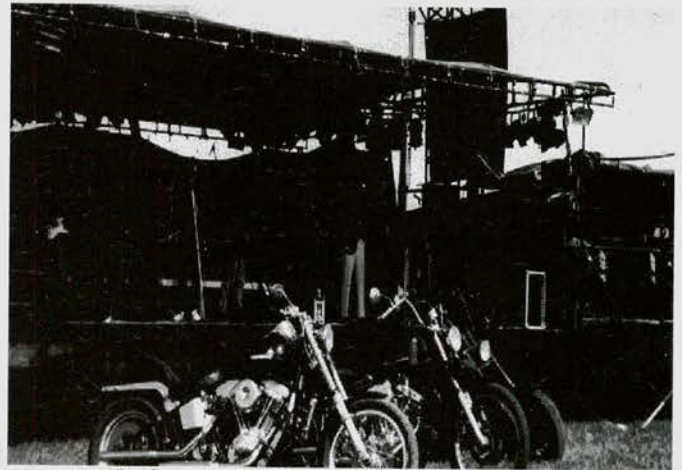
Yella Rock Bike Festival

By our Cultural Reporter, Colin (Spaceman Spliff) Miller

Many events take place through out the year which are a direct reflection of peoples lifestyles & the sub culture in which they exist. One new yet not so well known event is the "Yella Rock" Bike Festival, which takes place once a year and is put on by the Bandito Motorcycle Club.

The chance to attend this 24 hour a day, 3 day party came when Rick Doolan of Bandanna Entertainment asked if I'd like to see a 'real gig'. The challenge was laid down, and accepted by yours truly.

After arriving at the scene of the party I suddenly became aware that I had no idea of what I had let myself into. Here in a sea of leather, chrome, tattoo's, beards and Harley's, I suddenly felt very naked in mum's clapped out little Sigma. After negotiating my way in



Butlers stage (with roof low to defeat drizzle)

and around thousands of dollars worth of bikes, which were owned by people who looked like they had just won a fight with a rock crusher in a coal mine. I found my contact - Mark Gibson.

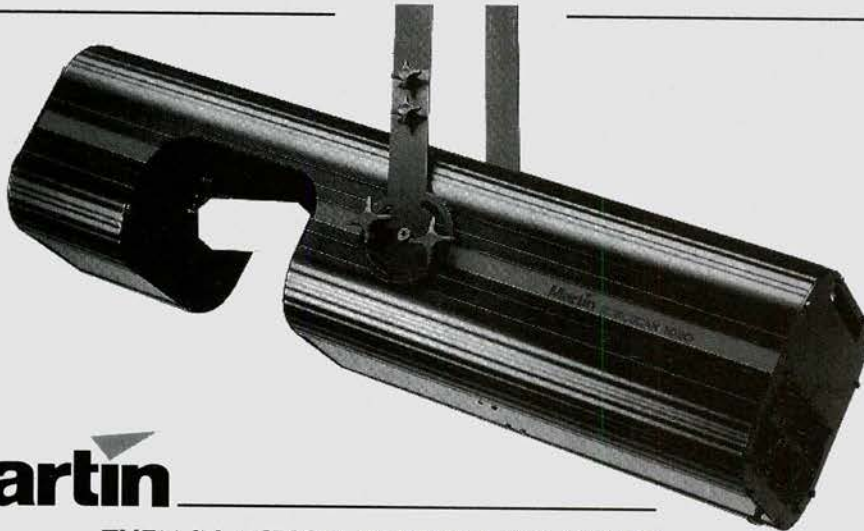
My first job as a fearless reporter was to meet the Bandanna crew and check out the stage and system (which was also a good way



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to avoid mean looking punters). The stage was an impressive fold out winch up type, towed by a prime mover and supplied by Butlers Hire.

Next on my list of things to check out was the FOH PA, which was run by Mark Gibson and Gaff, consisting of 10 x ARX 118, 10 x ARX 212, 4 Renkus Heinz L1 subs and 2 Renkus Heinz B1, all driven by Jands and ARX amplifiers. Mixing console was Bandanna's 32 channel Yamaha.

The next stop was the lighting rig operated by Ziggy, from a Jands ESP-48 console into 4 Jands Roadpaks, driving 110 assorted Par 64's, Rays, Minuettes and blinders.

Lastly came the foldback run by Brett and Darren Gibson via a 24-8 desk, with 6 JBL AF42 wedges, 6 AXR 306 wedges, 4 Renkus Hienz B1 boxes and 2 System 80 subs, all run by 10 AXR 1200 amps.

The whole affair was a logistical nightmare which was pieced together into a problem free event due to the efforts of the crew, not an easy thing to do when the location is a 70 acre paddock with one big generator for power. On top of this they had to contend with 15 bands and their assorted equipment, light drizzle, and the inevitable knuckle dragon insisting you play the same ZZ Top tape for the 50th time during set changeover.

The entertainment was impressive with the likes of Phil Emmanuel and Dave Tice, Meatballs (Fat Out Of Hell), Stones Alive, Swanee, and a strip show where lengths of

ribbon and other items were produced from God knows where (which gave me a new perspective on a XXXX rating). Then there was the mad dude trying to break a world record by jumping heaps of cars in a vehicle that Mad Max would have shot his load over. (Huh? -Ed)

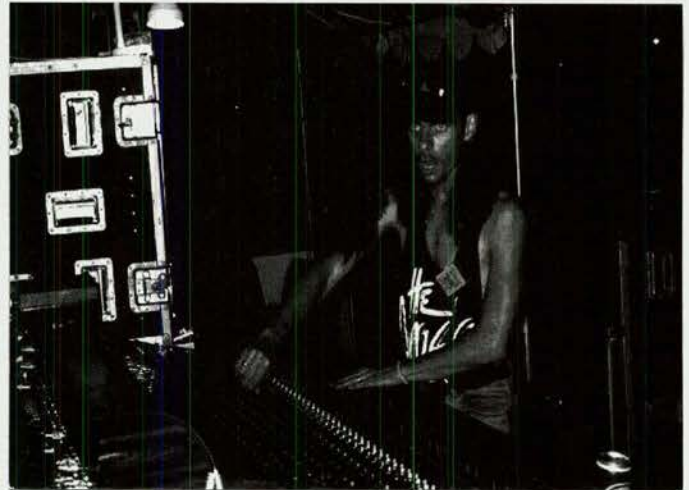
Security was tight with each Bandito armed with a 2 way radio and to their credit there was no real trouble. I would like however to thank the anti-social **** from an un-named club who made me fully aware of what a near-death experience is, and for helping me to understand what goes through someones head when being hassled for being a poof and drinking Fanta in the beer shed at 6am on a Sunday morning! It was strange, I never thought I could appear ice cold and calm on the outside whilst going internally beserk with terror. (Never a Bandito around when you need one, is there?)

All in all it was a great weekend with stalls, bike and tattoo competitions and a great bunch of people making it an enjoyable time. Everyone should go to

something like this at least once in their life to see how bikies party and to realise that they are not all bad.

It was an experience I'm glad I had, so thanks to Rick Doolan.

***Thanks Colin. You've experienced a reality! Given the choice back in my Production days, I'd rather a biker function anyway. My biggest hassle was being caught in the middle of the Easter riot on the mountain at Bathurst with 5 tonnes of PA, but I survived, and it wasn't the bikers fault, they were provoked. No, the type of gig I found worst - and many agree- was, and is, the dreaded Uni Gig. How bright and educated young people can act so atrociously- and cause so much damage- is beyond me. -Ed.**



Gaff at work on Bandanna's Yamaha 32

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In the U.S. of A., Concert Production Companies do things differently- to the extent that one of the top outfits, Audio Analysts, built their own full-on consoles. The task was accomplished with the help of an Aussie, Shane Morris- who tells his story here to Julius Grafton.....

Designing the CADD

Shane Morris is an Australian who has designed and built possibly the world's finest live sound console - the CADD console, which is the frontline console used by Audio Analysts. "Albert Leccese called me up in 1986 and said 'come on board and design me a console'".

Some understanding of the American Sound Reinforcement business is necessary before we go any further, as to the reason why a touring S. R. company would forgo what is on offer in terms of mixing consoles, and build their own. Probably the main reason is that America is the driving edge of the world touring business, while the mixing console industry is serviced by manufacturers in Japan and England. The trend in the 1980's was to commission very particular mixing consoles, hand built to specification by companies like Gamble and Harrison for S.R. firms like Maryland Sound and Showco respectively.

The rapid growth of the industry in the early to mid 1980's fuelled this trend, and undoubtedly gave Audio Analyst's Leccese the confidence (and funds) to engage Morris. The brief called for three house consoles, and three matching monitor consoles, which were specified, designed and constructed individually in the period leading up to 1991.

"Billy Joel was the first act to tour with a CADD console, in fact they bought one here last year", said Morris. "The house console has 40 mic inputs, 8 stereo returns, 8 line inputs, an 8 x 8 matrix, 8 stereo subgroups, 3 main mix outputs (A, B, & C), and a total of 16 auxiliary outputs- configured as 8 mono and four stereo. Absolutely no VCA groups, I've heard the difference with a kick drum through a VCA and then not through a VCA, it's just not there!"

"The philosophy with the board was to keep things as pure as possible. The bandwidth is up around 100kHz, and the result is a very airy sound. The rails are plus and minus 20 volts, and with a minus 2dB internal level gives the console great headroom. I took a lot of care with phasing as far as the outputs were concerned so you don't get rolloff if you're going into a low impedance load, you consequently don't end up with a high pass filter on your outputs."

"The circuitry doesn't have any top end phasing errors because of heavy compensation around op-amps, it's all to do with definition."

"The EQ section is full four band parametric,

the Q extends from a third of an octave to 2.5 octaves wide, the low and high frequencies sweep across 5 octaves and the two mids sweep about 4 octaves". This gives you control over any frequency, which is important. Brian Ruggles who is Billy Joel's soundman is on record as stating that the EQ on the CADD console is 'extremely active'. "I took a lot of care with very accurate scalings around the potentiometers- what you see is what you get".

An interesting design consideration that Shane incorporated into the CADD console overcomes a problem with some other boards around, namely what happens to the Monitor Mix when a FOH engineer removes a PAD. "The PAD switch on many consoles actually changes the impedance on the line, which changes the crucial gain that is set at the Monitor console- if the PAD is taken out, the loading on the mic amp is lifted a little, and the difference in gain can be 1 or 2dB." Enough for the Monitor engineer to get a bottle or roll of gaff thrown in his/her general direction by a band member whose just had a blast of feedback! "Just

"Monitor Engineers have got enough pressure on them without getting the verbal from the rock star" (Not to mention having the Rider thrown at them!)

look at a specification where it says 'Pad out: 5k, Pad in 2k'" says Shane.

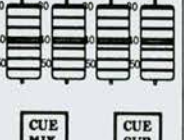
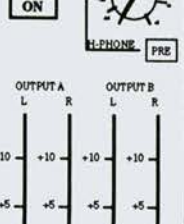
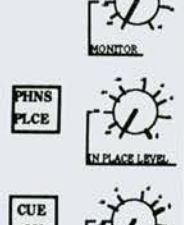
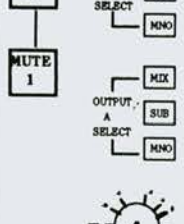
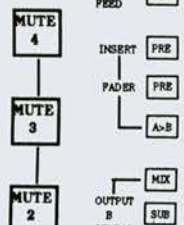
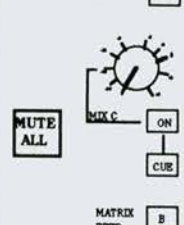
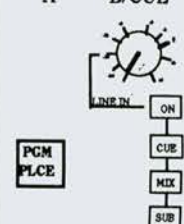
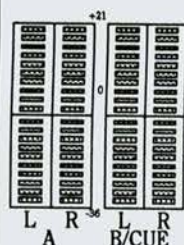
Getting back to the console features, every channel has +18dB input metering and four mutes. The eight stereo returns can be switched to ac-

cept microphone level.

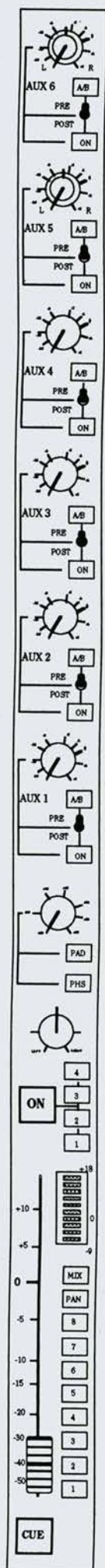
Shane eschews balancing transformers, preferring active balancing. "Transformers will give you great isolation, but you've got to pay a lot of money for a good transformer that'll behave like an electronically balanced in/out stage." The weight of a console full of balancing transformers is something else again!

The Monitor console featured the same EQ/ input module, and offers 20 sends. The configuration of the input module see's 16 rotary sends with a pair of dual concentric auxiliary sends for a total of four auxiliary feeds. Individual send mute along with selection for Pre EQ or Pre Fader (post EQ) or Post Fader for each send. You still with us?

A nice touch is the auxiliary remix ability, where any of the four auxiliary sends can be mixed into any of the sixteen main mix busses. Naturally each output mix has a 'DIM' button, which makes it easier to isolate mixes that are feeding back. The 'CUE' functions allow two different cues per out-



Lower input module (left) and lower output module (right)

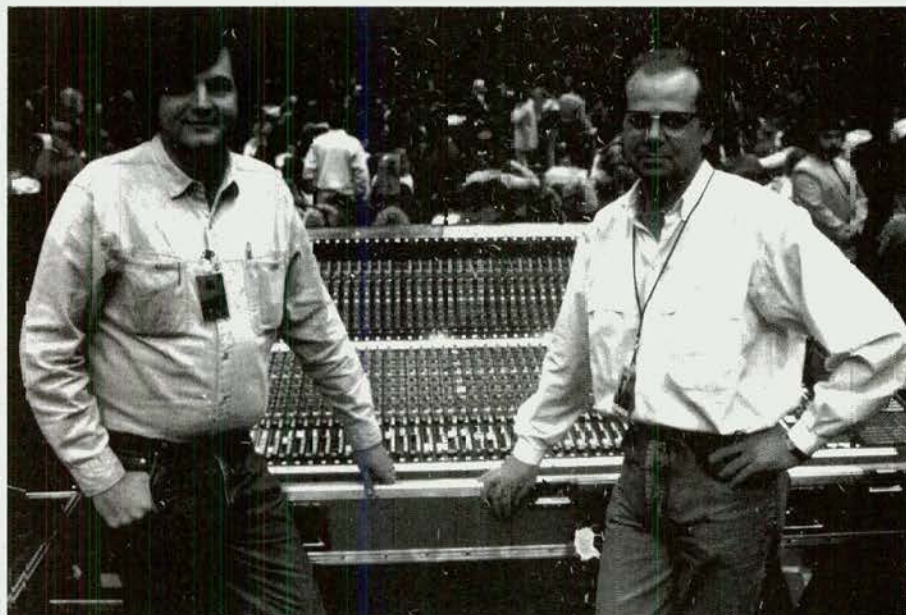


put mix-one pre fade, and one post fade- with a fade control, so you can balance your cue levels in the event one is a lot louder than another. This is typical of drum mixes, for example.

The outputs of the CADD Monitor console each boast a five band parametric equaliser, offering tight control from one-sixth to 1.5 octaves for very fine tweaking. The graphics disappear, on the New Kids On The Block tour they used just four graphics on the main wedges, the rest of the system EQ was done on the output modules. I commented that most monitor engineers I know are a little wary about using parametrics for main EQ, but Shane insisted that at an international level this is not so, particularly if you use decent monitor wedges.

Monitor engineers are under so much stress and strain you've got to give them what they need, Shane observed sagely. They're sick of getting the verbal from the rock star. Along with drumsticks, rolls of gaff, and empty rider bottles!

As to how an Australian ended up at Audio Analysts, the story started with Shane working for Soundcraft in the UK, then the USA, where he worked amongst the professional audio community supporting the Soundcraft range of products



including the Series Four console. When Audio Analysts decided to commission the CADD console, they called Shane.

Having finished the CADD project, Shane is

Albert Leccese with Shane Morris (right) back home to reflect on a hectic decade or so, and to basically relax a while. Shane can be reached in Sydney on (02) 344-9946.

Contract Watch

Megatone have recently completed the Heartbeats nightclub installation at Maroubra Seals Club. The install boasts 24 Martin Roboscan 1004 moving light fixtures, which boast 4 colours plus open white, 4 gobo's and precision stepper motors controlled via Martins 2032 Computer controller. The controller has an inbuilt VDU and a trackball.

Other features of the install include a 32 screen 'Smart Wall', a host of the latest 'whirly gigs' from Clay Paki, Griven and Lamo, and the usual assortment of PAR cans, neon and associated drive gear. Megatone's phone number: 02-564-2277.

Southbank Piazza is a very large contract to outfit an outdoor (but covered) arena theatre on the former World Expo site in Brisbane.

Jands Contracting will install an audio system supplied by the Southbank Corporation, comprising approximately 1200 loudspeakers, 20x Digital Interactive Audio Controllers (DIAC), 152x Amplifier channels and 1200 speaker filter networks.

The firm will manufacture, supply and install custom equipment rack systems, audio patch panels, outlets, input programme relay and paging, talkback and stage management systems.

Aluminium trussing to form a large octagon will be installed and supplied, along with Lodestar CM model L chain motors, custom cable retraction and reticulation systems. Dimmers to be installed are to be built by Dynalight, with Jands ProCan II Par 64's (Australian made), and Selecon 2kw followspots, DeSisti Leonardo 5kw and 2kw fresnels.

A Jands Event Plus 60 channel lighting console, custom DMX patch panels, DMX splitter amplifiers and associated equipment makes up the Jands part of this major job.

If you don't tell us about it, we can't tell them!
P.O. Box 439, Epping 2121 or Fax 02-876-5715

Showcorp to sell concert rig

As we went to press industry auctioneers Grey Eisdell Timms announced they would clear an entire concert system on behalf of Colin Baldwin's Showcorp, at an on-site Auction on Tuesday 26th of May.

Colin Baldwin told Channels he would retain some 300 plus fixtures after the system was sold, and it includes the AVO QM-500 console, AVO dimmer racks, Slicktruss and Socapex cab rigging. There are plenty of theatrical and rock type lanterns, and also two entire stage sets. The sets are the 'Kick' tour set, and the 'X' tour set.

For more information call Showcorp on 02-378-1799 or Grey Eisdell Timms on 02-740-6611.

Colour Changer Seminar

Following the success of the Moving Light Seminar held by Sydney firm, Lots Of Watts in April, the firm has announced a Colour Changer Seminar. The Seminar will be held on Tuesday June 9th, starting at 6.30pm, no charge & no RSVP needed.

"We'll follow the format we've established", Director Greg Kean said, "with individual product manufacturers having equal time to explain their systems, then a 'hands on' session where everyone can experience the products".

At press time, Lee Conlon's Colourset Scrollers, Rosco Scrollers, Pan Command and Rairbow Scrollers were all pledged by their representatives, who will be on hand to extoll the benefits of each.

In keeping with the theme of the seminar, it is hoped the latest 'Colour Mixing Lanterns' from Clay Paki, Martin and Highend Systems can be on hand, these utilise control signals to change colour, like a moving light without a scanning mirror. Contact Lots Of Watts on 02-638-0302. 47 Brodie Street, Rydalmere NSW.

LATE NEWS

Pro Light & Sound Expo

Scheduled for June 12th - 14th inclusive at the University of NSW campus in Sydney, where 3 theatres will be utilised. This show first ran last Winter in Melbourne, where the organisers touted a repeat this year at Sydney's Darling Harbour Exhibition Centre. Things changed, advertising is slim, we haven't heard a peep - but it will be on.

Milab on tour with Mr. Stewart

Lars Brogaard tour manager and chief sound engineer for Rod Stewart's 1991/1992 world tour has given high praise to Milab microphones, which he has been using extensively, according to distributors G.U.V.T. The new Milab LSR 2000 has, according to the guys at G.U.V.T., proven to be the best live vocal microphone Mr. Brogaard has come across during his many years of touring.

This new Swedish mic is designed to bring studio quality to the stage environment, they say. Mr. Brogaard is quoted as saying: "The Milab LSR 2000 mic we are using on the tour has proved as usual with Milab's products to be very rugged, withstanding all the knocks and bumps that occur during live shows".

LSR-2000 accepts a maximum SPL of 133dB before saturation, and has a switchable pad to add another 10dB. Phantom operating range is -2-52v. It has no transformer, and to offer a back rejection of 20dB. Mr. Brogaard says: "The frequency response of most mics alters dramatically over it's dynamic range, so in the 2kHz to 3kHz range the diaphragm produces a peak in response on transients which makes a vocal sound unnaturally harsh". The LSR-2000 doesn't do this, he says.

*Some swine **STOLE** one of Lars' LR-2000's in Brisbane. It's a NEW model, if you see it call Pat Tapper at G.U.V.T. on 08-363-0454.

The Secondhand Music Co.

is now:

Rock and Roll Music

Pty Ltd

ACN: 003 456611

New Phone: (02) 977-3188

Same location

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Neil SMITH - SMITHIE, and Neil OHLBACK
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Frankfurt Messe

Musik 1992

It's the world's largest Music Trade Show, and Channels correspondent Ray Bond was there:

Well it's time to pack the long coats and thick jumpers again and head off to Frankfurt, Germany, for the largest Musical Instrument and Pro Audio Exhibition in the World! Much like the NAMM show, only bigger, this was one of the original Musical Instrument Shows but also like NAMM, the Pro Audio Manufacturers display in droves.

A staggering 1500 exhibitors scattered through 6 halls plus the huge Galleria area, means that it does take you the whole 5 days the trade show is on to see this incredible exhibition!

The Pro Audio and Lighting side mostly occupy the top floors of the large Hall 9. New products for Europe had mostly been seen and reviewed in previous issues of Channels. The big difference at this exhibition is the prominence of the European Manufacturers and the international flavour they add to the show with over forty countries being represented.

Names not often seen in Australia include Zeck, Softarts, Smoke Factory, Vito, Tombo, Kotec and Volt, to name but a few.

So what's new? How about a semi-automated mixer from Soundcraft (to do battle with the Tascam 3700) - called Spirit Auto. More information on this in a future issue of Channels, it is slated for Australian release in Springtime. ART (no, not ARX from Melbourne, who used to be called ART - confused yet?) have released a new low cost range of recording mixers in Europe called Phantom Series. They come in 16 or 24 channels into 8, as well as 32 into 16. Strangely enough they are not 'inline' unlike the majority of new consoles on the market.

New products appeared

from Spanish company Altair, and a new Greek company called 'TWIN' showed it's interesting looking new consoles. The Italians were well represented by F.B.T. (Hey that's a tax, isn't it? -Ee) and Montarbo - but strangely enough no LEM. My friends at Mitec had a new line of cost effective boards, the M-802 and M-162 as well as new EQ, Patch and Gated Compressor Limiter modules for the Vari Desk System.

Speaker technology is new and old again, with the return of the 'large frame loud-speaker' (bigger than 18" dia). In previous years Hig Music from Sweden and Turbo Sound have shown that by the use of new material these long for-

merous to mention.

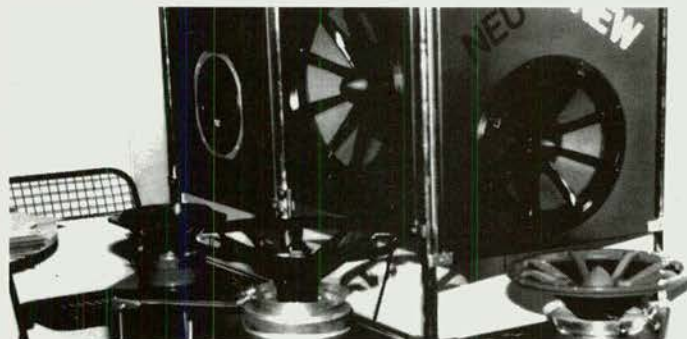
On the comeback trail were Hill, Studiomaster and the unkillable Harrison. Seems many UK amplifier and mixer manufacturers are feeling the tough times and seeing how hard the British Banks can be.

Aussie products were well represented with ARX, Jands and LSC on their respective European distributors stands, and A.M. were there for the fifth year. This is one of the great tradeshow to see if you are serious, despite the fact you'll use all of the 9 hour days to see it all.

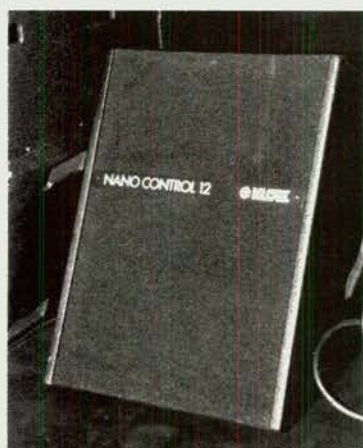
**Musik Messe is held around the start of march, next year from 3rd - 7th March 1993. Book your accommodation WELL AHEAD, as it will even then cost you a fortune!*



New for JBL - M Series



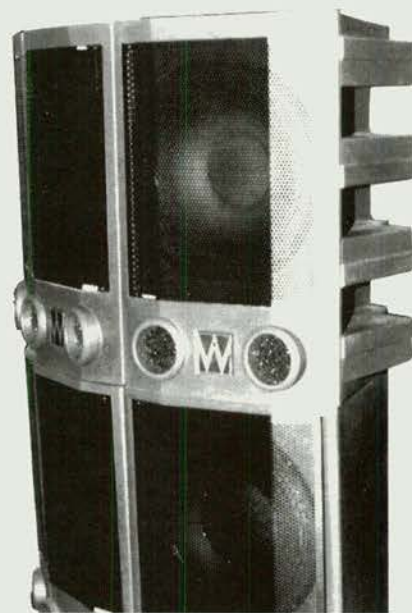
Here is the 'Volt' inside out loud-speaker concert!



What a name! And what is a 'Nano'?

gotten relics of the '60's and '50's had a place in modern PA's. Now Beyma from Spain and Profosound from Germany both had 21" and 24" speakers, with a six inch voice coil. Volt from the UK had their 15" speaker - with the frame on top! It is, in theory, lighter and stronger than more conventional speakers. They also claim improvements in efficiency and cooling with this design.

On the speaker cabinet front, everybody including JBL (with the Array Series) now have an electronically controlled PA, new systems were shown by Solton (remember them from the old Rank days?) Ohm and DAS along with others too nu-



Wharfedale - from HiFi to PA

Rimini 1992



Sex sells gear at Rimini. Hah! Don't blame us!

Look, I had a small niggle in my mind about this tradeshow. I just hate the word DISCO, it stems from the awful late '70's when I had a chain of installations that necessitated regular visitations. *Saturday Night Fever* was high on the charts, it put me off.

Of COURSE things are different today you say, and mea-culpa I agree. So given I know and understand that today's NIGHTCLUBS are about 5 galaxies away from those bygone times, I should adjust my mindset. Done.

Rimini is a town on the coast of Italy up near the top, the Northern Mediterranean bit, about 2 hours down from Venice. In Summer it does big beach trade, in the early Spring the SIB people run their tradeshow. It is THE major tradeshow for nightclub technology.

What is of vital importance is that what you and I used to label 'disco equipment and segregate is now in the mainstream. Moving Lights, of course, by this I mean. Who'd have thought those wretched 'kinetic effects' of the 1980s would develop into serious technology?

They have. Ignore at your peril. Clay Paky, Coemar and Intellabeam all flog one serious product each. A moving light product. That it is so important is testified by the massive number of other manufacturers all vying for part of the pie at Rimini. Everywhere you turned there was a waggly mirror.

Some old ideas were made new again, but take away the moving light story and you'd have a pretty dull Rimini. The next four pages are our wrapup of this expanding event, which is becoming more and more relevant to all corners of our trade. -JG

Don't copy us!

Coemar & Clay Paky lash out

(from page 1)

Nahum was talking to Channels at the SIB Sound & Lighting show in Rimini, Italy, where High End Systems were very visible with a new distributor. In a wide ranging talk session, we were joined by Coemar President, Bruno Dedoro who contributed courtesy of the very patient Poschi Grietta, who handled interpretation.

PIO: "Both our companies have had our products distributed by this big competitor of ours in Texas. Both for sure have (been) taken advantage (of) from this situation by developing products that are copies of our products, and by using our product to create his own market. What we have done is completely different. What Clay Paky has done.

We have realised, and we must admit, this American company is a very important company in this field, and it is not easy to make a petition against this company. We understand this company will always have a position in the local market.

We are trying to take a fair position".

BRUNO: "The American market is one of the most difficult markets. Clients are not interested in quality, rather price".

PIO: "Clay Paky & Coemar have always done first quality, you must pay for it. To explain quality is difficult, to explain price you just mention it".

BRUNO: "This American distributor....."(gives up in exasperation)

"We have a factory in San Antonio which will put together parts made in Italy and the United States. This will solve many problems, they are more prepared to accept products made in the United States rather than Italy. TAS is producing more economical products which compare better to ones made in Taiwan".

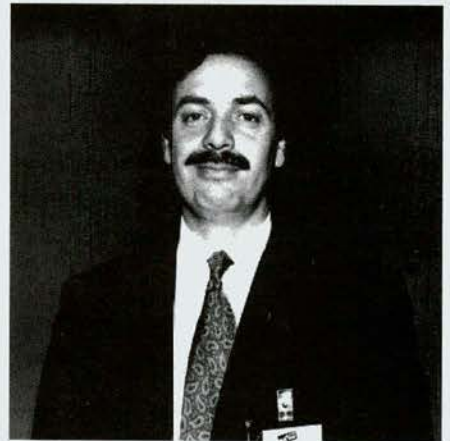
PIO: "Here in Italy nothing is different, Highend have always flitted from company to company, just to demonstrate they've been unsuccessful so far. I don't want to make polemics".

BRUNO: "For three years they come to Italy to try to sell. Of course they have a different philosophy, a different culture. Some things are legal in America, but not the same in Europe....."

PIO: "Let's speak about comparative advertising. In Europe no one would think about comparing his own product with another in a newspaper. The American companies are normally much more aggressive than European".

BRUNO: "I've been in this business for 25 years, and never said a bad thing about other peoples products. Then this company sent to the European agencies something that was false, a"

PIO: "A comparison sheet with FALSE infor-



Pio Nahum, from Clay Paky.

mation, FALSE information!"

BRUNO: "Some things are not in the mentality of these companies! The most important problem (for Coemar) is to produce different products to Clay Paky. They produced the Micro Scan, ours was created different, even though it would be easier to copy or make something similar. It took three times as long to make something new."

PIO: "The features are similar but the technology is different. I saw a copy of our Mini Scan at Frankfurt, a photocopy. Marketing is different, the right market approach must be made. Technologically it was possible for Coemar to make the same product as the Mini Scan, but they did something else. Always very fair competition."



Bruno Dedoro, Coemar President, (right) with your Editor.

Question: **DO HIGH END DUPLICATE YOUR PRODUCTS?**

PIO: "If you look at the history of High End, you see they have had Clay Paky and Coemar, and they copy Clay Paky & Coemar. They have had JEM, and they copy JEM. They have a good philosophy, they distribute a product, they create their own market, they create their own distribution network, and then they supply their own product. That's OK. They have not the same approach from the research & development point of view. We start from research, they start from distribution."

-Julius Grafton

The Texas based Intellabeam maker stands tall in our exclusive interview

High End Systems talk

Following the fairly robust statements made to Channels by Coemar and Clay Paky regarding High End Systems (makers of 'Intellabeam'), we interviewed High End President Bob Schacherl, and Sales Director John McDowell to get their side of the story.

Well, Clay Paky have alleged you distributed false information regarding Golden Scan. Do you want to refute that?



High End Systems President, Bob Schacherl

Schacherl: Absolutely. We built our business on a very professional image, a background of high quality dealers, they rely on us to be 100% truthful. The knowledge we impart to our dealers is 100% accurate.

McDowell: We test product to get values, we do scientific tests. It's a touchy situation with charts.

Clay Paky say you've brought in a 2nd set of specifications....

Schacherl: Specifications that some manufacturers quote are based on the performance of individual components, particularly lamps, and they don't necessarily take into consideration the actual output of the light after the optical train, and we feel that is the data everyone should be basing their products on.

How do you approach the SIB (Rimini) show?

Schacherl: We approach SIB as much more than an Italian show, everyone who's in the industry recognises it's international significance.

McDowell: As far as (the comment from Clay Paky regarding) changing distributors, the remark sounds like fear to me. Our distributor here is a new company, but we've known Giulio and Gabriella Savoldi for a long time. (Giulio Savoldi was until the end of last year a partner at Clay Paky). In our opinion we think we've got a wonderful opportunity with the right people.

Clay Paky have accused you of copying their products. What do you say to that?

Schacherl: We need to back up a few steps regarding the allegation that we've copied their (Clay Paky's) products. When High End Systems were first founded we were strictly a distribution

company in the United States, and we were quite happy being the sole distributors for Coemar and Clay Paky. It wasn't until we started having, shall I say, political problems, and there were rifts in our relationships and in actuality they started to do direct deals with our customers, we felt threatened. Not so much Coemar, but Clay Paky. The people responsible at Clay Paky no longer work there. At the time we had Coemar's Jupiter and Clay Paky had released the Golden Scan. We had already started our initial manufacturing capabilities before any of this happened, we were developing totally non-competitive products at the time, which were Data Flash and Color Pro. Totally non competitive. That was our focus, that was our thinking, we had a great relationship with these wonderful European products.

McDowell: Our customers were very fond of the Clay Paky Golden Scan, we told our wives, 'this is what's going to feed us', when Clay Paky took Golden Scan away, we had a problem.

Did you then go back to Coemar and say: 'Guys, the Jupiter needs fixing for the US market?'

Schacherl: Well, we weren't that blunt about it. We told Coemar we were working on the Intellabeam, and we sold Jupiters while we were selling Intellabeam, Not very many, but we didn't play with the pricing, and we said any time they felt unhappy with our company to just give us 30 or 60 days notice.

McDowell: We came up with a system, the Intellabeam plus a controller, which Clay Paky didn't do with the Golden Scan. Research and development is a very large cost for High End, we



...and Sales Director, John McDowell.

have 12 people working in R & D at the moment, that's a big commitment. We're driven by the customers rather than our competitors.

Schacherl: Software has been our forte, we do high tech engineering in house.

Coemar have established a factory in Mexico

Schacherl: The manufacturing environment on a mechanical level in Mexico is very conducive

to this sort of work. Culturally Italy and Mexico are similar.

Any hints regarding new products from Highend?

Schacherl: I anticipate having 6 new products at the LDI show this year, running the gamut from small DJ right up to the professional end of the market.

What does a Vari*Lite do that Intellabeam doesn't?

Schacherl: Their controller is a wonderful controller. Ours is a lot brighter. (400 vs. 700w)

Do you see lighting control boards running two protocols, DMX and a moving light protocol - together - with outputs soft-patched?

McDowell: That's been one of my missions in Europe, talking to board manufacturers about what works best for them. Celco's Navigator is suited to one protocol only. In the sense of the Navigator it would be better to maybe slave two together, one running one protocol and one running another. I see our protocol and DMX running together in new lighting consoles. Some manufacturers have indicated to me they will do this. We will make our protocol available to any manufacturer. It'd be nice to see the Intellabeam standard appearing in console protocol alongside DMX-512.

-See our Moving Light Comparison, P- 36.

Highend show off

A feature of LDI '91 and RIMINI '92 is the 'Big Lightshow' which manufacturers stage to show their products. Noise and Light!

High End Systems stage a truly excellent show, based on the Intellabeam moving light, Emulator laser simulator, Data Flash programmable strobe, and other products.

Tim Grivas, programming director, told me: "I designed this show. When an LD needs to use our product, I help program his show, and set up his control system".



Tim Grivas, High End Systems Programming Director.

JUNKET? No way!

The call came late, just slightly more than a week before, and then we were on the good ship Sorento, as Alitalia had christened this 747-200. Sydney to Melbourne, then Bangkok late at night made 12 hours. After a short blunder around the terminal, it was back onto the jam packed plane for the 13 hour leg to Rome.

The four Aussies en-route to the SIB show at



George Doukas & friends

Italian Government promotes industry

RIMINI (ITALY)- The Italian Institute for Foreign Trade (ICE), and the Association of Italian Discoteque and Theatre Equipment Manufacturers (APIAD) recently hosted a trade delegation to the 10th annual SIB International Exhibition of Equipment for Discoteques and Dance Halls, held at Rimini, near Bologna, Italy.

An admirable joint effort, the delegation made up some 63 persons from 19 different countries, including Egypt, Venezuela, Algeria, the U.S., Canada, Asian nations and four Australians. All delegates were flown in, accommodated, entertained and fed - the undertaking costing over \$300,000.

Because the disco (or nightclub) industry is massive in Europe, and particularly Italy, the show is a fusion of exhibitors from the audio, lighting and club furnishing industry, and well attended. APIAD represent some 30 odd Italian manufacturers in this sector, so the Delegation was obliged to visit these companies exhibits, which was achieved by shepherding the group from stand to stand at the show during the first two days.

Delegates were then free to spend the last two days of the show visiting other exhibits, and a nightly program of 'Regional Restaurants' and Disco visits kept the troops entertained. Overall the delegates were naturally enough quite happy, the organisers appointed nice minders and laid on sight-seeing - very easy to take.

Australian delegates were George Doukas of L.A.V.A., Noel (Mel) Bourne of G.U.V.T., and representing the media were Sonics Mag's Greg Simmonds and your editor.

Rimini in Italy had plenty of time to ponder the frantic scramble that a late invitation produces. Is it worth the trouble? Renewing your passport in mere days, rearranging your life and that of your spouse, shuffling appointments and canceling others - struth.

Stepping onto the Alitalia plane was like leaving Australia and arriving in Rome all at once - the same feeling you get when you get onto a Qantas plane on the other side of the world. Of course the Italians are a warm hearted race who really don't mind if you don't speak their language- they try, and appreciate your efforts to communicate. Bound for the homeland, the sense of anticipation is palatable, so the passengers are happy.

Happy people in Italy like to sing, dance, drink and smoke a lot of cigarettes. Happy people on a Jumbo Jet can do most of these things, and of course the whole trip is a continual procession of people up and down the aisle, talking, shouting, waving arms, drinking - and smoking. The Jumbo from Hell has taken off!

After 24 hours we land at Rome, where it is 6am, after the excruciatingly long night you experience when flying towards the West. The runway has ice on it, and of course we disembark onto the tarmac and into a bus, file slowly into the terminal, and slowly clear customs. For us it's another hour or so till our domestic flight up to Bologna, so we cluster around the Bar, where a Cappucino and Brioche breakfast is the order of the minute.

Some time later we arrive at Bologna, and go in search of our luggage, which has come direct from the Sydney flight. We have to clear the luggage through customs at this regional airport, a small Aeroflot jet has just disgorged 75 passengers ahead of us, and naturally enough, the customs guy with the sub-machine gun would like to search my bag.

Then we try to uncover our bus to Rimini, which leaves after much stuffing about for the hour plus drive. Finally we check into the Continental Hotel at midday after 30 hours travel, and I crash. My fellow countrymen however go to lunch, and wake me later to go to dinner, with our hosts.

The personal foibles of your fellow countrymen becomes apparent early in a trip such as this. Simmonds has been before, and is very good at sussing out things Italian. Doukas does not sleep. He is out every night with the rest of the

delegation, then sitting up in the hotel bar into the late, late hours. Bourne is the quiet achiever, saying little, just taking everything in. Myself - I torment those other delegates unlucky enough to sit at dinner with us, in the great Aussie tradition of stirring.

At the tradeshow we are shown to a meeting room which is our base, an adjacent lunch room, and a bar. We are appointed a 'minder', in our case



Actual fair dinkum product promotion on the Space Cannon stand. Different, huh?

a nice lady named Allesandra, who with fractured english will guide us around the trade show during the two days compulsory schedule, which consists of visiting a different Italian manufacturers stand every twenty minutes or so.

The plan collapses before lunch, because we get to the Space Cannon exhibit where a show is starting. A dancing girl type show, with all sorts of

strange things going on - and coming off. We sit and take it all in like good delegates, and quite some time later go to lunch.

Thrown in for good measure are some press conferences for Simmonds and I, along with about 15 other journalists- the first of which goes forever, with dual interpreters and long winded questions and answers about nothing. We decide to kill the guy from the Canadian magazine who has asked the same question three times, each time in five sentences, and each answer equally long. In fact, his whole line of questioning is needless, a Press Release earlier in the day had all the answers!

What really astounds me is the typical approach most of the lighting exhibitors have, which is an enclosed stand in which they run a lightshow to music, often through a really bad sound system, and always with lots of fog. So much, in fact, the whole show is like a war zone. These shows feature squillions of waggly mirror effects that all blast away through the gloom and haze, and you depart non the wiser as to the mechanical or technical attributes of the product! Even more strange are the live shows within some of these exhibits, which like the Space Cannon show, usually feature dancing girls and which have absolutely zilch to do with product. The better the show, the less attention you pay to the product, and the greater the crush of punters!

So we have our two days compulsory schedule, and then we are cut free to 'do the show' proper, and these last two days are not really long enough to see everything. Aussies we meet are few and far between - Peter Kemp is on the Coemar stand, Peter Freedman arrives on the last day with an



Simmo with Rock Hudson.

airline horror story about spending two unplanned days in Singapore, and Gary Pritchard is fronting for LSC on the LMP Lichttechnik stand. Few and far between, and all flying cattle class. This is 1992.

After the show we have a day to kill and our general hosts arrange a trip to San Remo, where a blizzard is snowing about the place. Doukas impresses his fellow delegates with his sidewalk ice and snow routine, sliding down the steep streets on his feet, seemingly in full control, dressed in a suit, with an umbrella held horizontally as a wing break. It's like a grotesque transvestite Mary Poppins almost, and looks very funny through a shop window looking outside.

The next day we depart from Rimini airport very early and have a whole day to kill in Rome, our flight leaves at midnight, so the others try sightseeing in pissing rain while I retire to a hotel room, nursing a churder bug that thankfully passes by nightfall. Midnight passes, the good ship Centro Porta as our homeward bound 747 is known departs late at 1.20am Saturday morning, retracing our outward journey, and landing me in Sydney at 9am Sunday, where typically I am searched again. Must be the way I cross. I feel like dog meat.

Poor Noel Bourne transits to the domestic terminal, where his Brisbane flight is canceled, he staggers in to his home just before nightfall. Life goes on, and we all go to work on Monday, the jetlag finally shaken by the following Thursday.

How people like Gary Pritchard, Duncan Fry, Paul Mulholland and Ray Bond cope with their continual travels around the world escapes me, perhaps a story on coping with long flights and jetlag is a good idea for a future issue.



He's BACK! Seen outside his disco.

Mini or Micro?

Coemar designer highlights the differences between Mini Scan & Micro Scan. "They're different"



Fausto Orsatti is a Coemar design engineer, charged with getting the Micro Scan and Samurai to market. The Micro Scan is pitched at the same market that has embraced Clay Paky's Mini Scan, but is sufficiently different in terms of lamp options and even the number of colours you can use - 5 vs. 8 in the Mini Scan. Talking to Fausto I muddled the product names, commenting that is easy to do, due to the similarity.

"Well, Clay Paky won't be making the Mini Scan much longer, now we have the Micro Scan", he joked. Asked if Coemar would come up with something to compete with High End's Emulator (a laser simulator), he told us no, there was no need, because in Europe Lasers are quite legal, and as such there is no need for an Emulator type product.

This was certainly the case at Rimini, where many laser companies demonstrated their products by blasting away at the bystanders, who were perfectly facing certain vision failure if they chose to hang around and stare into the flashing beams long enough! Thankfully the rest of the world has started to regulate the use of lasers by keeping the beam away from people.

"The optical system in the Micro Scan uses large lenses, the optical system is bigger than the Mini Scan. We don't lose light, the beam is very very good, which compromises the dichroic (colour) so we use less colours than they do", Fausto told me.

We had a long debate on 3 pin XLR vs. 5 pin XLRs, Coemar use 3 pin whereas Clay Paky use 5, which is the DMX standard. I commented that 3 pin XLRs left the fixture open to being hooked into an audio line with consequent ashing of the DMX smart's a possibility. Fausto said many customers asked for 3 pin XLRs, and after all, these do cost considerably less than 5 pin. High End use 3 pin as well, so the debate was not important.

"Our dedicated DMX allows some more functions over ordinary DMX, our controller works with dedicated DMX for more functions. The speed of the data is quicker with our controller", Fausto said. The new Samurai also takes advantage of this dedicated DMX.

"Compared to the Golden Scan, we have more colours, more gobos, the dimmer, the strobe and the flash function where you rotate the wheel, which can do three functions. We have a 100% dimmer. We look carefully at price. We use a special stepper motor. You must look at the light output, with the right optic system you can have more light".

Bits, Things & Stuff

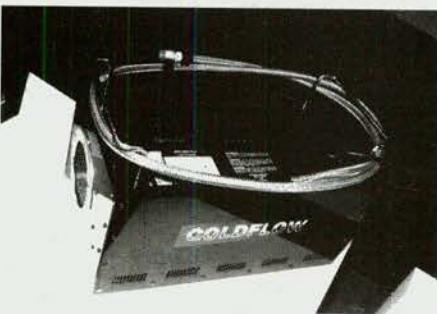
It's a power distribution system with inbuilt leads trunk. Nice idea! (right)

▼ Solar 575: Years late!



Augusto Andraghetti of 'Spotlight' who make same, spied with his favorite magazine, and favorite lighting console. Spotlight are Jands Dealers in Italy.

▼ Highena's new Nitrogen fogger for fast low fog. A go'er!

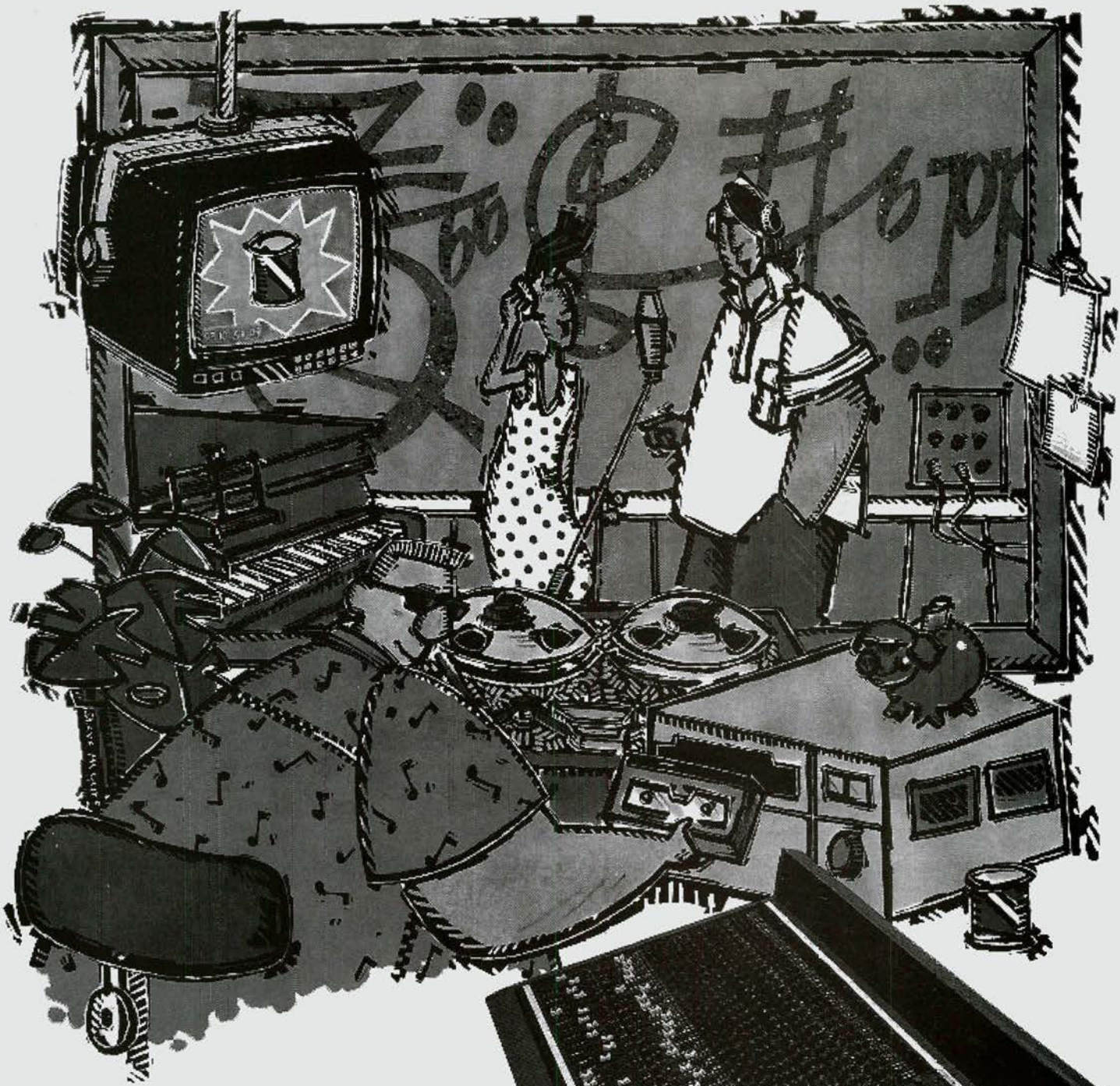


Other product we spotted at Rimini included some new things from Clay Paky, Martin and FAL. Next issue we'll have a look at the POLYCCOLOR, ROBOCOLOR MSD 200, and some FAL lines, along with whatever else we've missed here. You're probably wondering why the heavy accent on Lighting well it's because the audio industry in Italy is just not up to the same level as the lighting industry. To be fair, the less said the better.

The number of exhibitors displaying moving lights turned the whole show into almost a waggly mirror display. I lost count after 29 manufacturers alone, including the very serious Vary Scan people from Germany.

*Our thanks to Umberto Bonito of I.C.E. for his very kind hospitality in Rimini.

Our giant Moving Light product comparison starts on page 36



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Sapphyre

Channels

**STUDIO and
BROADCAST
Supplement**

The professional Sound and Lighting magazine

Issue 13



Brisbane studio adds new floor, cuts for work

GREVILLEA EXPANDS

BRISBANE: When the entertainment industry thinks big in terms of audio post production, usually their thoughts stray to Sydney or Melbourne. However, one of the most comprehensive audio post production studios is to be found in Brisbane.

Grevillea Recording Studios is nestled quietly in the Breakfast Creek region and boasts a string of credits and services usually found only in major southern production houses. The studios have been around since 1985 and have steadily developed a solid reputation with freelance producers, composers, engineers, musicians, and creative talent.

For many years, Grevillea held the leading reputation for orchestral productions, with a gradual expansion into the film and audio post production area. Its current client list includes Paramount Pictures, Mushroom Records, Parry Music Corporation of Canada, Warner Bros and Roo Films. One of the studio's more recent productions is the animated series, 'Dinky Di's', fast becoming popular worldwide.

Some of the services Grevillea offers range from total audio post production for television and film, ADR, Foley, FX and dialog lay-ups through to marketing (music) research and FX creation.

Grevillea Recording Studios is a 24 track recording studio with Dolby NR,

a comprehensive 36 input mixing console, extensive studio facilities and a wealth of outboard gear, including a huge sound effects library with an extensive Australian section, large Foley stage and a stereo/digital editor for effects creation.

The studio has been designed to cater for up to 40 musicians at any one time and recently the installation of a solid timber floor has given the room a more 'live sound', proving especially good for acoustic instruments and drums. The studio also has Queensland's only Calrec Soundfield microphone and the control room sports a Soundcraft TS12 36 channel console, MCI JH24 with Dolby A, Mastering to Dolby SR or DAT, and a choice of Urei, Yamaha and JBL monitors.

Through a carefully planned expansion program, Grevillea have created their own support system by developing Queensland's largest high speed cassette duplication service right next door. This facility incorporates printing and packaging and can arrange artwork if required.

Accommodation, flight details etc can be organised through Grevillea. Studio tours can be arranged by contacting Lisa Aston (Studio Relations) or Bruce Jacobsen (Technical Director) on Brisbane (07) 262-8422, or phone for a brochure.

-By Lisa Aston, Grevillea Studios.

◆ Apogee Filters explained (inside)

PRODUCTS PRODUCTS PRODUCTS

BEYER: Beyer Dynamic of Germany have released a new range of Miniature Condenser Microphones, which feature omnidirectional condenser elements. Two models are featured, the MCE 52 is ideal for percussion miking, able to be quickly clamped to the rim or a drum, and the Beyer MCE 53 has an integral gooseneck offering a wider range of mounting positions for use with brass and woodwind instruments.



Both microphones feature a remote electronics module and are available in versions for 12 to 48 Volt phantom powering, 9 volt battery operation, and for direct connection to Beyer's wireless microphone transmitters.

The microphones have integral pop filters, and are said to deliver smooth response and clarity, yet are able to withstand very high sound pressure levels.

CABLES: Mogami are the cable makers who are distributed by GUVT, and feature an astounding number of product lines. Following the release last year of Mogami's Bantam Patch Cords, they now offer Long Frame Patch Cords, these have nickel plated tip/ring/sleeve connectors, moulded to the cable in a low profile design. The overall diameter is 10.6mm, allowing use in tightly packed high density jack fields where 12.7mm between jack centres is the minimum allowed.

Mogami use extremely flexible, quad balanced Neglex OFC cable with an oxygen free lapped copper shield to eliminate electromagnetic interference - the same cable as used in Bantam cords.

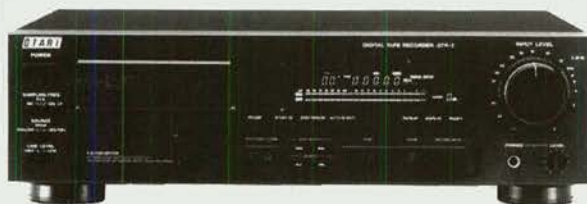
Lengths available are 60cm (24"), 90cm (36"), and 120cm (48"), and they come with interchangeable coloured rings for easy identification.

OTARIR-DAT: The DTR-7 is a professional DAT machine offering long play and wide track playback modes along with standard wireless infra-red remote control. Facilities include bal-

anced active analog inputs and outputs, an AES/EBU/SPDIF digital interface, and an optional Parallel Remote Controller. Features include 48, 44.1 & 32kHz record sampling frequencies, start ID, auto ID edit and auto re-number functions. Other assets include 1-bit Delta Sigma A/D and D/A converts. Bar graph meters with peak hold and XLR input/output connectors for the active balanced connections complete the picture.



HEADPHONE CONSOLE: Kane offer the HC-6, which now has Stereo inputs for each of six individual channels. Output is said to exceed 120dB SPL, to wit, 450mw per channel. Each channel can additionally drive two pairs of headphones. A master stereo input allows one source, and this can be switched mono or stereo. Signal present is indicated on each channel via a LED.



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PRODUCTS PRODUCTS PRODUCTS

YAMAHA DRU-8: This is a rack mounting, digital audio stationary head recorder that uses a convenient cassette format for 22 minutes of continuous 20-bit recording time at a 44.1kHz sampling frequency. The unit boasts a frequency response of 20Hz to 20kHz (at 44.1 and 48kHz sampling frequencies), a dynamic range of over 120dB, and 'immeasurable wow and flutter', so say Yamaha.

All common operating modes are accessible with a single keystroke on the DRU8's front panel or on the optional RC8 and RC24 Remote Controllers. In addition to the units 8 PCM audio tracks, the DRU8 features a separate timecode track, a servo control track and two analogue tracks for sync codes or click tracks, leaving all 8 channels free for program material. Conventional analogue systems reserve one or even two tracks for timecode.

The DRU8 has three recording modes: All record - used for format-

ting a new cassette, timecode striping, index marking or simultaneous recording on all tracks; Sync Dub- used for synchronised recording of individual tracks; and Punch In - used for timed punch-in and punch-out recording of individual track segments. The Rehearsal function, available in recording mode, allows dry runs before committing signals to tape. Punch-in rehearsal facilities control the transport and input switching automatically, so pre-roll and post-roll points and monitoring levels can be adjusted.

The unit has an inbuilt 8 x 2 digital mixer with panning, for monitoring. It will chase & lock to external timecode without an external synchroniser, and full remote control can conform to Yamaha, Sony, CMX or Ampex protocol. Up to three DRU-8 recorders may be synchronised to sample accuracy, and controlled by the optional RC-24 Remote, to appear as one 24 track to the operator. The RC 24 provides comprehensive editing facilities.



DEGAUSSER: Weircliffe announce the BTE28 Budget Degausser, intended for the general magnetic media user with the need to erase VHS, audio cassettes, cartridges and reels, data cartridges and floppy disks, at a bud-

get price. The unit joins over 200 other models in the company's range, and offers -80dB erasure level, with a throughput of 84 tapes or disks per hour. Media with a coercivity of 800 Oe maximum may be erased.

NEWS

▲ **PA People** have delivered an Akai DD1000 Magneto Optical Digital Disk Recorder, along with a Yamaha YPDR 601 Compact Disk Recorder, to The Seven Network, for its coverage of the 1992 Olympics. The sale included some other goodies as well, including 4 Denon DN970 CD Players, 2 Yamaha SPX 1000s, 6 EV Sentry 100EL monitors, and 7 EV RE50 mics.

▲ Meanwhile, **GIANT PRODUCTION COMPANY**, the operators of

the studio of the same name in Sydney's Balmain, have installed their YPDR 601 CD Recorder. Studio owner **Peter Dawkins** bought the machine from Sydney's The PA People. Here he is, looking content:



▲ **John Lancken** has been appointed International Sales Manager of Fairlight ESP, which means no more calling on regional studio clients here in Oz as sales bod for AMBER TECH-

C800G has Thermo Electric cooling system Sony release Tube Microphones

SYDNEY: The SONY Corporation have unveiled a remarkable pair of vacuum tube condenser microphones, which appear to outperform most, if not all, contemporary condenser microphones. The C-800G offers frequency response from 20Hz to 18kHz, against Neumann's M269 which offers 30Hz to 16Khz.

The 6AU6A tube is cooled by means of a thermo-electric cooling device, which utilises a Peltier device, a heat pipe and a heat sink. The Peltier device which is the core part of the system, is formed in a sheet of metal which cools at one side and heats at the other side as a result of the heat radiated from cooling. The cooling side is attached



to the vacuum tube to cool the considerable amount of heat generated from the tube by lowering its temperature. The heat radiated on the other side is sent away via the heat pipe.

Both models - the C-800G and the C-800 feature a unique two piece anti-vibration body, which is joined in two parts with a slight space where air resistance occurring within is used to eliminate acoustic vibration of the body.

A new large diaphragm capsule is said to produce the goods even at wild SPL, 150dB in the case of the C-800. Directivity is selectable between Uni or Omni Directional. For info, call Peter Norman at Sony, 02-887-6666.

Control monitors free with Studio console

Soundcraft offer JBL with Spirit

SYDNEY: The new Soundcraft Spirit in-line mixing console has had a boost with an offer from the importers of a free pair of JBL Control Monitors with



every console sold. The offer is for a pair of JBL Control 1 monitors with each 16 channel Spirit Studio, or a pair of JBL Control 5 monitors with each 24 channel model.

The Spirit Studio has met with great success since its launch, placing the company as the world's largest mixing console manufacturer. Spirit offers up

to 56 inputs, with each channel hosting two inputs for split monitoring with individual EQ. 6 auxiliary buses are offered, which can be split to both signal paths. 8 sub-groups, four band EQ with 2 mid sweeps, and 4 stereo effects returns ensure flexibility. For info: call Jands 02-516-3622.

NOLOGY, rather it's off into the wide world of Jet Lag, Passports and huge phone bills. Andrew Bell will continue as Product Manager- Audio.

▲ **YAMAHA** have formed the Pro Digital Group, which will deal DIRECT with pro recording markets. Here are **Geoff Crane** (left) & **Stephen Leonard**. Call them on 03-699-2388.



▲ **In India** the truly remarkable *Playback & Fast Forward* magazine continues to chronicle the biggest 3rd world market of them all, where Cassettes are the one and only medium. Big news is the release of India's first Hindu rap Album, by Harjett Singh 'Baba' Sehgal. A cassette sells for about 24 rupees. Then there is the sad tale of **Media Artistes** studio in **Madras**, glorified in one issue, and then burnt down. "Millions of rupees of equipment is lost, not to mention all of the love's labour lost". More soon.

Apogee 'FIX' Sonic Quality in high-end recorders- and we explain the technology

ANTI-ALIASING FILTERS

Despite the fact that the eighties have been heralded as "The Age of Digital", few of us would deny that, as with any advancing technology, there are still some improvements to be made. While working in the studio we have heard comments from musicians, producers and engineers that there's something strange about digital recordings that makes the music sound "harsh", "clinical" or "cold". Analog still has the edge, they argue.

This need not be the case, however. The problem lies not with the technology itself, but with a single component used in all digital recorders and processors: The Anti-Aliasing and Anti-Imaging filters.

Digital audio involves the sampling of an input signal at a certain rate, a process that can accurately represent a continuous time-varying signal with a bandwidth no higher than half the sample frequency. This bandwidth limit is called the Nyquist frequency, after a pioneer in information theory, Harry Nyquist. For a PCM system with a sampling frequency of 44.1kHz, the Nyquist cut off frequency is 44.1kHz divided by 2 = 22.05kHz.

When we attempt to sample frequencies beyond the Nyquist limit, they interact with the sampling process and fold back down below the Nyquist frequency. In audio systems this effectively means that ultrasonic signals beyond the 22.05kHz can generate unwanted or false audio signals unrepresentative of those signals we are trying to digitize.

ALIASES: These unwanted, false signals are called aliases. The positioning of very a sharp low pass filter to eliminate frequencies above 22.05kHz on the input to a linear 16 bit pulse code modulation (PCM) digital conversion system is imperative for clean and accurate conversion of the audio signal. The design of such filters is not an easy task. The original designs took the view that the secure removal of the aliasing frequencies was of paramount importance. Although these designs were technically excellent in hindsight they underesti-

mated the ears sensitivity to the by products of the filter.

It was discovered that in the real world it was rare to find high amplitude signals at frequencies much higher than 10kHz and beyond that levels tend to decrease with frequency. Input filter requirements can therefore be relaxed (less sharp) with the knowledge that aliasing frequencies are already naturally attenuated and masked. With the retrofit installation of these "gentle" filters, a relative expression as the typical response of the Apogee 944S filter is flat within .2 dB to 20kHz dropping to -14dB at 22kHz then to -33dB at 24kHz with a final attenuation of -85dB at 30kHz to 200kHz, the sonic integrity is vastly improved. For reference a typical crossover for sound systems only gives 18dB or 24dB per octave.

Fig 1&2 show the delay in microseconds vs frequency. The conclusion is that higher frequencies take longer than lower frequencies to pass through the filter. If the group delay is not the same for all frequencies the harmonics, or personality, of any sound source will therefore be disturbed. Each time the signal passes through the filter stage the complex harmonics get further displaced in time from the fundamental. This deviation from flat group delay (or deviation from linear phase) can be also measured in degrees. Most factory-installed low pass filters show significant high frequency phase deviation below 22.05kHz.

Fig 3 Shows the 1kHz, 2kHz and 2.5kHz square wave response of three cascaded channels of a digital multitrack, to simulate the minimum number of A to D to A conversions of recording, remix and CD mastering. The upper trace is a multitrack using standard antialiasing filters and should be compared to the lower trace utilising Apogee Linear Phase Filters on the same transport.

"The Apogee linear-phase low pass filters yield the best sonic improvement for digital audio since analog. These low pass filters solve 'the unnatural top end', which has been one of the most common complaints of

today's digital sound recording", a quote from audio consultant and designer Deane Jensen, Jensen Transformers.

RELIEF: Since the introduction of Apogee filters to the market place a great many engineers have breathed a

the much improved sound quality and accuracy to the original source. There are various filter models to suit multitracks, two tracks and some DAT machines.

World wide manufactures of digital processing equipment such as

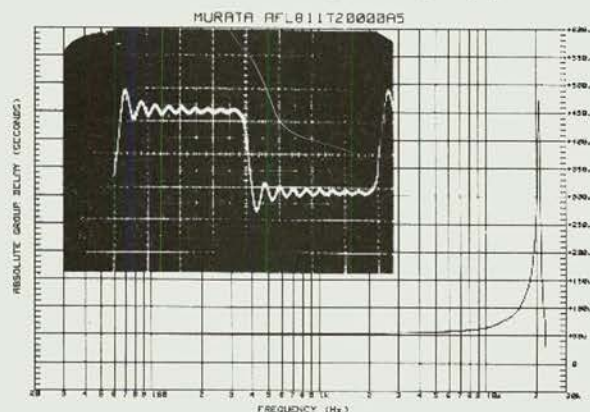


Figure 1. Absolute group delay of a Murata AFL-811T2000A6 low-pass filter, with a superimposed 1kHz square wave response trace.

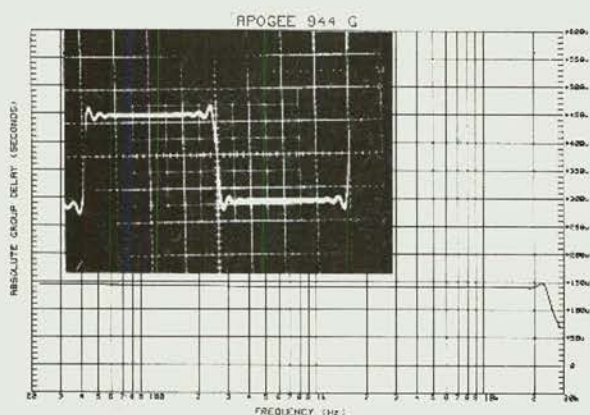


Figure 2. Absolute group delay of an Apogee 944G low-pass filter, with a superimposed 1kHz square wave response trace.

sign of relief as the equipment they are using has been upgraded with Apogee filters. For the end users of equipment fitted with Apogee filters the bottom line is radically improved audio performance, including wider more accurate stereo imaging; a tighter bass response, with extended low-frequencies; more faithful mid and high frequencies, especially in the 2kHz to 5kHz band which results in less harshness; a more open sounding and "airy" top end response and an accurate sibilance response. Without a doubt you can hear the immediate difference of

Digidesign, AMS, Crown, Audio Precision, to name a few, all use Apogee filters. In response to the market Apogee have developed many different filter types for use in both linear and over sampling conversion. Custom filters have also been developed for clients in the communications industry, where digital transmission is ever increasing.

Replacement filters available from Apogee electronics feature linear-phase response, optimised rolloff and no ringing in the pass band. The 944 series of filters, for example, are being

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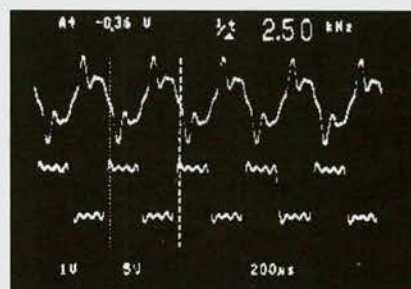
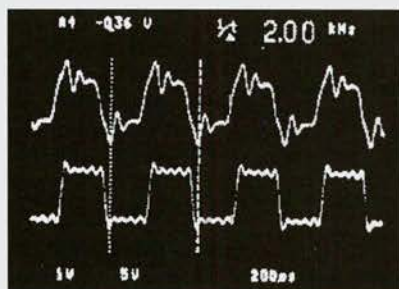
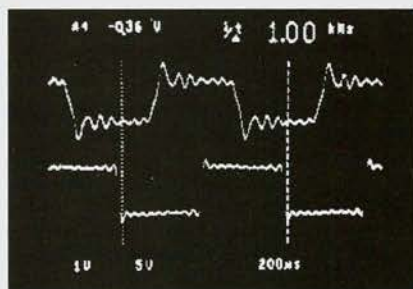


Figure 3.

(from previous page)

used by Sony, Mitsubishi, and Otari, in their digital multi tracks replacing the "harsh sounding" original filters. All multi tracks from these companies have been shipped, in the U.S.A., with Apogee filters for over 12 months.

Listed below are just a few of the many owners of digital stereo and multitrack recorders who have enhanced the performance of their PD/DASH format machines and video based processors with Apogee Linear Phase Filters:

- A&M Mastering;
- Hollywood,
- Atlantic Records;
- New York,
- Capitol Records; Hollywood,
- Capitol Records; Ontario
- Canada,
- Digital Magnetics; Los Angeles,
- Digital Recorders; Nashville,
- Editel; New York,
- Hilton Sound; London,
- Hit Factory; New York,

- Denny Jaeger; San Francisco,
- Master Disk; New York,
- Masterfonics; Nashville,
- Modern Video; Hollywood,
- Alan Parsons; London,
- Precision Lacquer; Los Angeles,
- Power Station; New York,
- "Queen"; London,
- Sixteenth Avenue; Nashville,
- Bruce Springsteen; New Jersey,
- Village Recorders; Los Angeles,
- Westlake Studios; Los Angeles.

Apogee also manufactures what is fast becoming an industry standard, the AD500 analog to digital converter featuring soft limit and soft saturation along with a host of sync possibilities; the DA1000 digital to analog converter has a high slew rate current to voltage / filter module with 20 bit converters to give superior performance than present day 1 bit D to A converters.

Next issue I will cover all of the features and advantages of Apogee's converters and why Recording Engi-

neer-Producer Bob Clearmountain who has worked with artists such as Crowded House, The Pretenders, Bryan Adams, Bruce Springsteen, Tracy Chapman and INXS uses Apogee at home and the office.

*Product information edited by Shane Morris from previously published material available from:

Betty Bennett
Apogee Electronics Corporation
 2103 Main Street
 Santa Monica C.A. 90405
 Fax 310-399-7665

ABOUT APOGEE

*Apogee Electronics Corporation mustn't be confused with the Apogee who build loudspeakers! This Apogee (Electronics) is a bit of a brains trust, one of the partners is of course ex-pat Aussie, Bruce Jackson - the 'J' in JANDS, which stands for Jackson AND Story. Bruce left our shores after selling out way back then, and is famous as Elvis Presley's Sound Man. He also has spent a great deal of time mixing that other mega American Bruce- the Springsteen.

PRODUCTS PRODUCTS PRODUCTS

M-M-M- MORE MOGAMI: Then there's the AES/EBU Digital Audio Cable (part number 3080), one of the few that meets the AES and EBU specs set for digital audio interconnection. O/D is 5mm, with 2 conductors with a lapped shield and separate drain wire. Characteristic impedance is 110 ohms.

Mogami say using standard mic cable - especially quad configuration - for digital interconnection can induce errors in data transmission. The company have a number of other reasons why you should avoid mic cable- call GUVT for a run down.

* **How about a speaker cable** designed for XLR connection? Mogami (part # 3082) is actually a coaxial speaker cable, with a large conductor size of 14 AWG made from 80 strands of 0.18mm oxygen free copper. This is

insulated with a 1.32mm thick outer. The shield is lapped and also made from 80 strands of 0.18mm OFC, then sheathed in PVC. O/D is 6.5mm.

Coax design offers extremely low induction and is said to provide superior sound.

SEND INFORMATION

The Studio & Broadcast Supplement welcomes news and editorial items for consideration. Freelance contributors are sought, please contact the Editor on (02) 876-2612, Fax (02) 876-5715, or write: P.O. Box 439, Epping NSW 2121.

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Rod Stewart '91/'92
Tour Manager &
Chief Sound Engineer

About the Milab LSR2000 - ... "The sound quality is superb, the LSR2000 for the first time combines the crisp attributes of a condenser microphone with the dynamic mic's ability to handle extremely high sound pressure levels..."

Bruce Swedien-
Recording Engineer
Michael Jackson - "Dangerous"
Quincey Jones - "Back on the Black"

About the Milab VIP-50 - "the VIP-50 is the first microphone to come along in over a decade that I would consider one of my first choices for vocals. I just love the sonic clarity."

Richard Perry-
Producer
Pointer Sisters &
Michael McDonald

About the Milab VIP-50 - "I can't remember being so impressed with a microphone."

Gary Lux-
Recording Engineer
Manhattan Transfer

About the Milab VIP-50 - "With the (Manhattan) Transfer, vocals are the deal, and I have been able to capture a real sense of vocal 3-dimensionality using the VIP-50"



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Gerry Nixon - Tel: (02) 550-5488 Fax: (02) 517-1946
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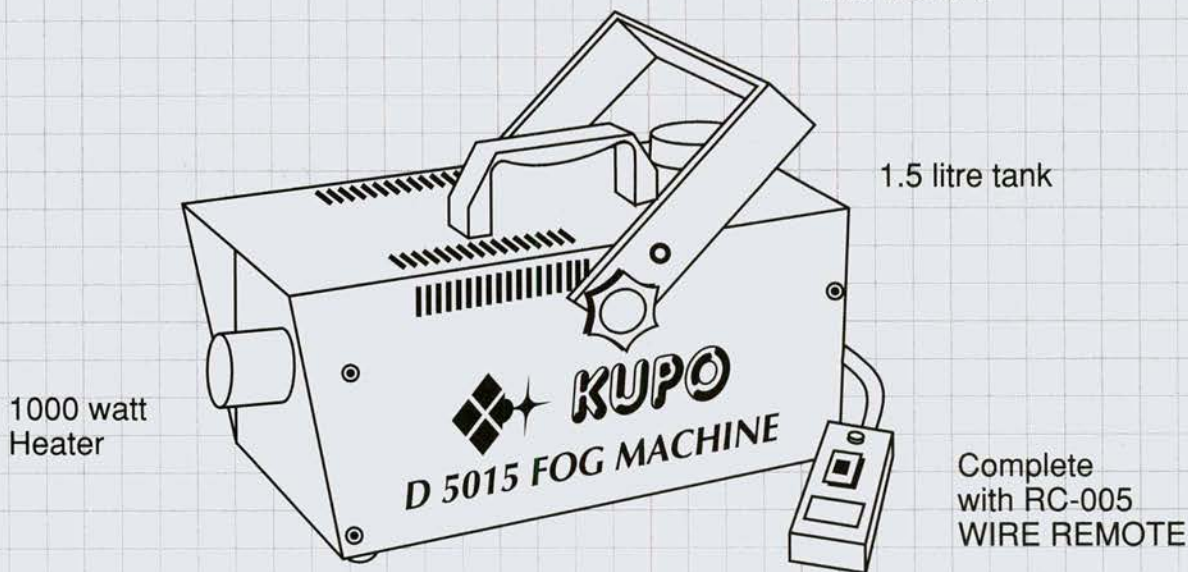
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Duncan Fry

Don't you just love that select group of punters who hang around the mixing desk, full of beer and advice? There is usually a cluster of them, grouped behind you like a Greek chorus, spouting pearls of audio wisdom ranging from- "Can't hear the guitar, mate, (or drums, or bass or whatever)", or- "Tell 'em to play something good!" or- "Is the singer a poof, or what?" I'm sure everyone who's ever mixed a gig has had the benefit of such helpful advice as this.

The worst ones, though, are those with a little technical knowledge. One such person told me he played in a band himself, and they had their own PA, much bigger than this one. How big? "Oh, it's real big mate, it's got a 400 watt crossover!"

In the early days, before I had a company that makes such things, I had a couple of 160X compressors that I used over front of house. Set on about 10:1, they were there just to keep things under control if I got carried away with the occasion (tired and emotional?) and accidentally drove things too hard.

Of course the trouble with those things is that they have so many LEDs in the meters, especially down the 1, 2, 3 dB of compression range. Light up just a couple of them and sure enough, a mixing desk moll will come up to you and say- "Bit much compression there mate!!" I suppose you could always suggest they try some sex and travel (as in F*** OFF!) but there is always the risk of copping a knuckle sandwich or a jug to the head!

However, by putting some gaffer tape over the first few LEDs I managed to avoid all this. Now I could safely run up to 9dB of compression before any LEDs were visible. Regular advice givers were impressed by the improvement in the sound- "Much better without so much compression, Mate!"

Another time I was mixing for a solo artist, and carefully applying the Golden Rule of solo artists - no matter what, they must be the loudest. In solo parts I'd crank the band up, but otherwise they stayed as a backing band. Suddenly there's a voice in my ear. "Turn the drums up, mate." "Why?" I asked. "Oh, I'm a drummer, mate, and I reckon they should always be the loudest thing." I turned around and indicated the crowd of several hundred people, all happily bopping away and singing along. "Look", I said, "See these people? Who do you think they've come to hear? The famous Mr X or the drummer? You

tell me!" He stared back at the crowd, drained his beer, and shuffled back to his mates who were clustered behind me. I leaned back to eavesdrop on the conversation. "Shit, the bastard won't listen. I told him what was wrong but he just won't pay any attention!"

Other guys are the opposite. Lurching up to the desk with a full jug of beer, they've got nothing but praise for your work. "Shit - great sound mate - keep it up - whoops," as they trip and neatly deposit the contents of the jug over your brand new Soundcraft and shutting off half the channels. Well, I guess it's those sort of things which keep the business exciting. As long as it's beer, it will usually dry out with a minimum of problems. Rum and Coke has to be the worst, though, forming an impenetrable sticky mass that clogs up the works in big lumps.

Just as bad are the ones who are sure that the effects rack is only there for them to put their drinks on. One nudge and 4 or 5 glasses of jungle juice pour their way down your nice new equaliser and digital effects. Sure, you can tell them not to do it, but for every bozo who remembers not to put their drink on the rack, there must be fifty waiting to take their place!

However, for whining nothing beats the girlfriends of the band. And believe me, if you don't keep them happy you've probably blown all chance of keeping the gig. "I can't hear Wayne's backing vocals". "Is he singing?" "No, but even when he does I can't hear him!" So, you have to tactfully explain that when Wayne does sing, it would be a great help if he got closer than four feet to the microphone. That's why I like to use gates on backing vocals. You can leave Wayne's vocal mic up full, but it will only turn on when he decides to grunt into it. And then you can still keep your nice clean stereo image without his grunge guitar grinding out through the vocal mic all night.

I once worked with a band for their record launch. An independent release, of course, as mainstream record companies "just weren't ready and didn't understand the band's cult audience" (their managers quote). Well, it looked to me as though the cult audience had gone to the wrong pub, as the crew outnumbered the customers! The fact that the band was totally ratshit had nothing to do with it, of course. I just couldn't get any level in the vocals because the singer sang everywhere except into the microphone.

"What's happened to the vocals?" whined the manager into my ear. "Beats me," I shrugged, "Why don't you tell him to stop

watching rock videos on MTV and practice singing into a mic. He's all over the place like a mad woman's shit!"

Strangely enough, I never worked with them again!

Still, looking on the bright side, sometimes the guys hanging around the mixing desk can get lucky, just be being in the right place at the right time.

Away on tour one night, I was standing at the console when all of a sudden I had to go to the toilet FAST, but the band had started their set. There was no way I could wait until they finished. I quickly scanned the desk levels - all OK. I turned and grabbed the nearest guy standing next to me. "Hey mate, want to mix?" "Sure, no worries, what do I do?" I pointed to the echo return fader. "See this knob? It's on 5 now. When the song finishes, pull it all the way down. When the next song starts, push it up to 5 again. **Don't touch anything else. OK?**"

I stood him at the desk and made a dash for the dunny. Luckily I made it just in time. Must have been the Ptomaine burger from some greasy thumb eatery down the road. I should have eaten the bag and thrown the burger away.

Anyway, about 4 or 5 songs later I bounced out of the dunny about 10 kilo's lighter, and walked up behind the guy I had left at the desk. His mates were all asking questions about what does this knob and that knob do. Finally he threw his hands in the air and turned around to them. "Look", he said, "you wouldn't understand. It's technical! Hold on, hold on, I can't talk, the song's ending." He put both hands on the echo return fader and slowly brought it down. His mates watched in awe. He stood there, looking knowledgeable, and as the next song started, slowly pushed the fader back up.

I tapped him on the shoulder and thanked him for his help. "Oh, no problems, mate, glad to help out. By the way, how much do they pay you to do this sort of thing?" I gave him a rough figure, not letting on that it included the PA and the truck, and his eyes popped out of his head. He wandered back to his mates, shaking his head in disbelief, and I could hear him talking to them. "Shit, I've got to get into this mixing, guys. It pays really well and it's a piece of piss!"

Duncan Fry is the author of 'LIVE SOUND MIXING', an in-valuable book for beginners and audio users alike. The book is available from Roztralia Productions, phone 03-555-7859, and is already in its second print run in the USA. Duncan is also a director of ARX.

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NORTHWORLD- Venue and electrical safety has become a hot topic globally, with PLASA (Professional Sound & Lighting Association) in the UK calling a seminar regarding new electrical laws in the UK, SILB (the Italian Dancehall Owners Syndicate) protesting stringent fire laws proposed there, and an industry workshop in the US hearing that all equipment should be UL listed.

First to the UK, where a forthcoming regulation requires the proper testing and maintaining of all portable electrical appliances, including equipment hired. The regulations require proper records be kept, which has led PLASA to arrange a seminar on the bar-coding of equipment, called PAT for Portable Appliance Testing, where a system will be demonstrated which presumably

identifies tagged apparatus and provides details of last inspection and running repairs.

In Italy a most remarkable ministerial circular proposes that: 'public premises in which the audience remains seated have a fireman present'. This has caused great alarm amongst the disco industry. The SILB has drawn a distinction: that discos are venues for entertainment and amusement, not 'show' venues, so the prospect of a contracted fireman on hand during operating hours could lead to private fire training for D.J.'s, who would then as qualified firemen work a second job at the same time - sweating out music behind a console, with one hand on a hose.

In the US, a workshop panel at LDI 91, the industry lighting expo was told that only UL listed equipment should be used in venues.

LONDON- Professional Lighting and Sound Association (PLASA) chief executive John Offord told Channels the European market was looking up following recent trade fairs. "At SIB (Rimini) and Musikmesse (Frankfurt) our members have reported orders are up" he said. "Following the SIEL show in Paris this indicates a recovery of sorts". The 10th annual SIB show boasted 450 exhibitors, and reported attendances up by 15%, according to SIB President, Bruno Cristofori, with similar indications at Frankfurt. All eyes now move to Singapore this winter for the Pro Light & Sound Asia expo scheduled for July 8-10, where indications will show if the upturn has reached the far east. Australia of course is now part of Asia, making this show crucially important- haven't you heard?

Next issue: Deadline June 1st

GLOSSARY

Biz talk **A B C**

N **Noise:** That goddam thing any musician is paid to make! But it is also any unstructured or generally unwanted signal like Hum, Buzz, Hiss, Crosstalk or Rumble.

Noise gate: A device that attenuates or shuts off audio signals that fall below a threshold, usually set by the user.

Nominal Operating level: The design target of audio circuits. For example, a crossover may have a noise floor of -80dBu and a maximum output voltage of +24dBu and call for a nominal operating level of +4dBu which means that the nominal signal level will be 84dB higher than the noise and allow for 20dB of headroom.

Nook Light: A small, open fronted trough fitting with a short trip light and curved reflector.

Nookie Light: A 40 watt Red B.C. lamp base globe, situated between 1.2 and 2.0m from ground height, to either side of a door, through which entrance can sometimes be gained in exchange for money. According to sources.

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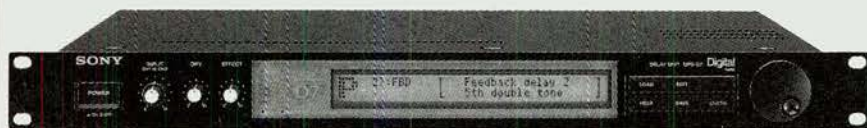
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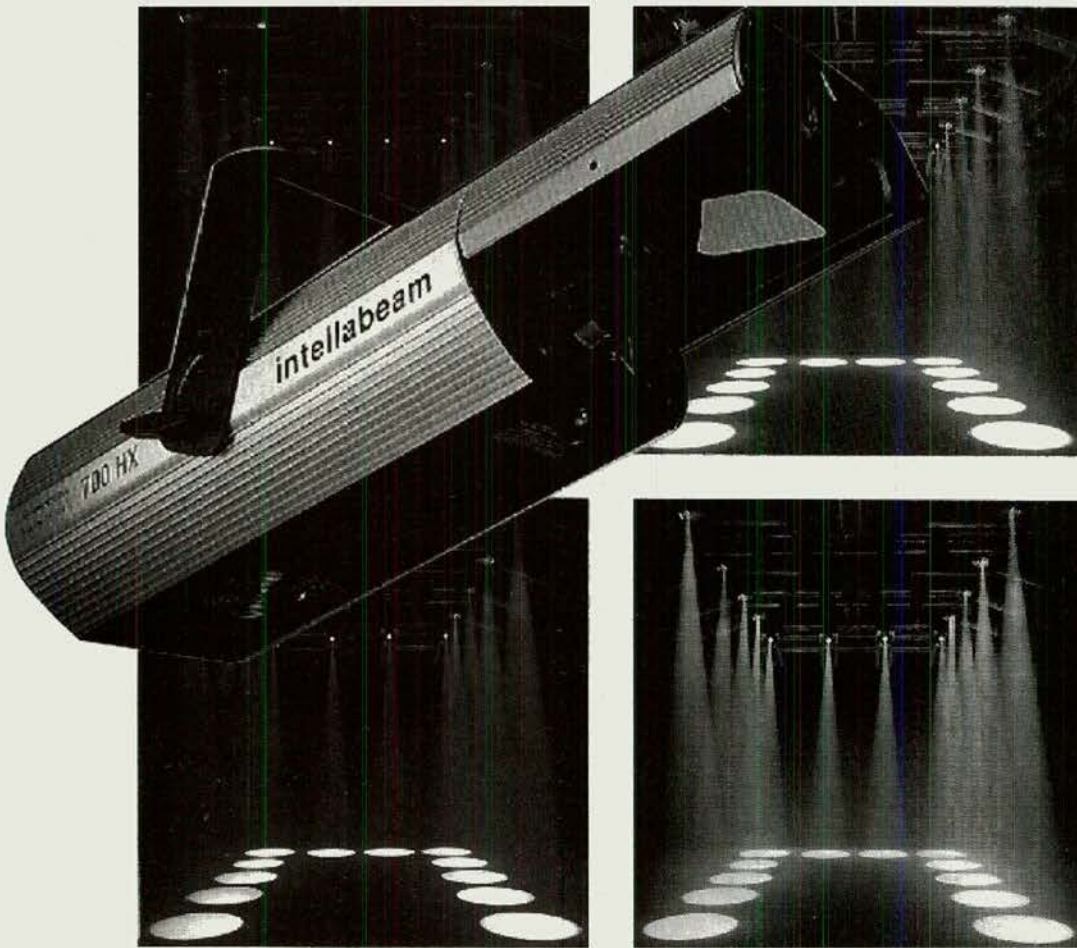
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PAR 36 SCANNER	25W	TRI TRUSS BASES (300MM C-C)		BELDEN MIC CABLE		• BLACK ROSCO SCREEN	20' X 24' D
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Cannon EP8

(continued from Part 7)

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- Pin 1 Low freq. common
- Pin 2 Low freq. hot
- Pin 3 Low freq. common
- Pin 4 Low freq. hot
- Pin 5 Mid freq. common
- Pin 6 Mid freq. hot
- Pin 7 High freq. common
- Pin 8 High freq. hot

These cables are constructed male to female, with the amplifier racks fitted with a chassis Female connector and the speaker boxes fitted with chassis male connector.

US/EURO STANDARD 4 WAY WIRING:

- Pin 1 Very low freq. hot
- Pin 2 Very low freq. common
- Pin 3 Low freq. hot
- Pin 4 Low freq. common
- Pin 5 High freq. hot
- Pin 6 High freq. common
- Pin 7 Very high freq. hot
- Pin 8 Very high freq. common

These cables are constructed male to Female with the amplifier racks fitted with a chassis Female connector and the speaker boxes fitted with chassis male and a 'loop through' chassis female connector.

JBL also use the EP-8 connector for Bi-Amp applications and use Pins 3 & 4 for Low frequency, and 5 & 6 for High frequency. Pins 1 & 2, and 7 & 8 offered passive loop through.

Intercom Connecting cables

Jands TBM/S and Ezicom Talkback/Intercom systems follow the Clear-Com standard by using a 3 pin XLR microphone cable to connect between the Master station and each

Beltback. The Talkback Master is fitted with XLR type chassis male connectors as outputs. The pin designation is as follows:

- Pin 1 Ground/shield
- Pin 2 +30v DC
- Pin 3 Audio Signal

NB: The Jands TBM/S System (and older Clear-Com systems) use a line voltage of -36v DC. Whereas the Jands Ezicom and current Clear-Com both use +30v DC.

DUAL CHANNEL INTERCOM

CONNECTING CABLES:

The Clear-Com RS-502 and RS-522 provides two channel communication allowing simultaneous conversation on each channel. Both normally use a 6 pin connector. The beltback is fitted with a chassis female XLR female connector. The pin designation is as follows:-

- Pin 1 Ground/shield
- Pin 2 + 30v DC
- Pin 3 Channel B audio
- Pin 4 Channel A audio
- Pin 5 No connection
- Pin 6 No connection.

HEADSET CONNECTORS:

Jands TBM/S and Ezicom Talkback/Intercom systems follow the Clear-Com standard, by using a 4 pin XLR female connector attached to the headset. The pin designation is as follows:

- Pin 1 Mic lo / shield
- Pin 2 Mic Hi
- Pin 3 Headphone cold
- Pin 4 Headphone hot.

NB: The Jands TBM/S System has pins 3 and 4 reversed, this difference can usually be ignored.

STEREO HEADSET CONNECTORS:

The Clear-Com RS-522 provides two channel communication with separate amplification of each channel thus a 6 pin connector is required. An XLR female connector is attached to the headset. The pin designation is as follows:

- Pin 1 Mic Lo/shield
- Pin 2 Mic Hi
- Pin 3 Headphone cold
- Pin 4 Headphone hot, ch. B
- Pin 5 Headphone hot, ch. A
- Pin 6 Headphone cold.

The End.

INDEX

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5	10	Microphone level & line level connectors
6	11	Line level and multi-circuit speaker connectors.
7	12	Cannon EP connectors, Multicore cable colour codes.
8	13	Cannon EP 8 and Intercom connectors.

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The Great Moving Light Comparison

Intellabeam vs. Clay Paky vs. Coemar

By Julius Grafton

This sort of story is very hard to get absolutely right. It started with a discussion on the merits of various Moving Light types, with Greg Kean and Philby at Lots Of Watts. They were to move into the moving light market, and to establish the right direction decided to hold a Moving light Seminar, where various manufacturers would display their products, and the technology could be thrashed out in front of their customers.

Having undertaken to mediate at the Seminar, I went to the SIB trade fair at Rimini, Italy in late March, where every major moving light manufacturer in the world pitch very hard. It was almost overwhelming. At Rimini were the Australian distributors of the big three - Clay Paky, Coemar and High-End Systems (who make Intellabeam). We all decided the concept of a comparison here in Channels was fair, and the Moving Lights Seminar at Lots Of Watts was the ideal base for the story.

At this stage the plot looked simple enough, three major manufacturers, comparable products, get them together and have a look see. Clay Paky took the forthcoming event very seriously, Pio Nahum told me as far as he was aware it hadn't been done before, which surprised me. From his point of view as a major manufacturer, Clay Paky don't (or won't admit) closely examining competitive product. This might have something to do with the intense interview earlier that very same day, where he virtually accused High End Systems of copying the Golden Scan. (See our cover story, this issue). He said Clay Paky had proposed a proper evaluation of various product occur on a theatre oriented campus at a Munich university, but the project didn't proceed due to cost and the difficulty of establishing the testing parameters.

After I returned home, Clay Paky faxed a letter to their distributor offering to send an engineer over for the seminar, an offer I refused on the basis the event wasn't to be run

on a scientific or engineering basis, rather just an objective look at some product.

PRODUCT CHOICE. We limited the seminar to the three manufacturers, despite heavy lobbying from others to be included. The exclusion of other types upset some people, but the intention was to focus on types that I alone felt were realistic choices for a rental company today, which is not to say there are other rental company moving lights that are inferior. In fact here it is necessary to understand this is a 'Waggly Mirror' moving light comparison, which is quite different to the style of fixture that moves through 360° - namely the Vari*Lite and the Pan Command System. These are a different proposition, and thus in a different league in terms of price, in fact Vari*Lite's may only be hired, not purchased.

CLAY PAKY: The Golden Scan was their first entry into the market, now known as Golden Scan 2. We had a GOLDEN SCAN 2 (which comes in two lamp sizes) and a SUPER SCAN, with MINISCAN, which is of course their new small fixture that has fired a lot of imaginations around the world.

COEMAR: This large Italian manufacturer has offered the JUPITER against the Golden Scan, and has just released the SAMURAI as a more up to date competitor. We have both these, as well as the also new MICRO SCAN range, (to compete with the Mini Scan) which is made up of two fixtures sporting different lamp types.

HIGH END SYSTEMS: The Texas based makers of INTELLABEAM have carved a strong niche, offering also products like the Emulator, which is in essence a Laser simulator, but we stuck with just the Intellabeam for our comparison, as they offer no other fixture of this type.

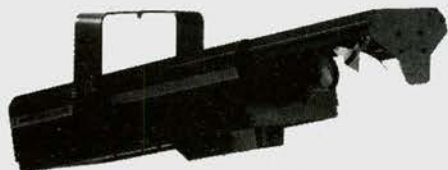
So here you have 7 basic products, complicated by lamp options. Given there are two



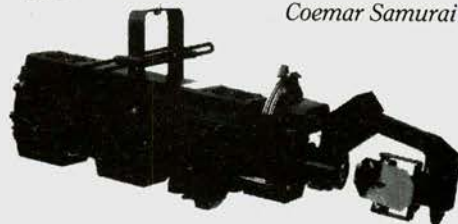
Clay Paky Super Scan



Clay Paky Golden Scan



Coemar Samurai



Coemar Jupiter



High End Systems Intellabeam

Golden Scan models, and two Micro Scan's, you now have 9 fixtures on offer.

The format of the seminar offered each distributor the chance to display their products, which were all connected daisy chain to the DMX output of two Jands Event lighting consoles. (Except the Jupiter, which will **only** run with its dedicated controller). Now of course Lighting Politics being what they are, the guys at Lots Of Watts were approached by some other lighting console distributors who felt it was only fair to compare consoles too. Time constraints ruled that out.

CONTROL. Having a common controller evens the field, because the question of DMX control of these fixtures is a little complicated by Intellabeam, which also offers a Dedicated Controller, working to a protocol which is not DMX. Similarly the new Coemar Samurai is offered with and without a dedicated con-

The Great Moving Light Comparison

troller, but sadly this didn't arrive in the country in time for the comparison. Clay Paky allow you to run their fixtures on DMX (as do the others except Jupiter), and also RS 232, so computer software is on offer as well for their fixtures.

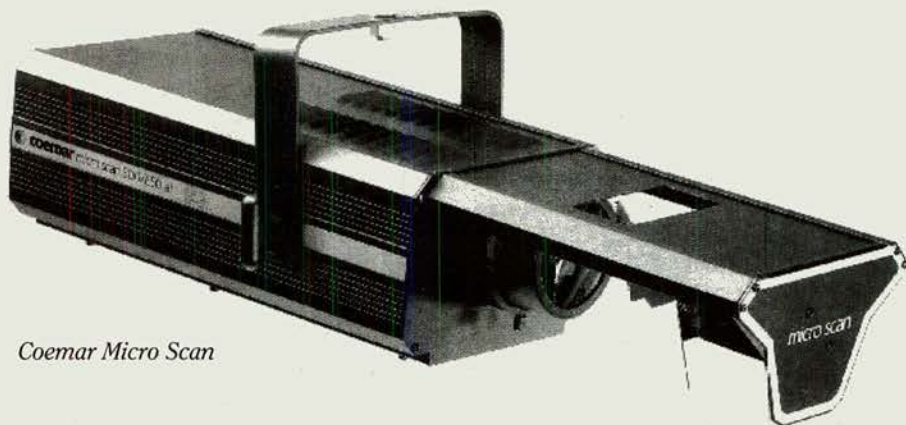
All the DMX controllable fixtures, which is all except Jupiter, were thus addressed by the 2 Event consoles, a 24 and an Event 48 Plus.

To make an exciting lightshow you need a memory console with plenty of level conscious chases, capable of storing as many scenes as possible. The Event will store up to 500 scenes, and has the added advantage of Assign & File™, whereby any Assign Fader (the Event PLUS has 24) can be assigned any combination of crossfade stacks, chases or scenes.

Another crucial aspect of your contemporary moving light control system is data retrieval. Floppy disk drives are not an option due to the negligence of you and I, who do not insert a travel protect blank in the drive religiously every time the console is transported. We should, we rewally mean to, but we don't. So you need a non-volatile means of downloading your 500 memories, and the best is the M-Card, which is like an EPROM, and hard to destroy. In fact Susanne Sasic, the L.D. for Nirvana, carries her M-Card around



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Coemar Micro Scan

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The Great Moving Light Comparison

the world, and slots it into Event consoles in each country, whereupon her Golden Scan cues are ready for use.

The final consideration is software upgradability, which is where Jands first got the Instinct console into favour with rental companies, who appreciate the added benefits of an up-grade from time to time. Event carries that tradition, which ensures enhancements can be incorporated as running changes.

HOW THEY ARE PATCHED. DMX control is digital, running down a shielded microphone cable. Each unit is given an 'address' by way of a DIP switch mounted on the unit, you can have several units on the same address if you want. The control cable is simply 'daisy chained' from fixture to fixture. If you also have dimmer racks to run, you daisy chain to them as well.

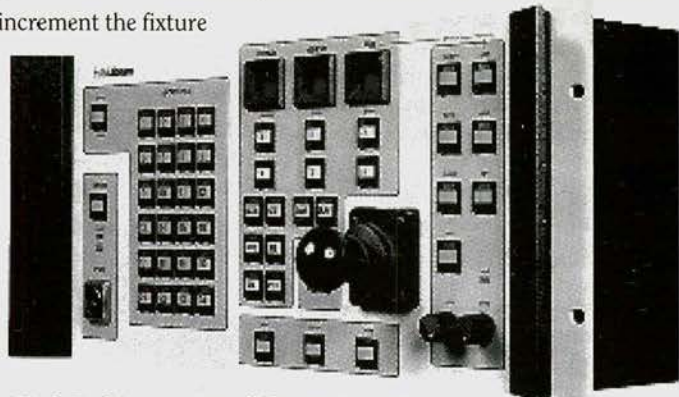
Different functions of the fixture occupy different channels on your controller. For example, the Micro Scan 400MSR needs 5 channels - one for panning, tilting, colour change, gobo change and blackout or strobe function. At the other end of the line the Super Scan needs 9 channels - pan, tilt, colour, gobo, iris, blackout/strobe, dimmer, prism and focus!

Each moving light channel on your board thus performs a function, moving the pan

fader for example, will increment the fixture according to the fader setting. Likewise the colour wheel will turn each time you move the colour fader, and so on.

LIGHT OUTPUT AND LAMPS. Just looking at the lamp wattage and type used in each fixture is misleading, as the optical chain in each type of fixture differs, as well as the actual lens in terms of beam degrees. What we did at Lots Of Watts was to measure the actual lumens each fixture produced by opening up the focused beam, in open white, on the floor directly under the truss on which all the fixtures hung.

Now there were two problems with this method. The first is that the fixtures were hung for a display, and thus with 90° or 100° of tilt each (according to model), some were beaming directly down to the floor. Some could only travel 'most' of the way there, imagine a row of light circles not in a straight line, rather some are a little out of line, and others as much as 500mm. This alters the actual throw distance, thus the lumen count



High End Systems Intellabeam Controller

will be slightly less. Of even greater note is that the units themselves are of different sizes, the Mini and Micro Scan's are of course quite compact, so their lens' were thus higher than the largest unit, the Super Scan, whose lens was closest to the ground.

The difference in lens position is less of a problem in the comparison due to the directly competitive units being close in overall size, and thus the throw at which we measured the output was about 3.4m.

Looking at the fixtures type by type, we group the Samurai, and Intellabeam (both with 700w MSR lamps) and Golden Scan (575w HMI) together, and we got these readings:

Golden Scan 12,650 lumens at beam cen-

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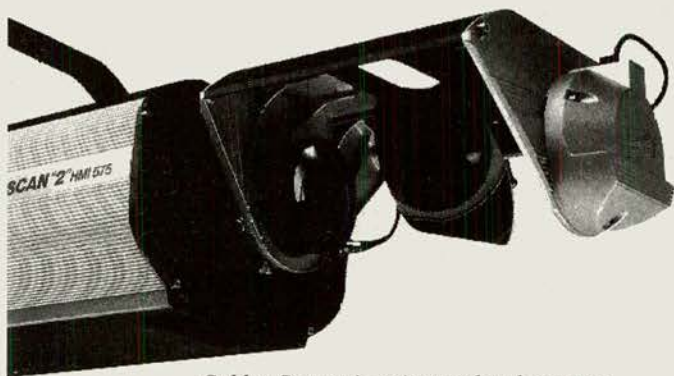
- * TASCAMA AUDIO MIXER MODEL No
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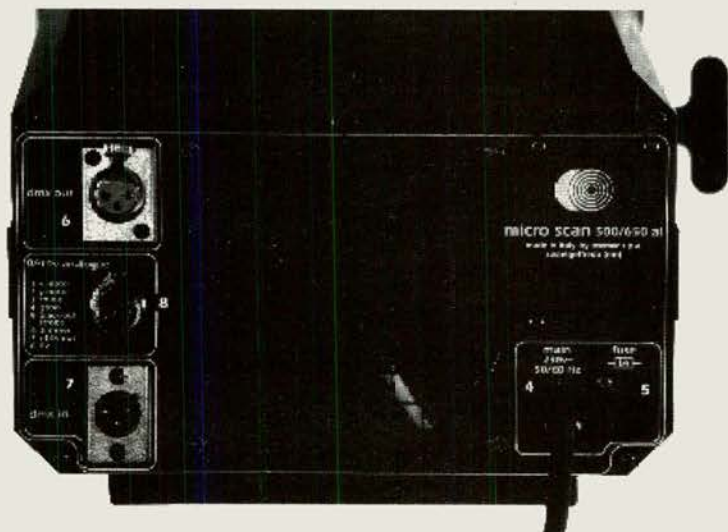
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The Great Moving Light Comparison



Golden Scan mirror/motor head removes



tre, beam dia: 670mm.

Samurai 17,800 lumens at beam centre, beam dia: 720mm.

Intellabeam 17,980 lumens at beam centre, beam dia: 790mm.

Then we compared the two 1200w units, the Jupiter 1200 MSR, and the Super Scan 1200 HMI.

Super Scan 15,860 lumens at beam centre, beam dia: 660mm.

Jupiter 17,170 lumens at beam centre, beam dia: 660mm.

The baby fixtures come in various lamp types, the Mini Scan is on offer with a 150w HTI lamp alone, but the Micro Scan comprises two models - the 650 tungsten halogen unit (which benefits from an electronic in-built dimmer that is fired by a 6th control

channel and DMX), or a 400 MSR model, which has an external ballast that you must hang with the fixture.

Mini Scan produced 2,060 lumens, beam dia. 550mm.

Micro Scan 650TH: 3,200 lumens, beam dia. 540mm

Micro Scan 400 MSR: 6,600 lumens, beam dia. 600mm.

COLOURS & GOBO'S. Starting with the middle three models again, the Golden Scan offers 8 colours plus a bi-colour facility, with 2 gobo wheels of 4 gobos each, making 16 combinations. Samurai offers 12 colours, with 11 gobo's. Likewise the Intellabeam 12 colours plus bi-colour, with 11 gobo's as well.

Micro Scan rear end. Typical of these units is the DMX in and out connection, and an analogue control connection. Every unit has a means of establishing it's 'address' in the DMX chair, some have DIP switches on the rear, in this case it's beneath the fixture

Mini Scan has 8 colours and 5 gobo's, Microscan 5 colours and 5 gobo's. Super Scan 8 colours with bi-colour and 2 wheels of 4 gobo's for 16 combinations, Jupiter 12 colours and 12 gobo's.

DIMMERS & THINGS. The Superscan, Intellabeam, and Samurai all offer dimmers, which are essentially a 'flag' that motors across

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the beam. The Micro Scan 650TH, as the only incandescent lamped unit, has a useful electronic dimmer, fired by a 6th control channel. An Iris is standard on all the larger units. All fixtures will blackout, with the blackout also acting as a variable strobe.

CONTROL CHANNELS. Mini Scan: 4 channels, for colour, blackout/Gobo/strobe, pan and tilt. Micro Scan 5 channels for colour, Gobo, blackout/strobe, pan and tilt, with a 6th channel for the dimmer in the 650TH version.

Golden Scan uses 6 channels, the iris being the extra channel. Intellabeam and Samurai use 8 channels, adding of course the dimmer channel, but differing in the case of the last channel, which Samurai use for remote lamp ignition (these are discharge type lamps that must be fired up to achieve full intensity over 5 minutes or so), while Intellabeam use the extra channel for speed - that is, speed of pan and tilt.

The Super Scan uses up to 12 channels, one offering control over three trioptic prisms which provide multiplication and overlapping of projected patterns, and another extra channel allowing focus, a very handy feature. If you choose to, the last three channels control a colour mixing system, where red, blue and green are mixed together as primaries to create infinite colour choice. Jupiter doesn't need channels on your controller because it has it's own.

OTHER THINGS. Weight of course is a consideration, a truss load of these baby's becomes an exercise in number crunching lest you break the truss! Mini Scan 8.6kg, Micro scan 650TH 11.1kg, Micro Scan 400MSR (with ballast) 20.4kg, Intellabeam 25.9kg, Golden Scan 575 32kg, Coemar Samurai 34kg, Jupiter 37.6kg and Super Scan a whopping 50.7kg.

As I said earlier, pan and tilt varies from 150° pan and 90° tilt for the Jupiter, to 170° pan and 110° tilt for the Micro Scan, Samurai and Intellabeam. Against this, Golden Scan and Super Scan offer removable and rotatable mirror heads, which let you get the beam further in terms of pan, say if your fixture is at the end of the bar or truss.

Coemar and Intellabeam will supply optional colour wheels with specified colours. Clay Paky say individual colours can be ordered to fit into it's wheels via Lee colour numbers. Optional lens' for wide and narrow throws are available for all fittings.

Lamp life is in the region 700 - 1000 hours, and watchout, with the exception of the Micro Scan 650 TH, they are not cheap. An hourly running cost will vary from 30c to \$1.00.

Gobo choice is available in the larger fixtures, Clay Paky use M type gobo's, while Intellabeam use VL-1 sized gobo's. Coemar's Jupiter uses E type size.

PRICE. We leave the big question till last. These prices were as quoted by each respective Australian Distributor, exclude 20% sales tax, but include a lamp. Got that? Add 20% if you are not a government dept. or education facility. Be aware dealer margins may vary.

Fixture	Price
Mini Scan	3,960
Micro Scan 650TH	2,189
Micro Scan 400MSR	3,589
Golden Scan 575HMI	7,290
Samurai 700MSR	5,637
Intellabeam 700MSR	7,292
Super Scan 1200HMI	12,863
Jupiter 1200MSR	9,912

Note also available Golden Scan 1200HMI, price unavailable.

Do not buy any of these products solely on the basis of this comparison. E. & O. E.

For more information contact:

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G.U.V.T. (Intellabeam)

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We've had the Moving Light Seminar - now we invite you to have a closer look at Colour Changers

Moving Lights are just one part of the new face of the lighting industry. We recently held a Moving Light Seminar where the leading manufacturers demonstrated their fixtures, and we put them to test.

Coemar, Clay Paky and Intellabeam were all there ... industry types and beginners together got their hands on the latest technology, and hopefully went away with a

clearer idea of what these products do, and how they improve a lighting design while saving money.

Now we would like to invite you, or anyone you know who may be interested, to come along and see the latest in Colour Changers.

These are scrollers and fixed lanterns that mix colour - the second part of the greatest revolution to sweep the lighting world since the candle was lit! We've invited the distributors of the products pictured on this page to come along and show you what this means.

Your invitation to our Colour Changer Seminar. It's Free!

Come to our new premises on Tuesday June 9th from 6.30pm, and we'll demonstrate the types of products pictured on this page. The representatives from each Colour Changer distributor will be on hand to show you their products and answer your questions.

No need to RSVP- just come along on the night. We'd like to see you there!

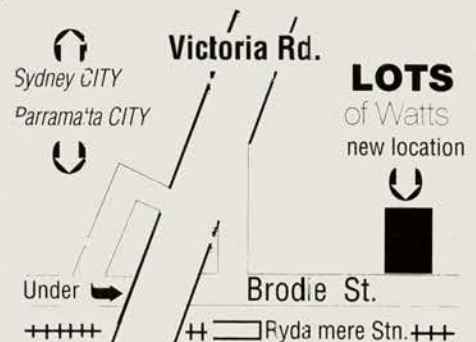
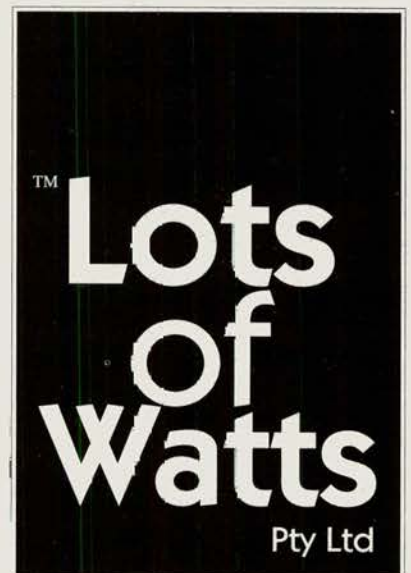
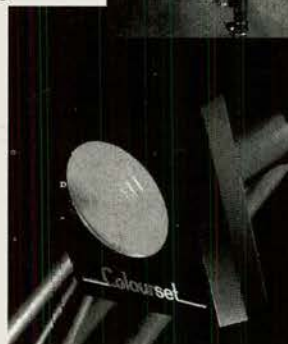
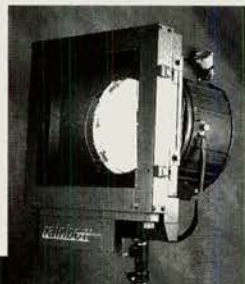
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Channels

People- the society page



Phil Burkinshaw at the Grainstore in Melbourne



Denis Stokes and Brian Inglis in Brisbane



Mick Previtera with Nigel & Gary from MPS



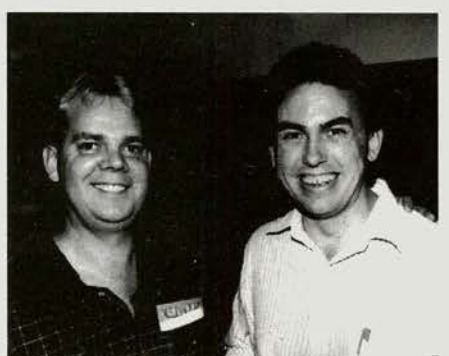
In Adelaide Harry Gum explains very capable venue manager Karen Murray's penchant for spanking. Is that right Harry?



Melbourne punters pouring over the new Jands SR-3000 after the Grainstore Tavern amplifier seminar. Who's the guy with the glasses?



Remember Holden-Wasp? Here's Wasp founder, Ian Johnstone with Ron Holden from N.Z.



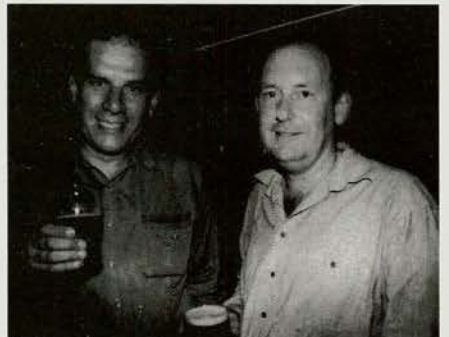
John Matheson, Technical Sound Manager, Adelaide Festival Centre, with CUVT's Pat Tapper



Sydney's Peter Freedman with Cloud Electronics Director Roy Millington at Rimini



AR Audio's Tony Russo with 'Dr Light' - Mike Tanner. They share beer. How intimate.



Canberra identity, Steve Devine, with Jands director Paul Muirholland. One beer each.



This is New Yorker Patty Seyburn, Editor of Lighting Dimensions mag, at Rimini

Dr. Light

Write to Mike
Tanner P.O. Box 439, Epping 2121
NSW Australia
Fax (02) 876-5715



Well I must say I was blown away by the reaction to my column in the last issue of Channels, thank you for all the letters and cards! First, a letter from Alan Charlton of Moorbank, who says:

Dear Dr. Light,

Very Impressed to see your picture in Channels (issue 12). Were you once a lift operator in David Jones Elizabeth street store? I'm sure we discussed illumination of lift shafts. All the best at your new job.

**Alan, you've mixed it up, I'm sure we discussed shafting lift illuminators!*

QUIZ

Channels readers pick up your pencils ... the neatest correct response will receive a very special prize! Perhaps even a 'Dr Light' Centrefold?

1. Who invented the multi lenticular lenses often found in light houses?
2. What does PAR stand for?
3. What is the speed of light?
4. What is my inside leg measurement?

the following shows on their books: Hair, Buddy (by arrangement with Roger Barratt) and Dancin' Shoes or whatever David Atkins new show is called.

Doctors News

► **Showcraft's** Lee Conlon tells us of his recent success, with over 60 Showcraft Colourset Scrollers hired by the Adelaide Festival Theatre Trust for the recent Adelaide Festival of the Arts, including 12 units used for an outdoor performance of Shakespear's Twelfth Night, lighting designer was Glen Elstern.

Lee Conlon owns Revolver Audio, and established Showcraft to built equipment, his Colourset is by far and large his most successful product, with over 200 sold to date around the world.

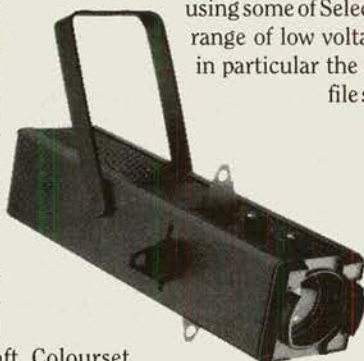
Lee also tells us that the Sydney production of Hair will be using Showcraft Colourset Scrollers supplied by Chameleon Touring Systems. Good news for Lee, not so good for Rosco, whose units were used in the Melbourne production.

► Nothing seems to be the same anymore, once if you were putting on a theatre show you automatically went to Strand, basically there wasn't an alternative. (excuse me, what about the AETT, Barratt Lighting and Czar Lighting in Sydney during the late 70's? -ED)

Oh, but how things have changed. Chameleon Touring Systems in Sydney currently have

► Finally plans have been announced for the refurbishment of Sydney's Capitol Theatre. Interestingly there may not be a sound or lighting system, rather the venue will be bare bones. Just watch for a management deal to be structured by someone with a lot of equipment to place!

► I had the pleasure recently of using some of Selecon's Accent range of low voltage fixtures, in particular the Accent Profile spot with it's



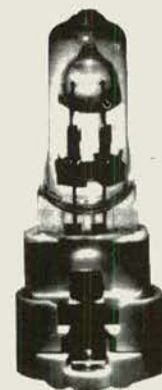
precise framing and crisp gobo projection characteristics coupled with the range of E sized gobos (courtesy of Rosco Australia's Ian Baseby). I also had glass dichroic filters, which are a bit pricey but boy, do they last! Our Kiwi brothers deserve a medal!

The full range of Accent fixtures available from Selecon includes the Demi Spot, the Accent spot, not to mention the fantastic 150w metal halide Accent P.C., Accent fresnel and Accent Zoom spots (wide and narrow angle).

The single ended MBI-T Arcstream lamp used in these last three fittings is the answer for

cost effective, long term display illumination with a theatrical touch. A good quantity of light is produced at roughly 3000° kelvin (Chroma co-ordinates of x=0.434

and y 0.402) with an output comparable to 650 TH lamps, but with a really useful and cost effective 3000 hours lamp life!



I would be interested in seeing the figures on these units, I believe that the savings over a 12 month period would certainly have a significant impact on their cost over standard TH lamps!

► Račica, new product release by ARX, the audio manufacturers, who clearly intend making a statement with lighting product. The PAR 43 was released on April 1st to an un-suspecting world. Aimed squarely at the "Garage End" of the market (ARX's statement!), the Par 43 is a do it yourself (or do it to yourself!) device.

How can you do it? Simple. Get a hold of any Nescafe™ coffee tin, fit a BC lamp base, insert a lamp and away you go! 43 beams in every can! Who needs sleep?

The every helpful ARX design team offer the 250gm can (Pin Spot), the 1 kilo can (Band Light), and the 10 kilo catering pack as a Super Trouper clone. The guys say Banc's judge light by quantity.

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

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Great Mistakes

Trucks, Tyres, Tasmania & Zeuss

For as long as I've been touring (I did monitors for the Sermon On The Mount), trucks have been a constant pain in the backside. They are forever breaking down, blowing up, refusing to fit under awnings and leaking when it rains.

My most memorable truck trip occurred in Tasmania, where having blown two tyres I was without a spare till Monday, when the tyre shop would get a delivery. The Sunday gig was where we were staying, so come Monday morning it was into the tyre shop for steering attention as well. 7.30am Monday morning I bounced into the courtyard to find it unlocked - a glorious day, and only 3 kay's to the tyre shop.

The truck was glistening in the morning sun with a fine coat of dew. The front tyre was flat. "Right", I thought as I walked closer, "I'll whip it off and take all the flats down to the tyre shop in the band's bus".

It didn't click with me as to why the courtyard was wide open until a four hundred kilo Doberman launched himself from behind the woodpile directly at my throat. His slathering fangs were coated in a thick yellow scum that formed as he thrashed in a demented frenzy at the anchor chain securing him to the brick wall. His eyes glowed with an inner fire that served to illuminate the swastikas tattooed inside each ear, and a roughly cobbled scar ran the entire length of his rippling flank. (Sounds like a loader I know! -Ed) There was blood streaming down his shoulders from where the studded collar had smeared away flesh and sinew in his maniacal effort to rip my throat out.

Adrenalin is a wonderful substance, without seeming to flex any muscles at all, I cleared the

eight foot wall to land bulging eyed in a puddle caused by simultaneous voiding from all bodily orifices. The gate was open because the yard was in the care and control of a veritable cerberus.

The joke was on me, once the owner had introduced me to "Zeuss" he turned into a friendly dog, so I could pick up the shards of my briefcase which he had monstereed in my absence. In fact, as I bent over to jack up the truck Zeuss turned downright amorous!

With the truck on the jack and the wheel off, I thought I'd better secure it, lest the jack collapse and it cause injury. Scouting about I found a pile of bricks, and let the jack down. The pile collapsed and the 8 tonner crashed onto it's front hub. Jacking the truck from the ground was laborious, with much grovelling under and then dragging timber beams to chock under. The sun was now hot, and the scratches from Zeuss' friendly games were stinging, I was already grotty.

The guy at the tyre shop would be ready for a coffee break when I finally got there, I thought, and after lugging all these truck wheels into his shop he'll make me one too. Over the cuppa, Roy rolled about with laughter till tears came from his eyes as I told him my woes. "Geez, all that and I couldn't get the tyres you ordered either!"

I considered the chances of getting a really good left hook into this dork, but I really needed at least one tyre, maybe this clown had a 2nd hand one somewhere. I had to wait while Roy gave a rendition of my mornings adventure to an enraptured audience of simian primates who I presumed were his staff. His version took longer, but he added some embellishments that I thought would be useful later, so I filed them away.

The hairy-knuckled associates grunted and

snuffled their appreciation of the story, then they fixed one puncture and ratted about looking for an old tyre. A large sum of money later, and I was on my way back to the truck, the courtyard, and the dog.

Zeuss was beside himself when I returned, having chewed up my tool box in my absence, apparently having a taste for ABS plastic. I had had it, I grabbed for the mongrel but he ducked, grabbed a wheel nut in his mouth and took off.

I consider myself a fairly even tempered person, but this was the limit. I timed my moment carefully, grabbed the chain and jerked back as hard as I could. The resultant carking sound as the dopey, lop-eared mongrel's full charging bodyweight jolted his neck against the collar was most satisfying. His jaws flew open and the wheel nut shot out through the gate and into the gutter, where it fell through the grate into the storm water drain.

An hour and a half of groping around in a fowl smelling drain, and I was on my way to have the steering serviced. I could smell myself and it was sickening, a mixture of rubber, dog and sewer. Of course the steering people were all out to lunch. Afterwards they took two hours to find a part, and it started raining, and the coffee machine was broken.

At 5.50 I storm back to the Hotel, past a crowd trying to revive Zeuss, to be greeted by the receptionist. "Thank goodness you're back" she cried. "The bus has a flat tyre and the band need you to borrow a spare from somewhere and run it out to them." -from T. Foster, Coffs Harbour.

Send your story to: PO Box 439, Epping
2121 NSW, or FAX (02) 876-5715

Caption this pic!

Sure, it's a photo of a Donkey with Steve Devine from Topstage. So now you can put pencil to paper and win yourself a T-Shirt, by mailing or faxing your caption (and your address and T-Shirt size) to:

Caption Contest,

P.O. Box 171,

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We'll award the T Shirt to the best caption provider.



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