

Channels

Free

The professional Sound and Lighting magazine No. 6. 1st August 1991



X-pense Factor

INXS X-Factor: tour production reviewed

Showco's PRISM® Sound System had its first major visit downunder when the X Factor hit town recently. INXS in the middle of a major world tour broke with convention and freighted in almost their entire production with the exception of Vari*Lites, lanterns and trussing, which were provided by Jands Production Services.

Production Manager Keith Bradley explained it was only possible to bring in the Prism System by sea, by the time the tour did its last U.S.A. date in San Diego, the duplicate P.A. was already on the docks in Australia occupying two shipping containers.

"We built a new set here, that was cheaper than airfreighting, but it presented a few logistic problems early on" said Keith. The rest of the gear, amounting to about 20 tonnes was air freighted straight from L.A. to Perth on five different carriers, at a cost of more than \$100,000. "We had a few nervous moments, with each carrier routing their flights differently, but it all arrived OK." This is living dangerously.

The PRISM system is essentially based on a trapezoidal speaker cabinet that by virtue of an ingenious rigging system, fits into a complete arc-segment array of cabinets. The array is four cabinets high, and usually eight wide, totalling 32 boxes per side. As a left-right array, coverage is 270° - to cover 360°, a third array is required.

Showco are coy as to the nature of components within PRISM, although it is known that JBL Vented Gap loudspeakers are used, with the high frequency component including a JBL 2" compression driver. All these components are "Proprietary", being unique to Showco.

The Sound was typical INXS, fairly constant with their album production, and run at about 104dB (A weighted) at the console.

(continued on P. 8)

SPOTLIGHT: INXS LX P4

Jands name their newly released JBL P.A. range:

System

The 1991 Jands JBL definitive range of loudspeaker cabinets has a name: System. Top of the range, and just released, is the System 1400, a composite full range cabinet rated at 1,400 watts RMS at 4 ohms, the most powerful passive cabinet available in the world today. That the cabinet will handle such power is entirely due to JBL's new Vented Gap Cooling technology, the 2226 15" loudspeaker, of which 2 are used in the System 1400 has given designer Richard Priddle a walk up start.



System 1400

"The woofer section is setup for optimum power handling, the 2226's are each capable of handling 600 watts" said Priddle. "What we've done is set them up so it's a balance between low end extension - they just hit the fat zone 45Hz, so you don't need to run them with sub's, they've got that rounded bottom end. Sometimes when you design speakers

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NEW FEATURE: The Connector Bible

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The Secondhand Music Co.

Pty Ltd

GUITARS, BASSES	\$
Gibson 335 Dot re issue	1750
Gibson 335 GB Tobacco s/burst	1200
Rickenbacker 330 black	1200
Fender Strat (with lace sensors)	1200
Gibson SG 68 (Angus Young)	1200
Charvel Custom Fusion	1000
Ovation Custom Balladeer (12 string)	990
Fender Original Pre L Precision	1600
Fender '62 Re-issue Precision	1000
Epitone Semi Acoustic bass	1400
MANY MORE!	

AMPS	
Vox AC 30 '63 model	1100
Vox AC 30 '71 with Rev	1000
Fender Twin Reverb	1000
Marshall 30w Valve head & 2 x 12" Marshall box	1000
Fender 'Brown Face' concert amp	1000

THIS MONTHS SPECIALS

Lighting	\$
Jands 4 Pak	650
ESP 24 ch desk as new in r/case	3000
Sound	
JBL M110	100
JBL E145	195
Clair Bros. Phase Linear's (8 only)	900 ea
AKG CK 451 with CK 1 cap	250
Beyer M500	200
Sennhiesser 441	300
Yamaha DMP 7	
Digital mixers	2250
Yamaha REV 7	900
Yamaha PM 2000	
24 channel desk	12,000
Yamaha DEQ 7	700

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Tribute band or something more interesting? Seen advertised as appearing at a Sydney club.... "Old Kids Off Their Blocks"!

Acoustic Consultant **Richard Priddle** has moved base to the Antipodean delights of rural Bathurst, near where your Editor resides. Priddle, like the Ed, will journey to the big smoke when required, and at all times can be reached on the anatomical extension he calls his mobile phone (018) 642-765. Yes, Cel-Net works in the Country, too. The Ed reckons it works in a small plane, but he gets confused when people ring him while he's trying to find things, like airports. This now makes for two Priddles in Bathurst, Bro. Andrew of course is famous in the district, formerly as a local radio announcer, and more recently as a touring P.A. operator.

"Why are you looking for John Busst?" said the voice on the end of the phone. "He's right here". Responding to the plethora of rumours, all of which Aux 1 cannot possibly detail here, John says: "I went to LA to finish a tour with BB King, Albert King and the Bobby Blue Band. I had to come back early at great cost. I've sold my house, and now I'm selling Court Australia piece by piece to pay the bank off. I'm available for road work." His number is: (075) 92-0275.

John E. Thomson, otherwise known as J.T. is back and looking for work. Thommo as he was once known in his Theatrecraft days has spent most of the past four years working overseas for the likes of Pink Floyd and the Rolling Stones. He is available for Stage Management, Production, Set work, Trade show construction - call him on (02) 949 4272.

Every promoters nightmare, the whole Wendy Matthews rig (now supplied by Jands Production Services) was setup at Dallas Brooks Hall in Melbourne, only to have the lady fall foul of a throat infection and cancel.

The Bandit's, featuring Deek Rivers (AKA Smithy) had, at presstime, won Starsearch on Network 10, 2 weeks in a row.

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Sydney's Precedent Productions have appointed **Tim Stackpool** as Technical & Production Services Manager, to oversee all video, audio, staging and other such elements of every Precedent Production. Tim is formerly of Channel (Yes, Mr. Packer) Nine.

Jands Production Services recently employed a group of trainees, 5 male and 1 female aged between 19 and 21. Last year, 9 trainees were started, trained and retained by Jands. The company had 90 applicants, the trainee positions are now all filled. In the meantime, the word is: "Get some experience, however possible". Please don't ring Jands regarding training positions, if they become available we'll let you know here in Channels.

Monitor engineer on the last Paul McCartney tour, John Roden says whoever ripped off the tape of Linda McCartney singing backup vocals to "Hey Jude" is a very lowlife indeed. The tape turned up after the tour, and some radio stations played it, in some weird character assassination attempt. Anyone whose worked in the live area knows backup vocals in isolation often dont sound great. As to how the tape was produced, John is mystified. "Aside from the Monitors and the FOH, the McCartneys had a 32 track mix of every show done for a possible album, then there were several shows where a Studio Truck was hooked into the rig for A.V.'s". John insists the McCartneys are very nice people to work for. "A luvly family".

Honourary Texan, Howard "The Legend" Page now minus trademark moustache!

Aussie at large Rockie McKenzie operated Vari*Lites for the Kurds benefit concert in London recently, featuring the likes of Sting and Skinhead O'Connor.

Chris Royal back at Graftons Sound, rumoured to change soon to Krupp Sound!

To whom it may concern:

I wanted to clarify an article in your 15th June issue, No. 5, which I saw while mixing at EMI Studios.

It concerned your "Great Mistakes" column and an article on the Empire Hotel at Cobar, and the "not so good" treatment that the writer of the article received there.

All I can say is that this must have been quite some time ago and I wish he'd said so. My parents have been running the Empire Hotel for about one and a half years and would never treat anyone like that!

They know what it's like, they have a daughter in the industry.

Is there any way of saying this in your next issue? I'd appreciate it.

-Karen Smith.

☐ Yes Karen, the incident concerned did happen just before your parents aquired the Hotel. Actually, given the nature of the story I don't think the lady at the Hotel was unreasonable in her actions! Your parents are very lucky to have a Daughter like you to defend their reputations. Anyway, let us set the record straight. Empire Hotel rules, Oyl

Troy Balance Corp. reorganise

Melbourne's Troy Balance Corporation has relocated their Production Division, moving it together with the rest of the operation to 9 Union St, Sth. Melbourne. "Sure times are tough, with Production business not at the levels it was two years ago", said Peter Trojkovic, "but CMI at Yarraville have taken over the company owned factory I've vacated and in spite of the recession their business has nearly doubled in the last two years. Furthermore they have just acquired distribution of Ross and Charvel/Jackson products! Trojkovic has an interest in CMI, and assures all that the Troy Balance Corporation is alive and well. Their phone number remains (03) 699-3844. Incidentally, the next issue of Channels will review Troys Daryl Braithwaite production.

Readers Contest

Caption this photo! The best caption award is a genuine Soundcraft Spirit T-Shirt, available in any colour you like as long as long as you don't choose! Send your caption, and your T-Shirt size to: **Caption Contest**, P.O. Box 171 St. Peters N.S.W. 2044 Australia. Fax: (02) 517-1045. The pic was taken at a Midnight Oil show during Easter.



RoddyPix



John Featherstone, L.D.

INXS LX

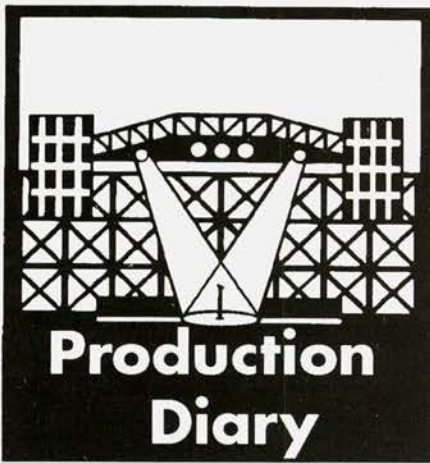
The X Factor show is impressive through high production values, with the most breathtakingly co-ordinated lightshow this writer has ever seen. L.D. John Featherstone was busy with Janet Jackson when the tour started, so Roy Bennett, who is Prince's LD designed the rig and worked the first month. "The design hasn't changed much, Mac Mosier (Vari*Lite designer & operator) & I have improved a few things. Roy and I work together a fair bit, like tag team lighting directors! Roy & I think on similar lines."

"The rig isn't huge, it's getting towards a heavy metal type size rig, but it's high tech. Every conventional lantern - of which there are about 120 Par 64's - has a Colour Mac colour changer, even the 8 x 5k fresnels mounted on the top of the grid., and the 6 x 5k on the back. We have a 20 colour palette for each light, which is versatile. I have Terra Strobes on the floor and in the grid, cyc lights with gel changers, and 60 Vari*Lites - of which 14 are VL4's."

Followspots were used very well indeed - two each side of the grid, and eight in the F.O.H. John had a map taped to his Celco Series II 90 channel console, which showed each followspot position, and he had thoughtfully gone to the trouble of finding out the name of each (locally employed) dome operator. He then cued them individually by name. It works very well indeed.

The execution of the lighting was totally harmonious between John, Mac, Simon Carus-Wilson (Colour changer operator) and the dozen domes. This is such a rare blending of elements and people it becomes apparent how ordinary many shows with a lot of equipment are. Far too many lightshows are a bunch of people bashing away at random and at odds with each other. Still too often, domes wash out the stage and blunder about, Vari*Lite tech's work to their own agenda, and fog happens according to the mood of someone else.

Featherstone & Mosier worked very well together, the result was a lightshow that created a great deal of punter interest. Perhaps it overshadowed the band - just a bit!



Production Diary

Midnight Oil finished off their Blue Sky Mine tour by arranging a series of shows in support of homeless youth. The shows were held in Melbourne, on the Gold Coast, and at Sydney Showground on the last day of the Sydney Easter Show. The Sydney rig comprised 60 S4's, stacked 5 wide x 6 high. In Melbourne, 64 S4's were stacked 4 x 4 to total 32 per side. At the Gold Coast the stack was 7 wide x 4 high, to total 56. Otherwise the sound spec was the same as the Oil's used on their world tour (See Channels, issue 2). The Lightrig comprised 380 Par 64, 10 Lekos and 5 DWE 8 packs, driven by an AVO QM 500/90 via 4 x 36 way dimmer racks.



Midnight Oil's Sydney stage, from the FOH desk.

The ABC contracted **TOPSTAGE PRODUCTIONS** to supply audio for the World



FOH at the World Council of Churches

Council of Churches 2 week conference earlier this year. They used 5 x JBL 4750 Soundpower cabinets in the main room, with 8 Control 1's as a delay ring. The second room had 4 x 4726 as centre cluster, with 8 x 4716 in a delay ring with 2 4742 sub's. Wedges were 9 x 4728, consoles were Soundcraft Venue 32 and Delta 24.

The **HIGHWAYMEN** toured in May with J.P.S., FOH 48 x Clair Bros. S.4, Jands ampli-

soles, Monitors 10 x JBL SLP wedges, 4 x R3 cabinets for drumfill & sidefill. Console Yamaha PM 2800/40 for 8 sends. LX: 80 Par 64, 6 Duets, 8 cyc lights, 2 HTI 400 f/spots. Celco board through 2 x Jands 36 dimmer racks.

WARRANT, Jands Production Services doing the honours, how's this for Monitors: 6 x

DLP, 6 x SLP & 12 x Turbosound TMS 3. (Yes, the guys like their sidefill!) driven by a Ramsa 40.



Peter Wait waits at the Oil's monitor desk.

PRODUCTION DIARY LISTINGS:
Fax to Julius, (02) 517-1045.

Audio Aficionado AES Alert

The Audio Engineering Society (AES) trade show - sorry, "Premier Exposition" is on from August 20 until 22, at the Moonee Valley Convention Centre, Melbourne. Internationally, the A.E.S. show is the one to visit. This regional show also promises an interesting array of products and workshops. The organisers have appointed the Victorian Rock Foundation, P.O. Box 297, Port Melbourne 3207 as the Event Organiser. They can be reached on the telephone (03) 696-2022, or fax (03) 696-2879.

DB Sound (Sydney) move

Sydney's DB Sound (not to be confused with Geelong's DB Audio) have moved to bigger premises, at 9 Bridge St, Rydalmere. The phone remains the same, (02) 638 0777. Sharing the building is Warehouse Rehearsal Studio's, same phone number.

..While A1 try to

To reduce overheads A1 Audio moved operations last month, in a rather hasty fashion that left their telephone system in limbo, without a redirection for more than a week. The confusion extended to a hastily settled dispute with the landlord of the premises vacated by A1, who locked them out of the premises during the move.

Director Chris Kennedy says he is working down his monthly overheads, and the new premises cost "considerably less" than those vacated. "These are dangerous times", he said. The new address is: 220 Harbord Rd, Brookvale, and the new phone number: (02) 905-7433. At press time the Turbosound Arena System remained unsold (See Channels #5) but "We have expressions of interest, two in Australia and a number from around the World", Kennedy said.

Thirsty for more?

Channels PUBLICATION DIRECTORY details the world of specialist magazines, some of which are just indispensable reading! Rated out of 5 *

Try these ...

Lighting Dimensions

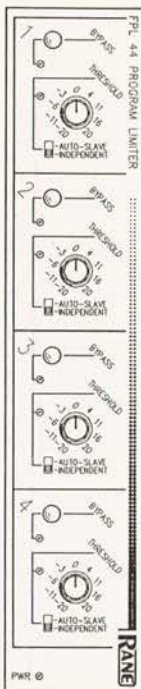
Subscription US \$39 per year, 9 issues. PO Box 425, Mount Morris, IL 61054-0425 High quality, the lighting bible, 120 glossy pages, colour. *****

Recording Engineer/Producer

Subscription US \$50 per year, monthly. Also mailed free, Monthly, providing you qualify. Apply direct to: P.O. Box 12952, Overland Park, KS 66212-0958, give full details of your company/operation, market segment and describe your function. If unsure, send money.

Obviously Studio orientated, but usually has a pretty good Live Sound feature too. 100 pages, colour, gloss, good schematic diagrams. *****

MORE NEXT ISSUE.



FPL 44 Limiter-latest in Rane Flex Series

Rane flex series continues to expand, the U.S. manufacturer recently adding four more modules, most interestingly a Quad Programme Limiter - the FPL 44.

This is designed as a pure system limiter and two units can be mounted horizontally, giving eight channels of limiting in one rack unit of space. The FPL 44 (pictured) has a Slave/Independent switch on each channel, and is balanced in with XLR balanced outputs.

Each channel has a bypass switch WITH LED (so you can be sure you are either practising Safe Sound or Un-protected!) and threshold control with LED indicator. The SLAVE switch is all important in system limiting, so as to preserve spectral balance on left/right (stereo) elements.

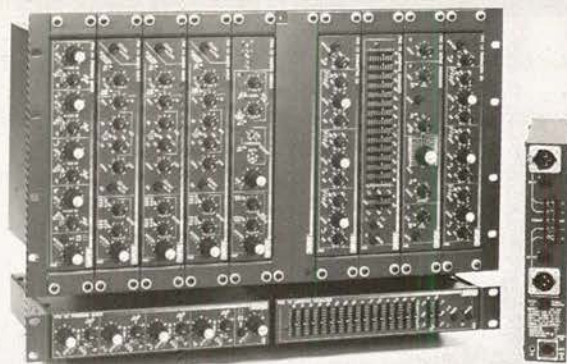
Twin Towns update rig

Twin Towns Service club, on the Gold Coast, have recently expanded their technical facilities. Production Manager Paul Kellners presided over works that have resulted in significant improvements to the stage, and added new equipment where it was needed most.

"We now have four Intellabeams with the Intellabeam controller, along with a new Jands Instinct 60 lighting console" according to Paul. The Intellabeams, an automated lantern, have 12 colours & 12 gobo's, and use a 400 watt MSR lamp for high output.

The club has complete technical facilities to cater to a wide diversity of artists. For example, the FOH (sound) console is a Yamaha PM 2000/32, and Harry Parsons is the engineer. Clair Bros. R4 composite boxes are driven by Jands 920 amplifiers, and JBL 4550's are used as subwoofers.

122 lanterns, followspots, fog, strobes and just about everything else is provided. Sounds like fun in the Sun, guys!



Rane Flex Modules

SALES WATCH

Long established independant PA operator, **Rob Barnham** recently purchased a Soundcraft Venue 32 ch FOH console, optioned with 28 mono and 4 stereo input modules; and a Soundcraft Delta 24-10 Monitor console, from Canberra's **Topstage Productions**. The consoles went immediately on the road with **Paul Kelly & the Messengers**. Rob's phone number, for those seeking a desirable Production, is (02) 281-2499.

Topstage themselves have ordered 6 x JBL 4850 Concert Series cabinets, which are fully rigged for flying. These will go into the Topstage Hire Dept., as well as a 32 channel Soundcraft Venue console.

Sydney's **PA People** have ordered 4 x Soundcraft Spirit Consoles.

In Melbourne, **Agent Audio** are outfitting 16 **Sound Rehearsal Studios** at Moorabbin with 16 Soundcraft Spirit consoles. 26 x JBL 2370 flairs, 6 x 2380, 6 x 2445 2" drivers, 38 x 2226 15" Vented Gap loudspeakers, 3 Rane AC22 crossovers, 13 Yamaha R100 reverb/delays, 3 Yamaha SPX 900's, 16 Yamaha Cassette decks, and plenty more, including 120 Shure SM 58 microphones!

Lytmo Systems Pty Ltd installed 23 pairs of JBL Control 5's and 17 SB 5's (sub bass cabinets) in the Virgin Megastore within Adelaide's Myer Centre. The install included lots of Koss headphones, a Citronics SM 550 mixer, White EQ's, HiFi bits and pieces, Video and was engineered by Lytmo.

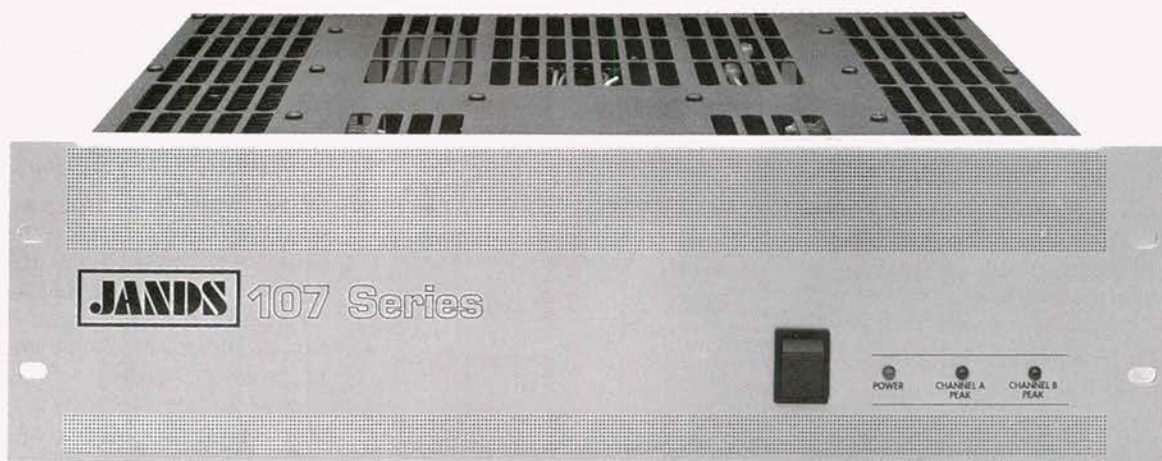
Townsville's Bank Hotel aquired 2 x JBL Soundpower 4755 cabinets, 2 x 4788, 2 x Jands 510 and 1 x Jands 516 Mosfet power amplifier, from **Musician's Pro Shop**.

Darwins **Top End Sound** and Rockhampton's **Stage & Audio** both recipients of new Jands amplifiers recently.

QPAC (The Queensland Performing Arts Centre) have bought a 36 channel Jands EVENT lighting console from Greater Union Theatre Supplies. According to Paul Beck at G.U., "The client was very impressed with the Event's capability to have up to six time playbacks operating simultaneously".

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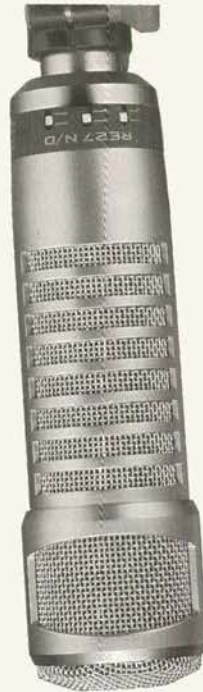
Yamaha EMP 100 - another low cost FX winner!



Selling for around \$600 at the dealerships we visited recently, the EMP100 follows the success of the R100, a half rack width compact Digital effects unit that has all but cornered the market.

With 100 factory preset effects including Reverbs, Pitch changes, Delays and Modulations, EMP 100 allows you to modify any factory preset and save your mop to one of 50 user memory locations.

Combination effects like Stereo Pitch & Reverb, Symphonic & Reverb and Delay & Reverb (amongst others) and the ability to modify up to 8 Parameters, make this a pseudo SPX 900. Midi in, R & L out, and full 20K-20KHz bandwidth complete the picture.



E.V. RE 27 N/DYM

This is a major re-work of the classic RE 20, possibly the nicest Kickdrum and Sax mic ever made. This version exhibits higher output (6dB more) and wider response, with 3 switchable filters, one high frequency and two low frequency.

Tour Horror Story #508

"In Glasgow I ended up wearing the board! It was a really small gig and I had about 2ft between myself, the wall, and the desk. The barrier collapsed, the crowd came back, and the desk ended up in my lap. I did the show braced against the back wall with my knee on the desk to keep it in place. The Sound board came back two feet as well, because all the security was at the front where the barriers had also gone and the crowd were picking up the strobes and playing with them. It was chaos, the band loved it, and the crew had a nightmare - it took five people to hold onto the sound desk."

-LD Tony Fagan, on tour with Jesus Jones.

System, the P.A.

(Cont. from page 1)

you compromise between heaps of bottom end and the slam you get out of the mid-bass with 2 x 15's, this has both. It's also balanced between the sound and the power handling vs the size of the box.

"We've gone to dual ganged inductors, we're talking about huge power handling, a 1400 watt box. In the high pass I haven't cut any of the amplitude out, rather I'm controlling the mechanical resonances, horn management is what it's all about, because these things are high 'Q' devices, when they're given the berries they tend to want to stay moving, so in the network there's a handbrake across the 2K bark that the constant directivity creates - it's a very unusual network. It's there to tame the horn." (A JBL 2445 mounted on a 2380 CD flair)

"In response the cabinet automatically has a very slow taper from low to high, 1K to 20K there is a gradual decay, of 4dB, to 15KHz it's down 3dB. It could have been dead flat, but it didn't sound right. In fact I have created a total horn management system for the 2445/2380, which could be used anywhere, even in active systems."

By way of comparison, Jands point out the System 1400 outperforms the two benchmark compact PA cabinets available today, the Meyer MSL 3



Priddle

and the Turbosound TMS 3. In both cases, System 1400 produces greater SPL, from a smaller cabinet, with more bass, a powerful claim from Jands.

The System 1400 measures 1245mm tall x 510mm wide and 510mm deep. Standard finish is Black Carpet, with provision for mounting four casters on the rear. A complimentary subwoofer, the System Sub 1200 has been designed around a pair of JBL 2226 "Bandpass Loaded" into a cabinet the same height and width but a little deeper than the S1400. A smaller cabinet, the System 700 is also ready for release, with other types due to join the System range soon.

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Multi track Music Recording course at Australian Film and Television School....

Respected industry "elder", Tom Lubin, is conducting a part time Certificate course at the AFTRS in Sydney. The course extends through 2 x 13 week blocks, each taking 11 hours a week, which includes a 5 hours practical workshop.

The cost is \$1250 per stage, or for both stages \$2500, and the good news is the course complies with the Training Guarantee requirements, whereby if your employer has a payroll of \$200,000 or greater, 1% of this must be applied against training. If it isn't, the employer is taxed the 1% anyway!

Employers have until June 30th ... that's NOW, dudes, to spend the loot, and this course is one way to do it. For further details, contact Tom on (02) 805 6609. Channels do not endorse or otherwise recommend this course for the simple reason that we would need to sit through it first in order to do so, although Tom Lubin is known to us.

We would like anyone who has recently completed any kind of Audio course to contact us so we can form a view on the course's suitability, and collect your views on this vital subject for a future feature. Contact Julius Grafton on (063) 375-354.

LEXICON LXP-15

Favored by Recording and Live Engineers the world over, Lexicon create effects devices that have a clean & natural sound almost of their own. The LXP 15 has 128 preset effects, and allows MIDI interface to the extent that MIDI can control every one of its 27 variable parameters.

128 user effects can be stored as well, and the simple front panel belies the sophistication of the unit. It joins the LXP-1 and LXP-5 effects processors.

Portable stage modules

Suprex ® Systems are a portable stage platform which are both height adjustable and also fast to erect. The modules measure in at 1.2m x 1.2m in surface area (4' x 4') and clip together with a cam lock system. The surface is carpet covered, the unit can be dressed with a gathered skirt secured by Velcro, and the RHS steel frame is galvanised. Distributed in Victoria and S.A. by Greater Union-Village Technology, elsewhere by Burkinshaw Consultants Pty Ltd, who can be reached on (03) 748 6864.

INXS

(from page 1)

Walking the venue, dispersion was good, up in row V perhaps not loud enough, nevertheless anyone complaining the show was too loud need only have turned their hearing aid down, it was very audience friendly. In usual Showco tradition, a Harrison HM-5 console with extender was used, giving long serving engineer Colin Ellis 52 inputs. The HM-5 is a true concert board, with eight stereo sub-



Showco's Prism System. (Pic taken during Paul McCartney's world tour, courtesy JBL.)

groups, 8 VCA groups, 16 auxiliary sends, and very comprehensive EQ.

Funnily the board has no metering besides a signal present (green) LED, and a peak (red) LED on each channel! Showco builds a meterbridge showing the 8 stereo groups, 2 stereo programme outputs, and cue bus status. No metering for auxiliary busses however. The console sits atop an outboard rack which has a patchbay and the console power supply built in.

The multicore is multipinned, as are the patchbay connections and the extender board. Two multicores and a flexible 3 phase power lead connect very quickly. Neatness plus.

The standard Showco drive rack is a very elaborate item of engineering indeed, termed the "Prism Digital Control System (PDS)". The signal chain runs through a pair of TEQ third octave equalisers, then into the left and right crossovers, the subwoofer crossover, then the system protection unit, finally into the system control units, of which there are three. These control the left/right array flown in the air, the left/right array stacked on the ground, and a third unit acts as a spare, or drives a rear cluster if the show is in the round. The first system control unit can act as a Master, with the following unit/s Slaves. This simplifies the gain structure.

An interesting option is the plug-in gain

control. One sliding fader controls the whole system gain-without affecting the individual settings of the control units, and keeping the desk gain structure the same for every show. Just fade the one fader, up it goes! Colin had the fader atop his effects rack.

The 32 Prism cabinets per side weigh in at just under 4 tonnes. Each four cabinets is driven by one rack of five Crown amps, thus eight racks per side, plus a rack each side for floor fill. The floor fill stacks comprised four subwoofers, with 4 Prism cabinets. Placed along the front of the stage were four small monitor type speakers, which were fed a mostly vocal programme from a FOH Matrix send (via the foldback EQ/amp chain) - to give the first few rows some intelligibility. A nice touch.

As to the reason behind using Showco, Colin explained: "It was pretty well my decision, we'd always used Delicate Productions, who are a great company, but they didn't really have the linkup through Europe we needed. They use Martin speaker systems." Asked about consoles he has used, Ellis liked the Harrison, having previously used the Yamaha PM 3000. "I've tried the Gamble (EX-56) but found it a bit crunched up; too many controls in too small a surface area. You need a pencil sharpener for your fingers". I asked Colin if he'd seen or used the new ATI Paragon P40 console, but he hadn't. Console choice is a topic we will dig deeper into soon in Channels.

Effects, and Colin has an AMS, with 5 SPX 900 and an SPX 90II for longer delays. One SPX 900 is set for doubling at 30ms left and right, and used all the time on the main vocal, "to get more gain". Another is set for pitch change with a stereo delay, 75ms one side, 125ms the other, pitched up a bit. At outdoor shows the AMS is set for an ambient reverb across the whole mix, other times it is used for a non-linear reverb on snare. Each delay setting co-relates to the BPM (Beats Per Minute) sheet for each number, as set in the studio beforehand. A Rockman guitar preamp is used on the Harmonica, and the usual array of noise gates and limiters (DBX 900 system) allows for selective control as required.

A Yamaha DEQ 7 provides different equalisation as required for the kick drum, which is essentially three or four different sample sounds, triggered by a Beyer M88 mic, which is not used in the live mix. "It'd be nice to have a DEQ 7 on every channel in the mix- then it'd be like an auto-



Long time band engineer Colin Ellis, with camera shy Showco system engineer, Gentle Jeff McGinnis. Note the slider fader to Colin's left; that controls the WHOLE system gain!!

mated mix!"

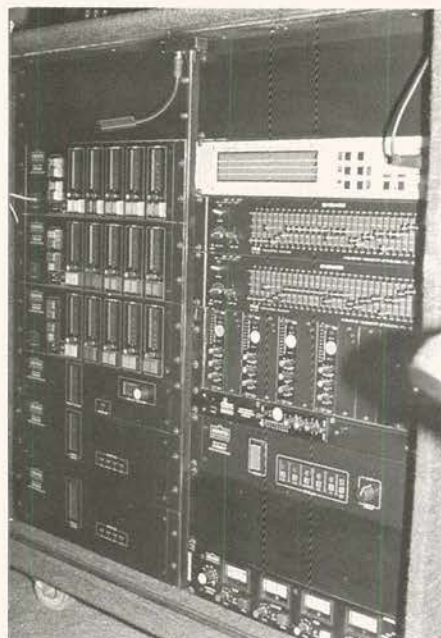
Desk inputs are Vocals, using Shure Beta 58 mics, Guitars (SM 57's), Snare (2 x SM 57's), Hats (2 x 451), Overheads (2 x 414), Toms (EV 408), Kick samples (2), Bass lines, Sequencers, Pads, Sax left and right, Harmonica, Stage Effects, Keyboards left and right (mixed on stage by Andrew Farriss) and amongst other things (including an input called "Stealth") a pair of shotguns. These are mounted atop the desk, pointed towards the heavens, and used selectively to motivate the crowd. "You can have a huge number of people clapping and cheering and hardly hear them. I can just slide in a bit of audience noise to rev things up" said Colin, "outdoors particularly, where I patch the shotguns back through the monitor desk to motivate the band".

A nice side chain consisting of a DBX 900 compressor/limiter with a Klark Teknik DN 360 equaliser provides frequency selective limiting of the lead vocal, "Particularly 5-6k". The EQ is boosted to emphasise the offending frequency, then inserted into the side chain input of the compressor, which does its thing when it gets enough input from the Klark.

Overall INXS preferred to feel consistent in using the same P.A. specification wherever they performed on this tour. The reality of importing a whole P.A. really comes down to costs, obviously if you can afford it, you will always use your "own" system. Many touring acts import their own consoles and monitors, running their programme into locally available amplifier/speaker arrays. The Prism system is probably the neatest, best presented system available in the world today.

The Prism cabinets form a flush array, joined with steel pins. Cabinets wire together, a column of four is powered by one amp rack.





Prism Digital drive rack

TOURING THE STATES

Can you sleep in a bus? The INXS crew do, up to three nights in a row when touring the States. "The roads are flat, obviously" said John Featherstone. Usually the strike takes from 2 to 3 hours, then they load in at 8am. On the bus you could get 6 hours sleep, but usually get about 5. Early in the tour the loadin started at 6am, with the riggers arranging the motor points, hanging the truss, then the lighting crew getting stuck into it.

Up to 30 loaders are on hand to unload the four semi's, and by 10am the P.A. is ready to be put together. The beauty of the Prism system is swift and easy rigging, which sees it in the air within 40 minutes. By midday the carpenters can start on the set, and the rest of the crew arrive. Soundcheck is at 4, and the touring caterer serves dinner at 6.

THE SPINAL TAP FACTOR

Aside from the Fog Machine flash button on the Celco 90 board sticking on during the gig at Madison Square Gardens, (with the stage disappearing into a fog cloud) the thing the crew laugh about most happened early on. A crew member, who shall remain nameless, invited a mate to the gig. As soon as the band started, "CRASH"! There this guy was, behind the lighting control area at FOH, going berserk, arms flailing, throwing himself around, totally off his dial. Then he climbed onto the support band's mixer, the security people seeing his INXS Backstage Pass wouldn't touch him! The crew sunk into their seats, trying to ignore the spectacle, until he was carried from the arena, very affected by a mind altering substance. With friends like that.....

INXS Monitors

INXS Monitor Engineer John Roden currently has no fixed abode, having just become a divorced individual. "Call me London based", he said. His last assignment was Monitors for Paul McCartney, an 18 month assignment. Before that? "Judas Priest". Whew ... that would sort anyone out.

The Showco monitor system is driven with a Harrison SM-5 console, with similar input modules to the HM-5 house console. Inserted across each of the 16 sends is a Klark Tekniks DN 360 3rd octave equaliser, the signal then routing to a Showco crossover, a neatly configured 2 or 3 way device that fits into a DBX 900 rack.

"Demanding? I've got cues at various times, I'm not just working for six guys on stage, they've all got their own stage techs too, who come to see me when nods, winks and looks from those onstage haven't accurately conveyed what they want.

"You're always the one they look at when something goes wrong, but I enjoy overcoming all hurdles, if I've done something wrong I fix it, if not I just stare back! I always keep a bit in reserve, but we've been on the road for quite a while now so it's all got a bit loud. At first it was vocal only in the wedges, now everything has crept into everyone else's send, it progresses.

John equalises wisely, just notching out (and gently) the first two hot points, which usually include one around the crossover point. "Any more and it becomes difficult to get your sound. You need it sounding relatively flat at the start, then having really comprehensive EQ on the desk I can get into anything. You can get yourself into a lot of trouble if you don't know what your doing...."

AFL monitoring is via a pair of wedges, so John can get stereo monitoring in the case of listening to the keyboard or drumfill sends, or monitor two separate sends at once if need be. The day we were there John had Monitor System Engineer Bernil Carlito rig him a subwoofer as well a noisy place!

At the hot zone, the BFM 600 Showco wedge has a JBL 15" driver with a 2" JBL compression driver mated to an acoustic lens - a reasonably straight forward foldback wedge that satisfies the likes of The Rolling Stones, Robert Palmer, Kiss and many other Showco customers.

As to the criteria for a successful gig: "If nothings said to me, I know it was OK! As long as I can please 5/6 of them, that's great!" Foldback can be a thankless task, but John Roden wouldn't do anything else.

INXS personell

Michael Long	Tour manager
Keith Bradley	Production manager
John Featherstone	Lighting director
Justin Collie	Crew chief/lights



John Roden, dressed for work

Simon Carus-Wilson	Colour changers
Terry Boyton	Lights
Colin Ellis	FOH engineer
John Roden	Monitor engineer
Mac Mosier	Vari*Lite designer
Roberta Greenberg	Vari*Lite head tech
George Hoadley	Production assistant
Ross Ferguson	Guitar/sax tech
Rick Salazar	Guitar tech
Andrea O'Neal	Bass tech
Rob Kern	Drum tech
Tony Smith	Keyboard tech
Richard D. Delay	Head rigger
Dennis McManus	2nd rigger/carpenter
Jimmy Bolton	Carpenter
Judith Heidenrieck	Wardrobe
..... and The Caterer,	who is a V.I.P. indeed!

SHOWCO personell

Jeff McGinnis	House systems engineer
Bernil Carlito	Monitor systems engineer
Tyler Garret	Sound tech

Jands/Vari*Lite Australia personell

Nicky Koumos	Jands
Andrew Cartwright	Jands
Nick Elvin	Jands
Paul Kent	Vari*Lite

Free time chart offer:

Colin Ellis kindly gave us a copy of his "Beats per minute" chart, which shows the correct time setting of your delay unit vs. the song and time signature. If you would like a copy, mail a stamped, self addressed envelope to:

Channels Time Chart,
P.O. Box 171,
St. Peters 2044 N.S.W.
Australia

Travesties amongst the walking wounded...

0800: A lighting crew at eight in the morning is not an inspiring sight, the term "walking wounded" springs to mind. However with the Australian Opera's summer season in full swing, such travesties are common, with a total of fifty performances of five different operas in rep. over a two month period, the lighting sessions and rehearsals inevitably get scheduled for the mornings.

Our mission this morning... to faithfully reproduce the lighting designers concept with little or no compromise in the two and a half hours available. In this case the lighting designer is John Montgomery and the show is Turandot, anyone familiar with the Air New Zealand advert will know the hit single. As this is to be a full orchestral rehearsal and delay results in mega bucks in overtime for the orchestra, a scenario the powers that be would prefer to walk over hot coals rather than see happen. The pressure is on to trim the focus of the three hundred or so lamps in the rig, the change over proper having been done the night before. That early morning feeling is replaced by panic !!!

0900: Due to a few technical hitches the mechanists have been delayed getting the set in, undaunted we continue to focus to whatever scenic elements are available to us, losing worklights on a stage full of let us say, unsympathetic mech's is a daunting (shouldn't the word be "Dangerous"? -Ed) prospect. By

now however the cavalry has arrived in the form of the casual dome (follow spot) operators who are despatched to the four corners of the theatre, we're looking in good shape.

1030: A calm descends, we're set to go. I've never ceased to be amazed after eight years in Theatre, that such mayhem can possibly rationalise itself into a tight and professional production.

1115: Interval, and a complete set change, dodging between frighteningly large trucks moving about the stage apparently at random, we re-focus for the next act. For the overheads a Cougar lift is employed keeping an ever watchful eye for marauding flats, the cause of demise of many an unsuspecting theatre lighting tech.

1145: Thirty minutes into a twenty minute interval and the stage manager is getting a touch nervous, when the curtain eventually goes out the scene opens with a dry ice cue. The last time we did this, the mechanism for lowering the Co2 basket into the machine (affectionately called "Das Panzer Fogger") broke, turning what was meant to look like a gently rolling sea into something that looked more like Armagedden. This time the complaint is "not enough dry ice" - sometimes you just can't please some people!

1330: End of rehearsal, strike the floor stands and anything else that will be in the way of the Mechanists clearing the set. Anything, that is, that we don't want trashed!

1430: After a quick set strike and a few grid changeovers, (That is re-hanging some of the flown scenery to allow for this evenings show to be hung) the stage is

now ours. Before the electricians changeover can be done however, a number of lamps which were refocussed during the rehearsal have to be refocused, so that when we do this show again in two days time, the point comes back correctly.

1500: All the bars have been into the deck, the lamps re-coloured and re-sized and flown out again to twenty feet, the standard change-over height. This process involves laying a grid of tape measures on the stage floor and each lamp being focussed to the co-ordinates that were noted down at the end of the lighting session. The system is about 85% accurate, a touch up is then done when the set is in to get it spot on, as we did this morning ... or was that yesterday? The days are starting to become a blur.

1700: The set's now in for this evenings performance of La Clemenza which will with any sort of luck go up in two and a half hours, after that finishes at about 10.30pm (2230 hours) it's another strike, another changeover, and we should be out of here by 0100am thank christ it's only a performance tomorrow!

**Andrew is a Senior Board Operator at the Sydney Opera House.*

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It's a Comm job...

Insofar as the world of professional Sound is a niche industry worth about 8% of the world market for potato crisps, Clearcom is a niche within. Back in late '60's when Rock and Roll became technical, Bob Cohen devised a talkback system to get the followspot operators to follow the action according to the script, which was really difficult due to the abundance of mind altering substances which were compulsory back then. The show's started getting real loud in 1969, so talkback became essential. Before then it was hand signals, which sometimes were charades gone real wrong!

Anyway, here in '91 the biz becomes more elaborate every minute, and a stage show like Buddy uses hi-tech to emulate the low tech '50's! (see Channels, #5). Clearcom talkback is used subliminally to direct a network of sound, lighting and technical crew, mastered from the stage managers position. The SB-412A main station can direct signal to anyone on 1 of 12 separate switchable outputs, which are matrixed to 4 independent channels.

This way, Stage Manager dictates directions to the stations of choice, and can single out miscreants for a private (or "all stations") grilling! 19 substations form the network, which is capable of running along a whole mile of cable if necessary, although the distances aren't that great. An essential feature of the system is that if someone inadvertently leaves a headset mic switched on, by quickly turning the master off, and then on, the offending substation is reset.

At the headset, abnormally high gain of up to 110dB ensures the given direction is heard, in the case of Buddy this is not a problem, but imagine you are monitor engineer for Whitesnake, and need to convey your Pizza order to the runner during the third number truly moments like this you need Minties!

Talkback, or Intercom systems are used increasingly in this information generation we live in, a Clearcom system is on trial in one of the Navies decompression chambers at the moment, living life 300 feet down so to speak.

The Californian company have an extensive range of systems, and cater to the broadcast industry in a big way with program Interrupt Systems as well. You know,"we interrupt this program to take you live to the Airport, where a musician has gone berzerk and locked himself in a mechanizing trunk...." and then the serious reporter with the earpiece is on the spot, cued by his Clearcom Talent Receiver. What a world we live in....



The Connector Bible

NEW FEATURE

Introduction

This is the first in a series of briefs detailing connector and wiring practices. Ever had to terminate a cable and not known the correct procedure, which is the correct connector to use, which wire goes on which pin? Well here's the answer!

First we look at microphone connectors. In future issues we will look at loudspeaker connectors, line level connectors, multipins, lighting connectors etc. These briefs are taken from a Standardised Connector and Wiring manual produced by Jands, although originally destined only for internal use, the manual has become useful to anyone working in audio and lighting fields in the Entertainment, Audio/Visual Broadcast industries.

We will document the various wiring/pin configurations used by Jands in their Manufacturing and Contracting/Installation divisions.

It is Jands policy to conform with accepted International and Australian standards where they exist, although many of the pin wiring configurations are wide spread industry practices, and are not as such an official "Standard" of any International or Australian Standards Authority. International and Australian standard numbers and references are given

wherever these are known.

Sometimes current industry practice conflicts with international standards and where this occurs it has been spelt out. Wherever possible, previous historical wiring "standards" have been noted for information purposes only.

You should always ensure that all connectors, cables and soldered connections are high quality. In audio systems more problems are caused by poor wiring than by equipment faults. The time taken to unscrew and inspect connectors internally is usually well repaid.

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GLOSSARY

Biz talk **A B C**

F **Feedback:** When signal from your speakers is heard by your microphone, an un-wanted oscillation that rapidly increases, producing speaker damage.

Flies: The space above the stage occupied by spotbars, hanging drapes and counterweighted lines for drapes and drops.

Flood: A wide angle lantern without a lens.

Focus: To point lanterns at their intended target/s.

FOH: Front of House, opposite end of the stage.

Foldback: Monitor system where an artist receives a discrete signal distinct from the normal FOH signal.

Frequency: The cyclic repeat of vibrations, changes in air pressure, that the ear can hear between 12 and 20,000 times per second, or 12Hz (Hertz) and 20kHz.

Colin Ford's Joke corner:

With Altziemers Disease you meet new people every day! and ...You can hide your own Easter Eggs! What's a definition of confusion? Father's day at Nimbin!

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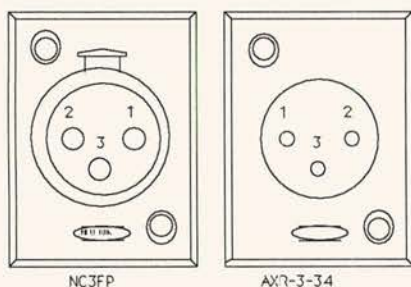
MICROPHONE CONNECTORS

Most, and in fact all professional (low impedance - balanced), microphones use the XL type connector. There are some semi domestic (high impedance - un-balanced) microphones that use 6.5mm Jack Plugs, but more on that later.

Jands use "XL type" connectors for all microphone level applications. There is a common myth that two "standards" exist for the wiring of "XL type" connectors, this is not so, there is ONE STANDARD which is IEC 268 (i) issued in 1975 and signed by 17 countries including Australia, the USA, the UK and Japan. In addition the same convention was accepted separately in the UK as BS 5428 (ii) and also has been made American Standard ANSI PH7.102-1983.

It should be noted that there really is no generic name unique to these types of connectors, the international standard refers to them as "Circular Connectors", we at Jands usually refer to them as "XL type". While this is more specific it should be noted that XLR, AXR, and Cannon are all trade marks of the original manufacturer ITT-Cannon and should not therefore be used to describe connectors made by another manufacturer.

As it is Jands philosophy to conform to ratified international standards, all new installations since 1987 and all new product introductions have conformed with this official international standard.



PIN 1 GROUND / SHIELD
 PIN 2 SIGNAL HOT / IN PHASE
 PIN 3 SIGNAL COLD / OUT OF PHASE

In addition to specifying the pin wiring, the standard also includes details governing the sex of the connectors, which is as follows:-

APPLICATION	CONNECTOR
Microphone Output:	Male 3 pin Chassis
Microphone End of Microphone Cable:	Female 3 pin Cable
Stage Box End of Microphone Cable:	Male 3 pin Cable
Stage Box or Wall Box Input:	Female 3 pin Chassis
Mixer End of Multicore:	Male 3 pin Cable
Mixer Input:	Female 3 pin Chassis

(i) International Electrotechnical Commission Standard number 268 Part 12, titled "Circular Connectors For Broadcast and Similar Use", 1975. Signers were Australia, Belgium, Canada, Denmark, Egypt, Hungary, Israel, Japan, Netherlands, Norway, Rumania, South Africa, Sweden, Switzerland, Turkey, the UK and USA.
 (ii) British Standards Institution No BS 5428, part 5 Section 3. 1980/81.

One point of interest is that all XL type connectors should, and most do, have the pin 1 socket longer than pins two or three. This causes the earth to be connected first and disconnected last (great for stopping BANGS and POPS when you connect a lead.

PART NUMBERS FOR "XL TYPE" CONNECTORS:

FORMAT	ITT-CANNON	NEUTRIK	SWITCH-CRAFT
FEMALE CABLE	AXR-3-11	NC3FX	A3F
MALE CABLE	AXR-3-12	NC3MX	A3M
FEMALE CHASSIS	AXR-3-31	NC3FP	D3F
MALE CHASSIS	AXR-3-32	NC3MP	D3M
MALE CHASSIS-LARGE	AXR-3-34		*
FEMALE CHASSIS-ROUND	AXR-3-13		C3F
MALE CHASSIS-ROUND	AXR-3-14		C3M
FEMALE CHASSIS-NCD	AXR-3-21	NC3FD	#
MALE CHASSIS-NCD	AXR-3-22	NC3MD	#

* The AXR-3-34 male chassis connector has

the same mounting footprint as the AXR-3-31 female connector. This allows the punching of common metalwork for the mounting of either sex connector.

The NCD format punch-out is widely used for circuit board mounting connectors and is additionally compatible with a number of plastic "XL type" connectors including those manufactured by REAN.

OTHER "XL TYPE" WIRING CONFIGURATIONS:

VERY OLD ABC STANDARD:

In the very early days of the existence of the XL connector a group within the ABC started a practice of wiring XL's with the same configuration as for 3 pin DIN connectors, ie Pin 1 - Hot, Pin 2 - Earth, pin 3 - Cold. Although this practice was only short lived mic cables wired this way do occasionally keep coming to the surface. They are hard to pick since most cable testers will show correct wiring since all three pins are connected to the correct place. Visual inspection of the terminations will reveal the screen connected to pin 2 and not pin 1.

NSW GOVERNMENT AND OTHERS' STANDARD:

The NSW government originally specified XL connectors for microphone applications to be wired pin 2 hot, but with a female to female format. This meant that stage microphone points were fitted with chassis male connectors.

Compiled by W. Peter Twartz
 Audio Products Manager,
 Jands Electronics Pty Ltd.
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 Sydney Australia. Not to be reproduced in any format without written consent.



AN INTRODUCTION TO STAGE LIGHTING

Part 2

By Michael Tanner*

Fresnel Spotlights

Fresnel spotlights provide a soft edge variable beam of light. This beam of light is usually at a higher intensity than provided by the profile spotlight due to the more efficient fresnel lens design. Focussing is achieved by moving the lamp in relation to the lens.

Beam shaping may be achieved by use of a barndoor accessory. The barndoor is usually a circular section of metal that fits within the colour frame runners at the front of the spotlight. This circular section of metal is fitted with four hinged doors which may be used to shape the beam and to reduce the spill of unwanted light onto areas not required to be illuminated. The fresnel lens used in these types of spotlights does produce a high degree of scatter light. In olden times this was reduced by painting the riser sections of the fresnel lenses black, however in modern times most fresnel fixtures are supplied with barndoors to limit the spill of scatter light.

Technical tip:

Even when barndoors are not required to

shape the beam they should be fitted to the spotlight to prevent the sideways spray of spill light. This is particularly important if they are being used at the front-of-house where spill light could fall into the audience area.

Other types of spotlights using a similar focussing system to the fresnel include the P.C. (pebble convex) style of lanterns. These lanterns are similar to the fresnel spotlights except they use a planoconvex lens with an optical breakup glass or stippled planer surface. Generally P.C. spots provide a narrower range of beam angles, however, this is due to the fact that there is little or no spill light produced by the P.C. lens. In some instances P.C. spots may be used in lieu of profile spots, however, they do not provide the facility for framing or gobo projection as found in the profile spotlight.

Par Cans

The Par Can is basically a metal fixture or housing designed to accommodate a Par lamp. (Par stands for parabolic illuminizer reflector). These lamps are similar to your car headlamps. Par cans are found in many sizes, the most common of which are Par 64 to suit the Par 64 1000 watt 120/240 volt lamp, the Par 56 designed to accept the Par 56 300 watt 240 volt lamp and the Par 36 designed to accept the Par 36 6 volt 30 watt lamp. These fixtures are also known as pinspots.

Traditionally, Par cans are found mainly in rock and roll applications, however, of recent years theatre lighting designers have incorporated these fixtures into their lighting designs. In general, Par lamps provide a preset beam of light, which is distributed in an oval pattern. Typically a Par 64 narrow spot lamp provides a beam angle with a horizontal dispersion of 14 degrees and a vertical dispersion of 7 degrees, with a Par 64 medium spot providing a dispersion of 28 degrees by 12 degrees. Both Par 64 and 56 fixtures are typically used to provide a wash of strong saturate colour on stage. Par 64 lanterns using 120 volt lamps require that two lamps be connected together by a series splitter. This series splitter presents a 240 volt load (i.e. 2 x 120 volt = 240 volt) to the dimmer.

Typical 650w Fresnel spot



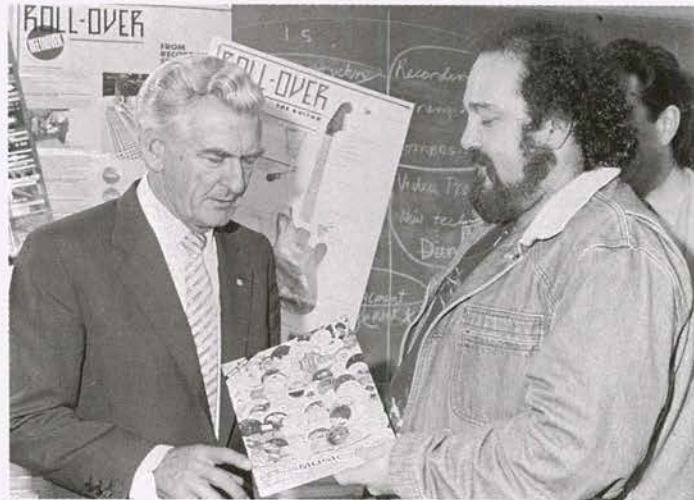
*Mike Tanner is Lighting Products Manager for Jands Electronics Pty Ltd.

Australian Music Industry Directory e-x-p-a-n-d-s

The letters arrive daily in foot high stacks and two fax machines continuously spew out multiple pages of listing forms. In April and October, as deadlines approach for free listing in the biannual Australasian Music Industry Directory, Immedial turns into a madhouse from its usually laid back environment.

In just three short years, the 200 page publication has become the 'Yellow Pages' of the rock industry not only in Australia but also throughout Asia, Japan and New Zealand. Since its first issue in July of 1988, it's gone from being the Australian Music Industry Directory to the Australasian Music Industry Directory with its seventh biannual edition coming out in July—due to its expanding of comprehensive listings of the music industries of 11 countries from its original goal of documenting only the Australian industry.

Phil Tripp has been known as a music trade writer, band manager, publicist, industry stirrer and a somewhat zany character in his



own right. Back in 1987, he was serving on the AUSTRALASIAN Rock Music Committee which he refers to as, "Kinda like a stint in the Army. The directory was an AUSTRALASIAN initiative, and Tripp got the job of compiling a 128 page initial effort that was funded with a \$10,000 grant for research. "In the end, I took the money, but I also took the risk that, since we were making the directory free with a 7000 copy run, if I didn't get the necessary advertising to cover costs, the exercise would be a loss instead of the winner it's become."

Advertisers run the range of record companies, lots of lawyers, venues and all sorts of music trade occupations—even bands looking for deals. But there are a number of other suppliers of goods and services including

airlines, liquor companies and odd bods such as a rock 'n' roll osteopath, cellular phone dealers but no escort services, yet.

For the January 1992 directory—which has a listing deadline of October 15—it is hoped to expand the directory even further with listings of road technical personnel like tour managers and production managers, adding a sponsorship section and expanding and updating present listing categories. "We've expanded so far into musical instrument and gear retailers and wholesalers in addition to our concert production listings but we feel that there is more scope with each edition to expand so we are interested in pinning down the road folk who run the live performance side as well." Tripp explains.

If you'd like to get a listing form or procure a copy of the current Australasian Music Industry Directory, get in touch with IMMEDIA! PR on (02) 212-6677 or swing by their offices at 3 Rose Street in Chippendale. Copies are \$10 prepaid by cheque or money order if you want it mailed to you. Or you can pick up a copy from IMMEDIA!'s offices or the Melbourne and Perth locations) for \$5 paid on the spot.

AUDIO CABLES AND ASSEMBLIES

Neglex Quad Microphone Cable

Neglex quad cables have been developed for the highest quality recording applications where maximum audio definition is critical. The balanced quad structure delivers sonic accuracy and cancels electromagnetic induction. XLPE cross linked polyethylene insulation offers excellent electrical characteristics which remaining super flexible. Available in three diameters and nine colours.



Multicore Microphone Cable

Multicore microphone cables from 2 to 48 audio pairs, each pair individually shielded, with drain wire, insulated, and printed with channel number for easy identification. XLPE cross linked polyethylene insulation will not shrink back during soldering. Rugged yet flexible construction offers a compact and super flexible cable, even at temperatures down to -20 degrees C.



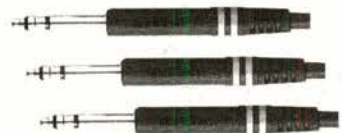
High Definition Studio Speaker Cable

Designed to deliver maximum performance from state-of-the-art tri-amp systems, this cable offers true audiophile performance for accurate sound transmission and transparent audio response. Each conductor features 224 strands of Neglex oxygen free copper with colour coded PVC insulation, with a tough overall matte black superflexible sheath. Available with 4, 6, or 8 conductors.



Bantam Patch Cords

Professional bantam patch cords, the first high definition audio cables designed specifically for recording studios and broadcasters. Superflexible quad balanced Neglex oxygen free cable moulded to a durable nickel plated tip/ring/sleeve connector. Interchangeable colour coding rings allow easy identification. Choice of four jacket colours and seven lengths from 30 cm to 180 cm.



MIDI Synchro Cables

Specially designed for use in MIDI communications systems, MIDI Synchro Cables feature one piece custom moulded 5 pin DIN connectors. A specially designed superflexible cable provides one twisted pair for data and two additional conductors for tape synchronisation signals. Interchangeable colour coded rings allow easy identification. Available in seven lengths from 45 cm to 9.1 m.



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CALVI CORNER

Great Mistakes

The great Mistakes column will resume when you send us your description of something that just didn't happen the way it ought!

Send us your story! P.O. Box 171, St. Peters N.S.W. 2044

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Cast your mind back, way back, to when you first started in lighting. Your head was buzzing with so many questions, that you just had to ask someone how all these things worked. Across the room you spot a friendly looking Neanderthal wearing a black t-shirt, who looks like he knows what he's doing. "Excuse me, how does this all work?", you ask in a pleasant voice. "Piss Off", he replies in a don't annoy me, I'm really important and busy voice. With your head bowed low you sulk from the room, your dreams shattered, wondering how you are ever going to learn when no one will tell you anything. Does all this sound familiar?

Are you sick of all the pop star roadies who refuse to tell you anything about their rigs? What colours they are using, or how they rigged something? Are you having trouble with rigging your lights in a particular venue? Are you stuck, trying to work out a special way of rigging your show? Does the venue that you're about to work in only have a 3ft high ceiling and you don't know where to turn? Have you just had sex for the first time and been turned off because you got your head stuck? (Are you talking from personal experience, Frank? -Ed)

Well with any luck your problems are about to be solved. This industry for many years has been very selective about who it tells what. The idea for this page is for everyone to share that sacred bit of knowledge that they have been guarding for years.

Maybe you have put a real lighting rig in to "DIDI'S" at Brookvale. If you have, tell us how (and why!). Have you discovered a previously unnoticed goods lift, right next to the stairs at Cronulla Leagues!!

Perhaps you want to find out how a special effect was created at a concert and no bastard will tell you. Are you having trouble finding a set of matching Skull and Crossbones earrings for those special occasions? Are you troubled by that rash that appears at load-outs? Are you starting to draw your plots by computer and aren't sure how to go about it?

Do you have a real challenge coming up where the band you are working with have something strange that they want from their lighting, and you're out of ideas? You might only have a tiny budget and want to know where to get something cheap (doesn't everyone). There also seems to be a lot of confusion about all the moving lights systems available in Australia, and a lot of urban myths need to

FRANK CALVI



be killed. Are there any other myths that we could explore? Are there any hoaxes that we could expose?

The idea for this page is to get some form of communication going in this industry. But to do this we need some input and some questions. I don't want to write another "LOOK HOW MUCH I KNOW" column, as there are already plenty of those about. I'm sure there are plenty of people out there with hundreds of unanswered questions.

As well as the questions, perhaps you would like to have a really big bitch about something, and get it off your chest. Maybe your sick of finding dodgy power at a venue. Did you have an in-bred electrician wire you in, only to find that your dimmers put out more smoke than your smoke machine? Maybe you had a really good experience and would like to share that with us. Have you discovered a really good truck stop that serves real meals and has serious coffee in real size mugs. What ever happened to the Kangy Andy truck stop?

Are there any crew out there who feel that they have been shafted in any way, and want to find out why?

Are there any Females out there who feel that they have been hard done by at a recent gig? If so, write and let me know. Maybe you have some ideas on how people's attitudes could be changed.

With any question we get and don't know the answers to, our team of researchers (me and several other Spanish volunteers who are yet to be informed) will endeavour to get to the root of the matter. Just like your very own Hinch Crew. Just think of me as your "Aunty Frank". Someone with whom you share all your problems.

So there you have it! Lets get those pens working and write to me, so that I can write about the things that you need to know about! I look forward to hearing from you!

-Frank Calvi.

Send your question, comment, abuse or suggestion, to: "Aunty Frank", P.O. Box 171, St. Peters, 2044 NSW Australia.