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International



RESTORED ROSARY WINDOW AND SUNBURNER AT THE GAIETY THEATRE, DOUGLAS, ISLE OF MAN - SEE NEWS THIS ISSUE

- Euro Disney Specials: Wild West and Videopolis
- Sounding Out Dire Straits at Woburn
- Four Hire: Australia's Tour Scene
- Show Reviews: APRS and Showtech
- Walk The Plank: Roadies at Sea
- Marquee and Delta - a Shepperton Partnership

JULY 1992


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"The PLASA Light and Sound show inspires research and development."

He puts his success down to an up to date knowledge of the latest advances in technology.

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So if you want to see what inspires David Taylor, a £4 discount on the entrance fee and the special visitor Hotel Booking and Travel Service through Exptel, phone the hotline on **071-370 8179** or return the coupon now.

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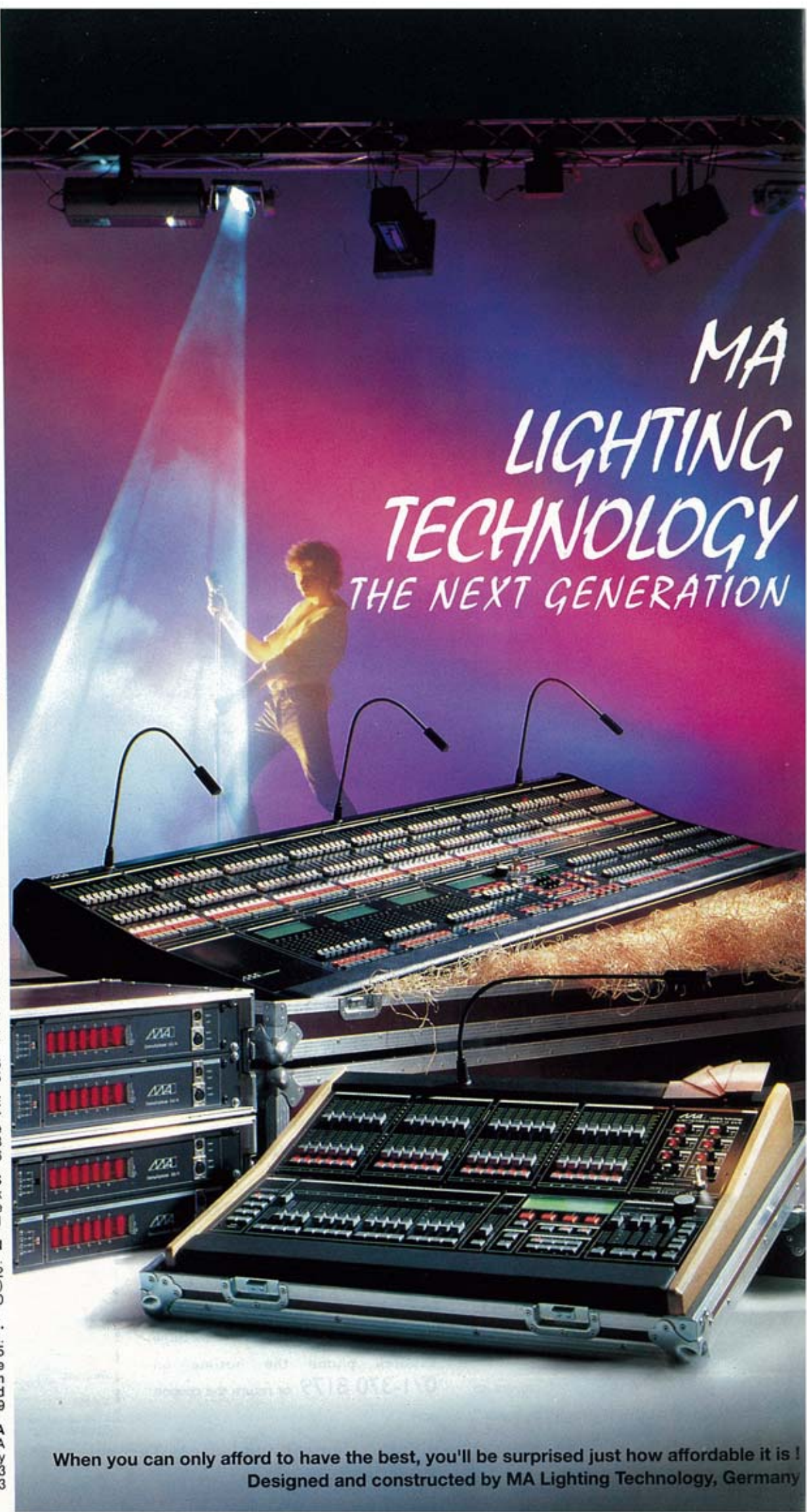
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LIGHTING+ SOUND *International*

JULY 1992

8 News In Lighting+ Sound International

Full round-up of all the sights and sounds from the industry

17 A Walk on the Wild Side at Euro Disney

The French version of the American cartoon park boasts two unusual live performance arenas not previously seen at other Disney locations. Tony Gottelier and Julian Williams report

21 Tour Scene Australia

Catriona Forcer talks to four Australian Hire Companies

25 On Tour

Catriona Forcer interviews Crowded House designer Steve Swift

29 Equipment News

30 Walk the Plank

'Astonishing shows at the drop of an anchor'. John Offord goes aboard Europe's first theatre ship

33 Showtech Showstyle

Ruth Rossington reports from Berlin

36 PLASA News

37 A Shepperton Double

Tim Frost talks to Marquee, where the K word's OK... and Delta where the junk is all hand picked

39 Maintaining a Sound Service

L+SI looks at service and maintenance of theatre sound systems

42 The Straits Return



Ben Duncan catches up with Dire Straits' sound crew at Woburn Abbey

47 Catalogue Collection

51 APRS Anniversary Show

Tim Frost brings back the briefs

54 National Theatre Studio Visit to Lithuania

From the diary of Bryan Raven, general manager of White Light

56 PLASA Members

59 International Directory

61 Directory of Suppliers and Services

66 Viewpoint

Simon Croft on Integration and Survival

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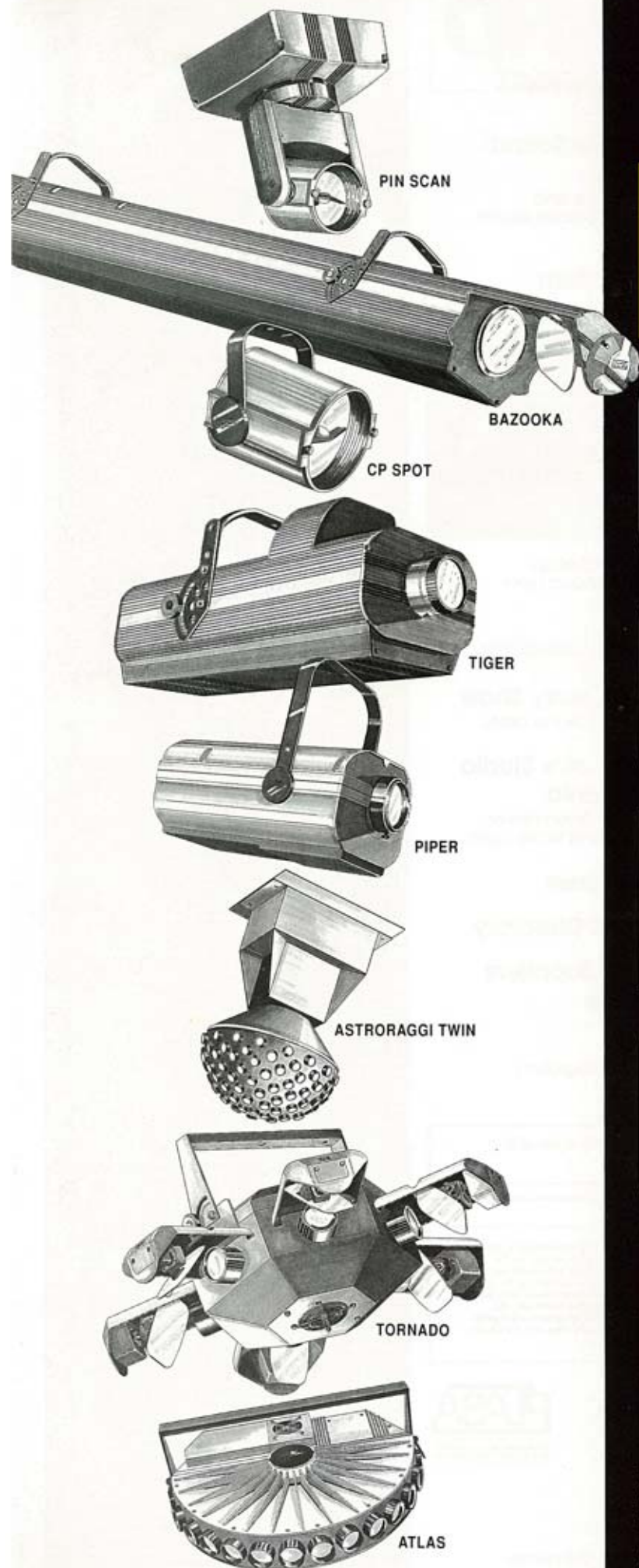
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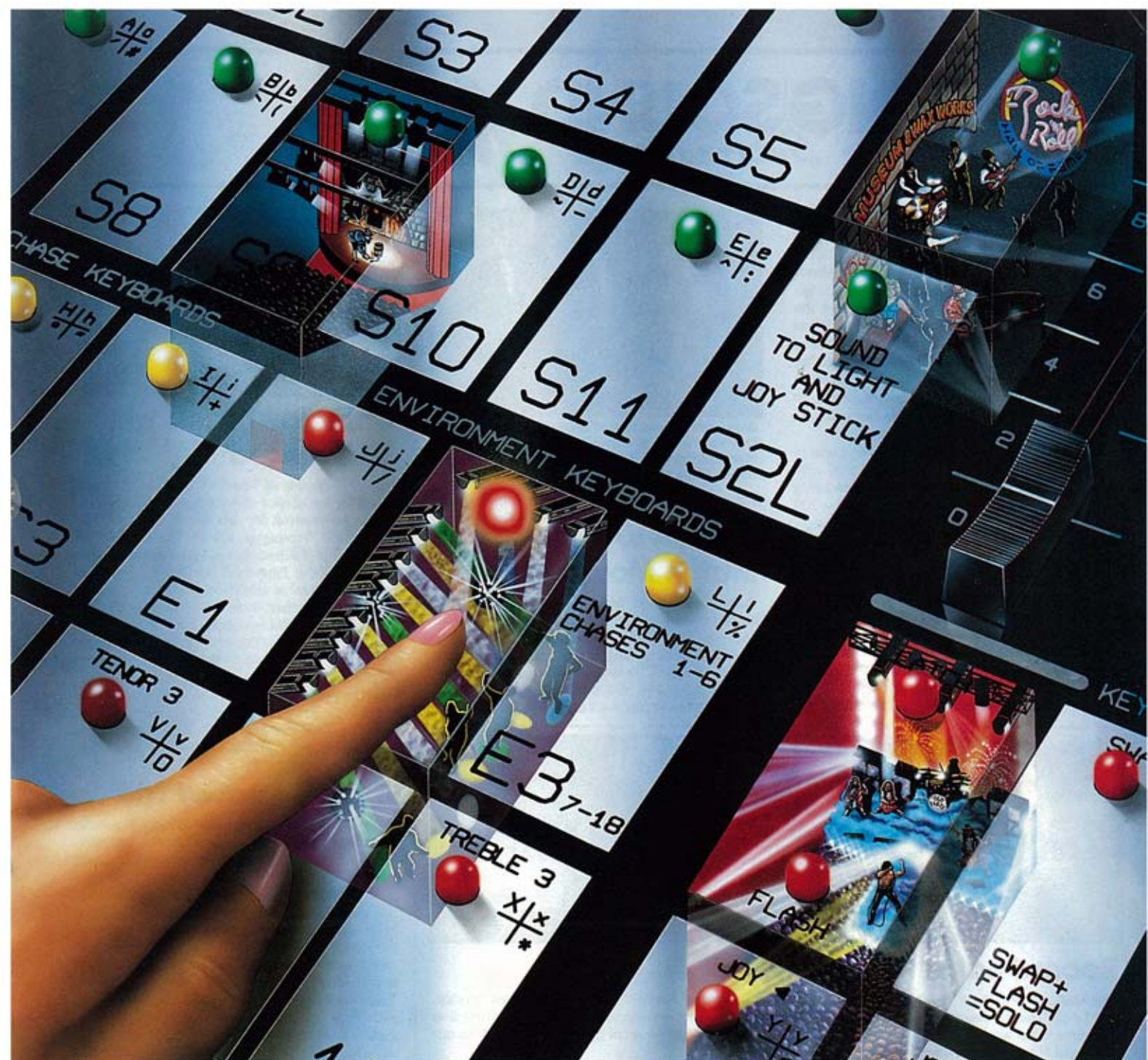
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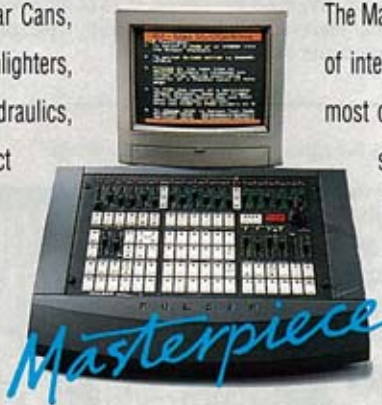
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BEDA Awards Success

The first, and highly successful Molson BEDA Awards and dinner in association with Disco Mirror came about as an extension of the magazine's Discotheque of the Year competition and the subsequent relationship built up with BEDA. It was felt that the nightclub industry needed something such as a black tie dinner to bring people together and the generous sponsorship from Molson Breweries of Canada made this possible. The event was held at the Metropole in Birmingham on June 21st and was a 750 seat sell-out.

Prior to the awards evening, a judging panel of eight 'industry experts' had been presented with three nominations in each category - these being arrived at through voting forms returned by 300 BEDA members, and over eight weeks the judges travelled the country to cast a critical eye over these venues, people and products.

Jonathan Ross compered the evening and first to join him on stage was Damian Walsh of Disco Mirror who announced the Regional Awards. David O'Donnell of Molson dealt with the product awards and BEDA chairman Tony Marshall took care of the Personnel Awards, which climaxed with the first 'Lifetime Award', presented to Lord Delfont of First Leisure, a hugely popular choice. Discotheque of



DM picture showing: David O'Donnell, Jonathan Ross, Paul Mardon and Ken Sewell of Pulsar, Geoff Palmer-Moore, Molson MD, Tony Marshall and Damian Walsh at the Molson/BEDA award presentation ceremony.

the Year was Rank Leisure's Ritz in Bristol. The Lighting Award went to Clay Paky for Golden Scan II and JBL picked up the Sound Award.

Martin Moves Bigger

Due to expansion Martin Professional A/S has moved to new and larger premises. In addition to improved facilities for the daily operations, Martin intends to build up one of the biggest show rooms in the industry. They can now be reached at Nordlandsvej 114, DK-8240 Risskov, telephone +45 86 214411, fax +45 86 215001.



Chris Townsend wins STLD Award

The 1991 Society of Television Lighting Directors' award for excellence of lighting was presented to Chris Townsend for his work on the BBC production 'House of Elliot'. The award was presented at the Society's summer meeting, held this year at the Pinewood Studios, by Bill Ward OBE, a veteran of television. He also presented certificates to Robert Hyde for his work on the TVS production of 'HRH Symphony For The Spire', Rod Litherland for BBC's 'Top of the Pops' and Graham Rimmington for his work on the 'Generation Game' for the BBC.

In the picture above Nigel Wright, chairman of the STLD congratulates Chris Townsend for winning the 1991 STLD award which was presented to him by Bill Ward (right).



Record Sales for Avolites

June was a record month for sales for lighting control manufacturer Avolites. Steve Warren, sales director, told L+S: "This has been the busiest month for the company since it was formed in 1978. Our production department has worked flat out manufacturing not only the complete range of control desks, but also our successful FD and TV Dimmer racks."

Lighting desks and dimmer racks were shipped, not only for the UK and European market, but also for the US. Avolites have supplied seven 72 channel and one 48 channel FD Dimmer rack for the Michael Jackson world tour. This is in addition to the racks supplied for the Olympics in Barcelona and the current Roxette tour. Both the Jackson and the Roxette tours are using QM Diamonds.

In the US, Metallica and Guns 'n' Roses will be taking to the stage using a number of FD dimmers during their double headline tour. Richard Salzedo, managing director: "We have now shipped 25 of the new QM Diamonds, with two more being delivered this month and our manufacturing facility in north west London is working constant overtime to satisfy the demand for dimmers and desks."

Action News *"What Light From Yonder Window 'Breaks'?"*

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New From Lampo

Amongst new products from Lampo of Italy are the Astral 2 and Mini Derby effects units.

Astral 2 uses a centrally mounted HMI 575 lamp focused upon two segmented sound animated mirrors. It has eight dichroic colours and eight gobos which are selected automatically. Control of the effect is via a 0-10v slider which allows adjustable strobe, black-out and gobo/colour hold.



Astral 2 and effects (below).



The Mini Derby unit.

The Mini Derby weighs in at just 3.7kg. It has bi-convex rectangular lenses available in eight colours, multi-colour or white. Sound animation is controlled by a motor PCB which allows adjustable sound sensitivity, motor speed and direction.

Lampo is distributed by Batmink in the UK (0458) 833186 and Reynolds of Raphoe in Ireland (074) 45179.

Busy times for Sound and Light Productions

Sound and Light Productions have been responsible for the production of the Hammersmith Odeon shows that formed part of the recent Radio One American Music Festival. Using sister companies Big City Sound and Big City Lights they provided a full production service for the predominantly country and blues roots artistes appearing.

Ealing-based Big City Sound used their Electro-Voice MT2 PA touring system and EV microphones driven by Amcron amps and controlled by a Soundcraft desk. "Our MT2 stock has been expanded as it proves to be more and more popular with those promoters and artistes who appreciate its clarity, performance and increased output for the same size," said Jan Goodwin.

Due to venue bookings at the Odeon, the fourth day was not part of the American Music Festival but played host to Shakespears Sister. To get around the logistics involved, Sound and Light Productions came to agreements with the group's technical production to use the EV and lighting equipment already installed. The festival continued at Crystal Palace Bowl for Big City Lights who provided the lighting rig for an open air weekend concert. They then went straight into the Hammersmith Palais the following Sunday to provide a smaller rig for the musical stars of the film the Mambo Kings.

Despite all this activity, Sound and Light Productions continue to expand and consolidate their new areas of backdrop design, backline hire to record companies for video shoots and guest appearances and laminate production to complete its production service.

Sales Success Story: Aliscaff and L+SI

Aliscaff Ltd of Tottenham, who have been producing access related products for 16 years have, since May 1991, been offering extruded aluminium couplers for trusswork, catering for both 2" and 1.29/32" OD tube. Single, double and swivel couplers are available, together with snap hooks (also catering for both ODs).

A modest advertisement in L+SI has produced an astounding volume of business emanating from 18 different countries reports Aliscaff. Every time the magazine has been published over the last 12 months, there has been a rash of fresh international and UK enquiries.

The couplers are produced on a computer numerically controlled machining centre, which even when working 10 hours per day has been at times overtaken by the volume of orders, requiring the purchase of an additional mill.

Aliscaff tell us they have been amazed and delighted with the results and L+SI has been easily the most cost effective advertising media found for this product.

Squire Open Evenings





Squire Sound & Light is holding a series of open evenings at its retail branches featuring lighting and sound equipment from Abstract and Vestax.

The evenings, set to run throughout the country during July, will include presentations from both companies and comprehensive demonstrations of their latest products. Visitors will also be given the opportunity for hands-on trial of the lighting and sound equipment.

The open evenings will take place at the following Squire stores: 1 July - Glasgow, 7 July - Guildford, 9 July - Birmingham. Further details are available from Steve Rolfe on 061-866 8069.

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The Dinosaurs are Dead - Long Live the Dinosaurs

Tony Gottelier 'bones' up on state-of-the-art pre-history at Imagination's new exhibition at the Natural history museum.

For people interested in the creation of interactive environments, and who isn't these days in the advent of modern heritage museums and 'experiences' which are consuming entertainment technology by the truckload, Imagination's recent effort at the Natural History Museum could be an object lesson.

Within the narrow but very tall wing of the Ronson gallery, they have created an extraordinary spatial bridge from stainless steel which also serves as a structure from which displays, including fossilized skeletons and models of the prehistoric beasts are hung on outriggers and glass platforms and lit by Strand F Quartets. All the displays are beautifully and clearly labelled on the gantry with electroluminescent plaques, the first time I had seen the material used successfully for this purpose.



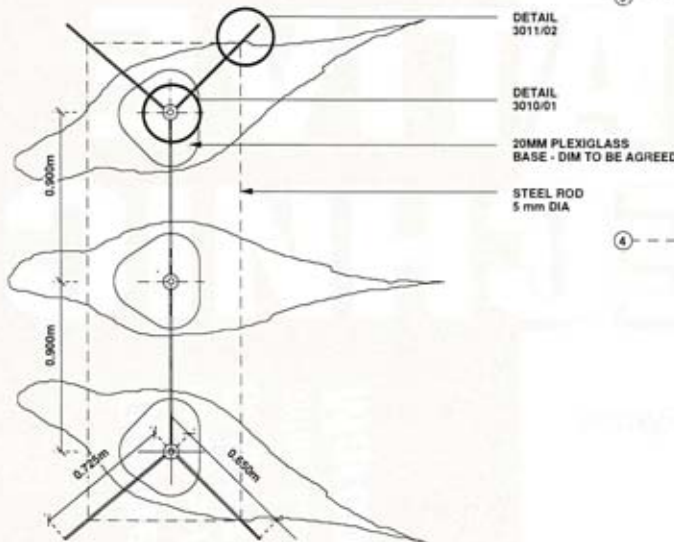
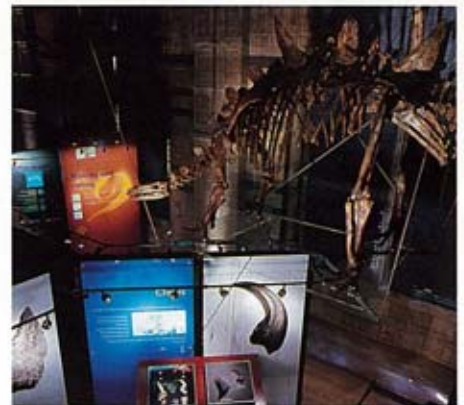
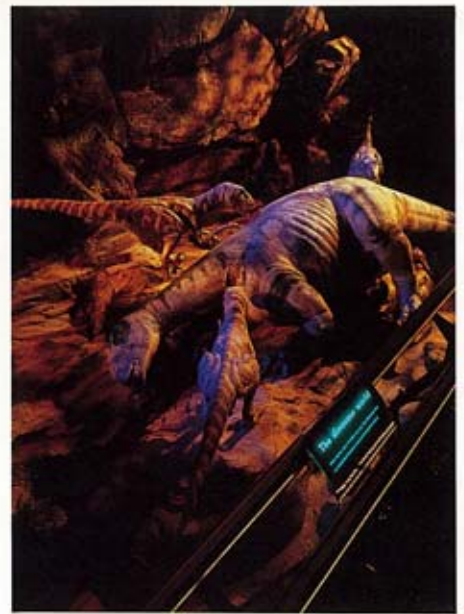
The 70m long walkway, known as the 'bone walk' by museum staff and resembling a huge dinosaur spine, enables the flown artefacts to be seen without any distracting glass, while leaving the lower level clear for the rest of the exhibition and numerous interactive displays. It also serves as a runway. There are continuous lines of white light embedded under lenticular teflon strips in the floor (actually an emergency system called Exitalite), to

deliver visitors to the main attraction, a 'live' animatronic feature starring the animals themselves.

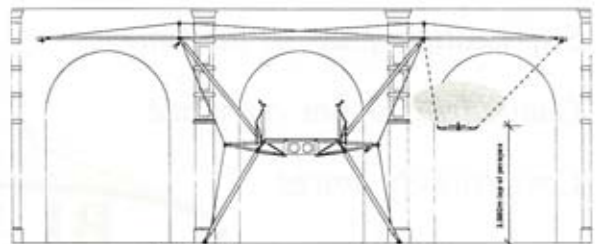
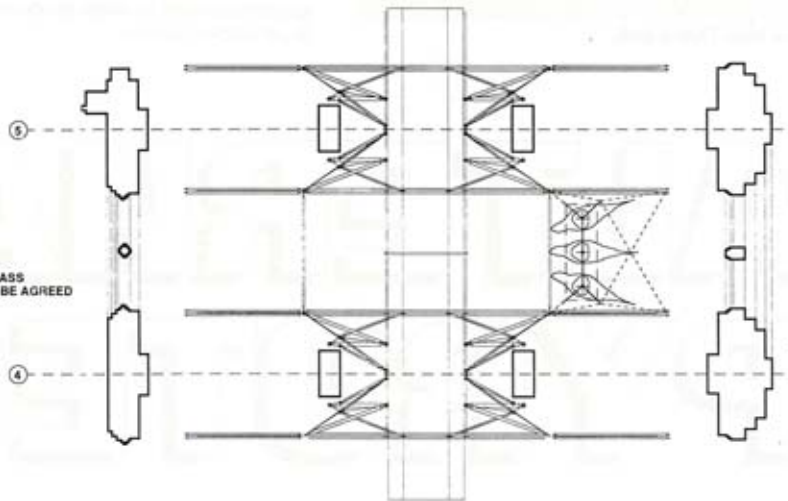
This Scare-o-rama centres around a dying Tenonatasaurus which has apparently been hunted down by three of the smaller Dionychus who are making short shrift of the twitching corpse. (Proportionally it's a bit similar to a pack of jackals taking their breakfast on an elephant.) All of this is accompanied by a great deal of blood and gore and the appropriate primeval screams and screeches, and it is these noises which really scare the kids.

The animated figures, each with six axis of movement provided by computer controlled servo pneumatics, are embodied in an extremely realistic skin of flexible silicon rubber packed with polyurethane and were made by Kokoro in Japan. Some movements are digital, others are analog. Each figure has a speaker embedded in the chest cavity. The show control system is based on Electrosonic's ANCHOR, a real time system developed for animated figure control which provides a panel with joy-stick, linear and rotary faders for analog programming and switches for the digital movements. The pre-programmed show is stored on EPROM for continuous replay. The background sounds are sourced from a Pioneer 4300D laser disc player to give a 32 minute continuous loop of ambient effects via a Quad 412 amp. The audio replay for the dinosaurs, each of which has 16 sounds available to it, is from Electrosonic digital stores called ESTA. The sounds, scripted by Imagination, are also on EPROM and are triggered by the ANCHOR show control system.

The animation programme runs for roughly three minutes and the background lighting, also using Quartets, is under the control of ANCHOR via Sceneset 12. The rest of the exhibition which cost a mere £2.3m, though educational, is a lot of fun with various interactive displays using AV, fibre optics and video projection. Well worth a visit, and not just for the sake of the kids!



1:20 scale



Dromaeosaurus Cast

1:100 scale

Dim 2400 x 590 x 1150 (varies with pose)
Approx Weight 7 Kg ea
Support: TYPE B - 50mm



NATURAL HISTORY MUSEUM GONDWANA EXHIBITION		Jan 94 2196
Drawing	Dromaeosaurus Base - Dromaeosaurus	Issued by 2014
Scale	1:20	Issue DEC 91
This drawing is copyright. No part of it may be reproduced without the permission of the		Imagination

New Name in Pyrotechnics

Blake's Fireworks have chosen the PLASA Light and Sound Show to launch both the company and its range of pyrotechnics and associated effects for the entertainment industry.

The operation is the culmination of four years work started by Martin Blake, who founded Le Maitre, and will operate from a nine acre freehold site in Fishguard, Dyfed, Wales, which is wholly-owned by the company.

An authority on the development of pyrotechnic effects, Blake will be joined by Matt Deakin (director), Keith Dale (chairman) and Colin Whittaker (managing director) who are all major shareholders in the company. The latter three are known for their work at Celco, which will remain their first and foremost activity.

Colin Whittaker told L+SI: "By designing and developing new effects we hope to increase the market potential, and thereby the availability of pyrotechnics. We aim to provide the customer with an alternative choice of manufacturer." According to Blake's a complete line-up of effects will be on display at the show, including a range of Pyroflash compatible cartridges.

Companies wishing to act as dealers should contact Blake's Fireworks direct at Unit 43, Barnes Court, Turners Hill Road, Crawley Down, West Sussex RH10 4HQ. Tel/Fax: (0342) 718659.

Strand Spotlights Irish Culture

Ireland's National Folk Theatre has moved into the cultural spotlight beneath Strand Lighting stage lighting controls, in a new building thought by many to be one of the most imaginative pieces of theatre design in Ireland.

The new IR£1.7m Siamsa Tire Theatre and Arts Centre in Tralee, County Kerry includes a cluster of buildings within a circular outer stone wall, reminiscent of an ancient Ring Fort. The centrepiece is a 355-seat auditorium with a fully-equipped stage and flytower, plus a large rehearsal room. Lighting control is by way of a Strand Tempus M24 120-channel system, supplied by Strand's Dublin-based distributors, The Stage Lighting Centre.

Electrosonic at the Games

Electrosonic have announced their involvement in the BBC coverage of the Olympic Games in Spain through recently appointed hire dealer Morgan Laboratories. Morgan Laboratories will be using the latest Electrosonic Videowall control system, PICBLOC 3 together with the new Sony Videowall projection cube, the RVP 400.

The display consists of 12 screens in a six wide by two high format which will be fully controlled from the Cthrough3 videowall software package. The system will be situated in the BBC Sport studio complex in Barcelona and will feature dynamic views of the Olympic city.



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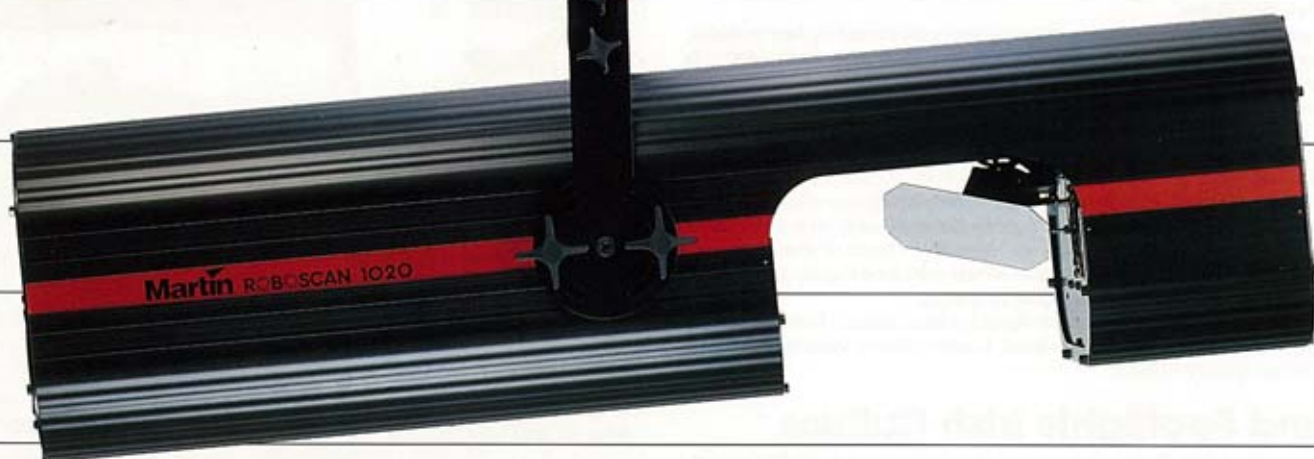
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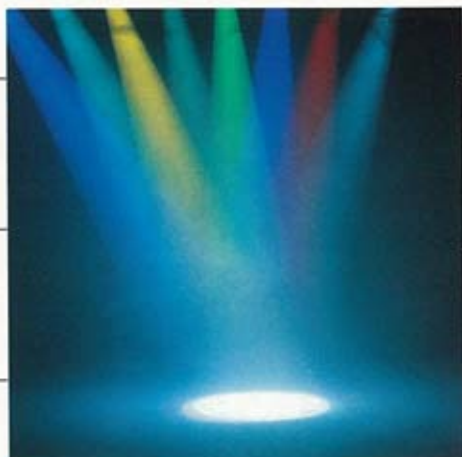
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Cover Story: Rosary Window and Sunburner Restored

Theatre consultant David Wilmore explains how Theatresearch undertook the restoration of the Rosary Window and Sunburner at the Gaiety Theatre, Douglas, Isle of Man which was funded by The Royal Bank of Scotland. (All photos courtesy of Island Photographic Co Ltd)

Whilst casually sifting through a few pieces of broken glass in the roof space above the auditorium we chanced upon a shard of decorated glass, and the project was born - the brief to restore the Gaiety Theatre Rosary window.

During the early part of the second world war the management of the theatre apparently thought it prudent to remove the old-fashioned glazed panels for fear of a bomb shattering the window and causing a cascade of glass to fall upon the unsuspecting patrons in the stalls. It appears however that the removal was not wholly successful for one third of a single petal of the window broke during removal and was left within the confines of the roof space. The rest were taken away and doubtless stripped for the glazing bars which held the glass. Once all of the pieces had been removed and cleaned I embarked upon perhaps one of the most exciting jigsaws of my adult life!

Slowly but surely a design emerged and the reconstructed panel is shown accompanying this piece. This, however, formed the central section of each petal, but despite endless searching within the roof and the archives we were unable to find a photograph or description of the missing sections. A decision was therefore made to draw upon other examples of glazing within Frank Matcham theatres of the period. The commission to produce the panels for the window was undertaken by the Victorian Stained Glass Co, who have also been recently involved in the restoration of glazing at the Criterion Theatre and Shaftesbury Theatre in London.



The reconstructed panel discovered in the roof space above the auditorium.

However, in order to present the glass to its full advantage we had to give careful consideration to the lighting of it. The Era reported in 1900, "that the theatre could be lighted from above the glass," and whilst only scant evidence remained of a few broken bayonet-cap fittings within the roof space, it clearly indicated the approach required.

The theatre had originally been ventilated by a 'sunburner' which had been positioned in the centre of the ceiling. This had in latter times been surmounted with a cinematic luminaire of uncertain origin! Removal of the said light revealed the original grille-work for the sunburner, and closer examination revealed it to be identical to the grille-work of the restored sunburner at the Buxton Opera House, another Frank Matcham theatre.

At this point we thought very, very carefully... and decided to restore the sunburner aesthetically but to simulate the gaslight with that new fangled thing called electricity, as the fire risk was simply too great. Nevertheless, this work was undertaken by Sugg Lighting, who have been manufacturing gas-fittings since 1807 - their pedigree was impeccable!

The grille-work was hand stripped back to the bare steel. The chimney was capped and special



The ceiling lit from above, with additional under-lighting from the Sunburner.

circular reflector burners were manufactured, and fitted with tungsten halogen lamps, though all the components simulated the visual and light distribution detail of the original gas jets. This was achieved by building housings to simulate the gas jets which were silhouetted from beneath, against the purposely shadowed bars of light emitted from the multiple 75 watt Philips tungsten halogen lamps, which could be controlled via a separate dimmer circuit.

The body of the fittings was stove primed, with white reflectors and black burner assemblies, and the simulated gas jets finished in polished brass. The lamps themselves were fitted low into the burner assembly in order to prevent any direct glare from the light source. The sunburner was then raised into position by a new winch which allows easy access to the stalls for re-lamping.

In order to ensure that the glass was kept clean the panels were capped with white diffusion perspex to produce an even spread of light. The lighting was simple but effective, consisting of four tungsten halogen 500W floods with colour frames fitted with Lee 159. All four fittings were controlled from a 2kW dimmer and operated independently of the sunburner. This now allows the lighting above the window to be time delayed after the main houselights have been lowered, and the sunburner remains lit throughout the performance, as it would have done in 1900.

The restoration of this beautiful theatre continues, and more projects are in the pipeline. Already the suite of sub-stage machinery has been partially restored, plans are afoot to restore the original external canopy, and the list continues! Should anyone be interested in obtaining more information about sponsorship opportunities or simply purchasing a restoration appeal brochure they can do so by contacting the manager, Mervin Stokes on (0624) 625001.



The restored Sunburner being examined by Mervin Stokes, manager of the Gaiety Theatre.

Our cover picture shows the ceiling lit from above with supplemental light from the Sunburner and auditorium houselights.

A WALK ON THE WILD SIDE AT EURO DISNEY

The French version of the American cartoon park boasts two unusual live performance arenas not previously seen at other Disney locations. Tony Gottelier and Julian Williams report.

While the French appear to have swallowed MacDonalds haunch, rind and burger, a fact which this francophile finds particularly affreux, there are signs that they find Euro-Disney less digestible. Les Francais see this plastic jungle in Marne le Vallee, probably correctly, as a symbol of cultural imperialism. Why they don't see the Big Mac in the same vein, especially with their renowned cuisine and the availability of far superior 'le fast food' from any Charcutier in any high street anywhere in the country, is a mystery to me. Why they have left it so late in this reaction is also beyond my comprehension, except perhaps that they were happy to take the dollars at the time. Similarly, isn't it amazing that Disney chose France in the first place, in view of its renowned xenophobia. And in the wetlands of la belle France! And on the most expensive air route on the continent! So many miscalculations make one wonder whether Disney executives had mislaid their marbles. Nevertheless, the fact that commercially the site is proving less good than expected, doesn't take away from the technical achievements which have gone into the making of this candyfloss Camelot.

Two areas of particular note, and not just because of UK involvement, are both ambitious live performance spaces not previously seen at Disney sites and noteworthy for that reason if nothing else. One is an amalgam of AV, disco lights, intelligent luminaires and audio, as well as generic stage lighting, sponsored by Philips, and called Videopolis. The other, based on Buffalo Bill Cody's travelling show which reached Paris in 1902, the eponymously titled 'Wild West Show' is illumineered by British wiz Andrew Bridge and Howard Eaton Lighting.

WILD WEST SHOW

This was the one originally envisaged by Disney CEO Michael Eisner as a nightly rodeo, until the French producer Jean-Luc Choplin pointed out the impracticalities of such a performance. The cavalry was at hand, however, in the shape of

Buffalo Bill who had conveniently taken his circus performance to Paris at the beginning of the century, thus providing the essential link and the element of excitement provided by live animals, which are vital ingredients for such a show. Choplin was determined to use Andrew Bridge for the lighting element, which he saw as crucial, having seen his Siegfried and Roy effort in Las Vegas. Andrew, typically, refused to conform to any of the Disney straightjackets (or are they Mickey Mouse costumes?) as applied to everyone on the site and insisted on doing it his way, or not at all. And, in the end, he got his way and it paid off.

His love affair with Vari*Lite is a typical example. The French had a natural preference for Telescan, as used in Videopolis, but Andrew was adamant that those 'obedient' luminaires could not provide the 'soft' looks which he required. Having convinced Choplin of his argument, the next hurdle was the unavailability of Vari*Lite for purchase which was resolved with a ten year lease deal arranged by Brian Croft of Samuelsons. He also demanded, and got, Howard Eaton as his main generic lighting supplier and installer, Mike Odam as assistant LD and Richard Knight as Artisan programmer and operator.

This authentic show, based on the original, is performed twice daily as an organised event structured around a traditionally cued performance, with two acts and two scenes in each act - a total running time of just over an hour, with no interval.

It is performed in a totally enclosed, purpose-built 21 x 40 metres (14 metres high) arena. The anticipated audience of 1100 are each issued with a ten-gallon hat on arrival which has a coloured band, and they sit on three sides in a group designated by the colour of the headwear. All are served with a running bean-feast of chicken wings, beans and beer, all served in billycan and frying pan, to be eaten with the fingers. Each group has a Disney cheerleader provided and there is a great deal of 'Yee Hah'ing' and banging of the tin implements

throughout. (Can you imagine 1100 Frenchmen giving the Texan battle cry? Nor could I, but they did it when I was there. Though I suspect they were a Dutch, rather than a French, audience.)

The show is highly competitive, even though the performers are actors they receive a cash bonus if their team wins the overall contest which is accumulative through the show. Mind you, since the thespian playing W.Cody was short on longsight and petrified of his horse, he constantly rewarded the wrong team, which must have caused consternation backstage. The theme of the contest is a 19th century western style congress of rough riders and sharp shooters, cowboys and indians. And there is a herd of longhorns and, wait for it, a herd of wild buffalo. (They have to be wild, they are totally untrainable - after all they've been through at the hands of man, what can you expect!)

At the closed end of the arena is a huge show cloth which beautifully illustrates the atmosphere of the original wild west show. Hidden behind is a purpose made canyon, built out of concrete and steel, forming the set piece for the stage and backdrop. Backstage are the stables and herding areas for the animals.

The lighting is unusually rigged, in contrast to ordinary trussed lighting, across the arena on a series of timber-built catwalks. The arena itself, in lighting terms, is divided up into 18 rectangles. Each of these spaces is lit by luminaires in a two-colour cover of Lee 162 and 202, and a scrolled colour wash; all focused from each of four directions, off the catwalks above. Some specials are also in use for three Banner clusters, down the centre of the arena, and there are some KKs used for fire flickers.

The Vari*Lites are the predominant light source and are used for most of the effects, gobo coverages and washes. There are 38 Vari*Lites mounted in a downward direction - 28 are VL2B units equally spaced along each side of the four catwalks and there are also eight VL4 wash units which are positioned on the set.

The Rock Canyon set is lit in traditional end-stage fashion, from lighting bars above. There are specials to light the showcloth and the 10 metre high stone scenery is conventionally lit with a 21 metre wide cyclorama behind it. The cyc lights are 24 x 4 cell floods providing light power of 48k at the top and 48k at the bottom. Additionally, there are eight battens at the bottom to give a punch of colour across the middle, for the sunrises, and a large moon-box, to provide the night setting.

Mike Odam told L+SI about some of the complications that can arise when lighting this type of show. For example, animals can be affected by the lighting. "Much to our surprise the horses would charge around the edge of the arena, which meant that lighting had to be moved off the rig and brought in from the sides of the arena at a lower level. This is a 162 colour wash from the side wall."

Another major concern was the low angle of the followspots. There are three entrances in the arena, two from the Rock Canyon upstage and one from downstage centre. He said: "When they gallop out for the first time, as Annie Oakley makes her entrance, and all these spots come on at once, we thought the horses might bolt. Another such moment was making allowance



The huge showcloth sets the scene of the original 1902 show in Paris.



Possibly the world's largest moon-box rises on a hydraulic lift from the beautifully lit Rock Canyon.



Buffalo Bill in the limelight - the horse was frightened by its own shadow.

for the nervousness of Buffalo Bill's horse, who would be frightened by his own shadow - he had to be gently walked around for a while to get used to it!"

Providing basic coverage of the set to make it look good at both hoof level on the sand, while at the same time allowing for even coverage at some 10ft in the air, a person's head height on a horse was a principal design concern. Extreme care in angling the luminaires either side of 45 degrees was required to allow for this wide, but precise, style of lighting. Using this technique it was possible to create some effects, while maintaining an acceptable coverage. For instance with the Parcans scrollers focused as a line, or slot of light, they can create patterns resembling the French flag. With Vari*Lites superimposed onto those rectangular shapes, they can simulate the 'Stars and Stripes'.

A simple adjustment can become a major problem. For example, when one of the three Banner clusters down the centre of the arena was taken a shade higher for scenic perfection, the light coverage became blocked. Mike says: "The Banners can end up being nicely lit, but the floor can look a bit of a mess at times!"

Frustrations ran high on this production. Mike plotted the show without production desk monitors which never arrived, requiring closer than usual head-set liaison with board operator, David Scaton. Mixing combinations of various groups of channels rapidly filled up precious memory capacity on the Galaxy - a major operational difficulty as days were wasted waiting for the necessary expansion card to provide an additional 64k of memory. Memory

rationing included plotting the scrollers as move-fades, as opposed to the preferential and more efficient method of using crossfades.

Lighting was plotted during technical rehearsals, preferably without stopping, but for some days there was major trouble while the designer waited for the board to download data onto a disk, and then convert to another disk to read into the Galaxy memory. By the time Andrew Bridge was given the time to put the finishing touches to the show, the production desk had been struck! When the company making all the props stopped trading in the middle of the contract it must have been the last straw.

Howard Eaton, whose own company had up to 18 electricians at any one time on site during the three month installation period, told L+SI: "The hardest part to deal with was the logistics of the building. Each luminaire had to be rigged on special arms since promised lighting bars were not installed." And some unusual difficulties were encountered as there were many different contractors working at the same time, giving HEL one of their hardest ever installation tasks.

A normally simple job which became a major headache, was the painted blue and yellow cyc which was also a fibre optic star-cloth. When installing the fibre optics the normally invisible black sheathing had to be hidden to keep it out of sight, necessitating another sub-cyc cloth, which was just three inches away from the back wall of the building.

Then there is what may be the largest moon-box ever seen, five metres in diameter,

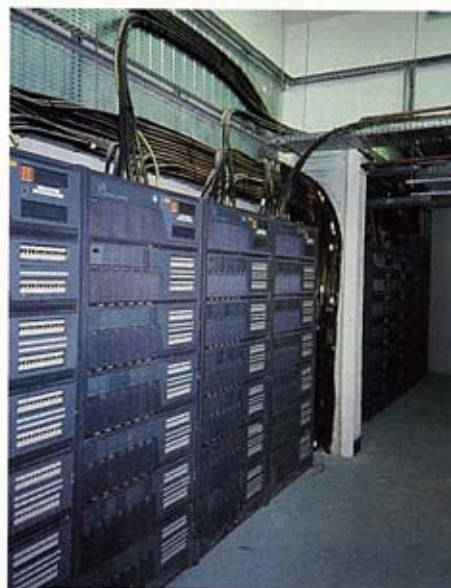
which rises on a motorized lift for the canyon set. Because of the close proximity of the sight lines, it can only be just 250mm in depth and is lit around the rim of its circumference to hide the light sources. Fortunately, as the moon doesn't rise clear of the rocks, the bottom part, which houses more uplighters, is hidden.

The Vari*Lites are installed by cutting access traps and building pipework frames under the catwalks for the units to be dropped into. HEL installed six JEM 6500 Heavy Fog machines, two of which are positioned behind the Rock Canyon at floor level and two at an upper level to complement a realistic waterfall effect. The fluid tanks to feed these machines have to be remote and some distance away, in fact two of the reservoirs are located in the cattle stall behind the arena! This necessitated cutting through 750mm of reinforced concrete to bring the pipework through to the arena and digging a trench 900mm deep to carry a 250mm dia. duct across and underneath the arena to transmit the fog itself to the opposite side.

The lanterns for this 600 source rig include the use of a variety of British equipment. Amongst these are Strand Lighting's highly popular variable beam Cantata profiles, complemented by their Cadenza moving effects projectors, and Total Fabrications' Parcans (which were specified because they have a superior locking-off clamp, to take the weight of a scroller). For the cyc, Thomas Engineering battens were used in conjunction with Eaton's own mini 'Howie' Battens. White Light's optical Cloud Effects were also co-opted. We believe the world's largest installation of colour scrollers



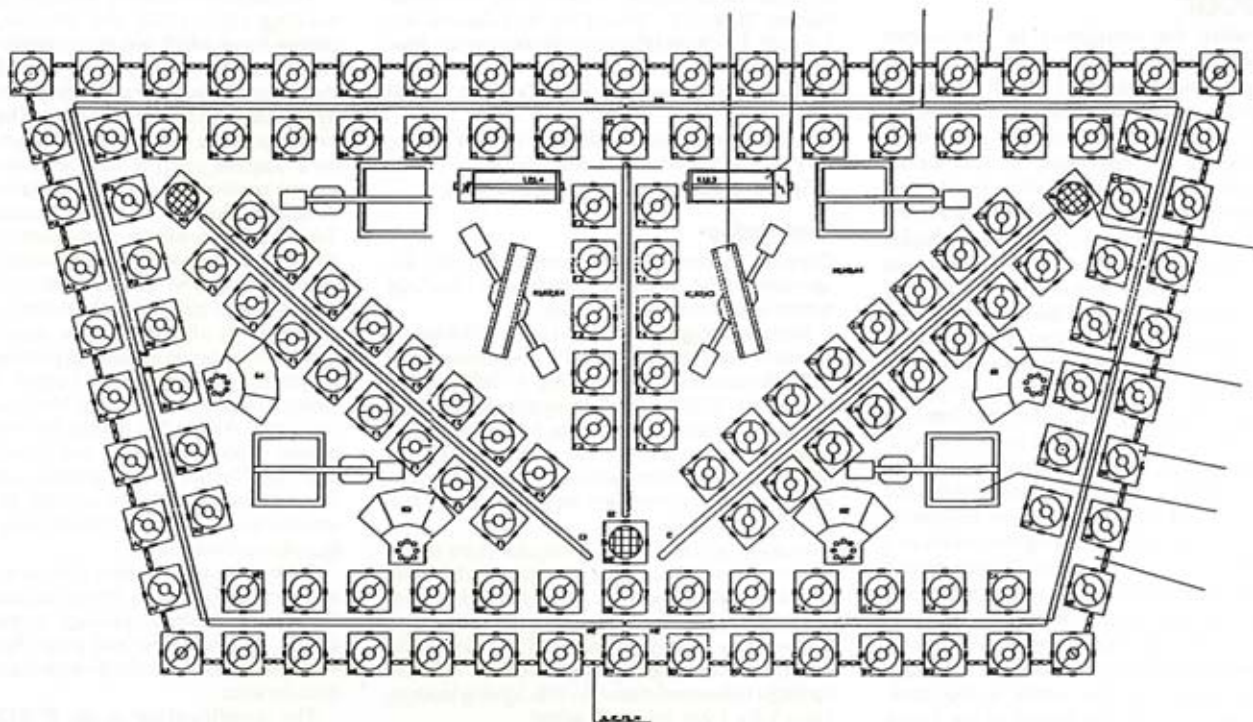
Videopolis control with Galaxy 3 in foreground.



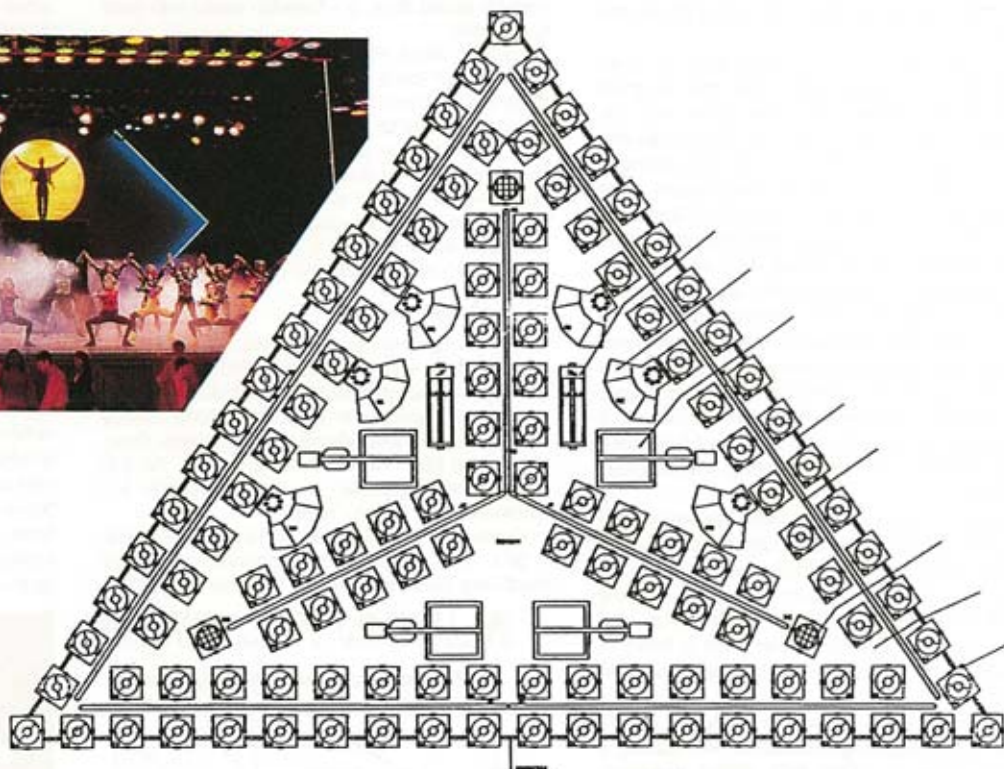
Videopolis dimmer room chock-a-block with EC90 dimmers.



Stage Accompany's sound processing racks backstage at Videopolis.



Claude Tissier's lighting plot for the discotheque-style lighting at Videopolis, and, inset, the finished result.



(certainly in Europe) was provided by M & M Lighting's Rainbow units - a total of 211 in all. Eight circuits of 300mm 25watt lamp festoons, which run along underneath the catwalks, were also designed and especially manufactured by HEL for the project.

The control and dimming equipment was specified by Euro-Disney's technical staff and consisted of the Strand Galaxy 3 already mentioned, with 348 ways of EC90 Dimmer equipment, plus house lights and non-dim circuits which were also installed.

Working for an organisation such as Disney may have a certain prestige value, but can also mean that a contractor has to rely on its own financial resources to a great extent, while work is in progress (and afterwards!). Administrative procedures can often delay progress and, as with

this case, funding was not forthcoming early enough and these specialists were unable to start work until only four weeks prior to rehearsals. Added to this there was the standard American Disney specification to be adhered to, involving equipment modifications, which were carried out before leaving Britain. For example, over three kilometres of steel wire safeties were fitted to the luminaires.

Drawing conclusions from various conversations, the venue appeared to be without a trained production crew who would normally arrange for the moving of equipment into eventual positions, as scenes are changed about in technicals. Disney, however, seemed to rely on the extra help of the installers themselves to change and re-make things during the long term project.

Things were certainly not running as smoothly as the PR might give one to expect from a conglomerate entertainment house such as Disney, who appear to have taken on the services of these specialized and vastly experienced technicians in the field of mega live show productions and then to have left them in mid-air, without the support required to bring such a hazardous project to fruition.

The Wild West Show is a spectacle with live wild animals, cowboys, indians and a bewildering range of mechanical props all interacting together with a constant air of uncertainty and spontaneity; not simply a show with actors performing together after long and carefully scripted rehearsals. In such circumstances, Andrew Bridge's team effort is a triumph indeed and the whole production an

extraordinary gamble in theatrical terms.

VIDEOPOLIS

Philips were the instigators of this indoor amphitheatre which, in many ways, is a pavilion overtly promoting the giant Dutch enterprise and its products. In fact, along with Coca-Cola and others they are called 'partners', Mickey-speak for sponsors, in the whole Euro-Disney commercial adventure. Among other benefits, this has meant that their French subsidiary Mazda-Lita, manufacturers of display lighting, had preferred status as a supplier across the park. However, within Videopolis they turned to British theatre technology contractor Glantre Engineering, and the double Dutch team of discotheque lighting specialists Prof Sound (strange name for a lighting company) and Stage Accompany, the audio high flyers.

I have given a lot of thought to the name of this venue which, literally translated from the Greek root, means video city. (Though in Ireland the name could conjure up some interesting images of 'virtual' police stalking the streets in a live enactment of some quasi Quasar game). Oddly, the first time I came across the Philips Vidiwall, their back-projected cube system, was at a Dutch establishment called Metropolis, where they had they had installed a 64 image stack, the biggest in the world at the time. Perhaps they just like the sound of the Greek ending because actually the building at Disney has little to do with video, nor is it a city in any sense.

So, the Acropolis it ain't but it is an amphitheatre, though with food, and the great wad of technology which has gone into the staging of the performances is of considerable interest to L+SI readers while also being a success in terms of Euro-cooperation. The performance area itself is a combined stage and dance floor incorporating both theatrical and disco lighting rigs overhead, but on hoists to maximize positioning flexibility, and a backdrop of Philips Vidiwalls. The agenda seems to be that, while the Vidiwalls generally repeat corporate promotional messages throughout the day, occasionally there is a staged dance performance during which the audience is encouraged to take to the floor and fulfil their Andy Warhol ambitions relating to temporary stardom.

However, as you will see from the equipment lists, Videopolis is more than capable of full stage performances and provided those facilities for both Cher and Tina Turner during the opening celebrations. The lighting designer for Videopolis was Claude Tissier who is head of lighting for the entertainment division of Euro Disney.

The principal stage facility includes a 540 channel stage lighting installation with Galaxy 3 control console, EC90 MD digital dimmers, conventional and motorized remote control luminaires, xenon followspots, HMI backlight followspots and 40 colour scrollers. The elaborate motorized rigging system by Hoffend USA, involves more than 25 multi-line and 45 single point suspension sets, with a Micro-Commander computerized control, together with trussing and tracks.

All of this equipment was engineered, installed and commissioned by Glantre Engineering under the auspices of Philips.

Stage Lighting

Controls: Strand Galaxy 3 for 580 channels including theatre playback, full tracking back-up and PALS motion control panel. Cameleon control system for Telescan remote control luminaires.

Dimmers: Strand EC90MD plug-in dimmers: 24 - 45A/10kW; 12 - 25A/5kW; 432 - 10A/2.5kW; 34 - 16A/3.5kW.

Luminaires: 20 - Strand Cadenza 9/15 profiles

2kW; 40 - Strand Cadenza PC 2kW; 24 - Strand Cantata 18/32 profile 1.2kW; 260 - Thomas Parcans 1kW; 12 - Strand Iris 4 cyclorama 4 x 1.25kW; 13 - Strand Orion 4 cyclorama groundrow 4 x 625W.

Motorized luminaires: 32 - Telescan MK III 1.2kW HMI

Followspots: 4 - Strong Gladiator III, 3kW Xenon; 2 - Pani 1202 1.2kW HMI, short throw.

Special Effects: 40 - Strand PALS scrollers

Stage Rigging:

Control: Hoffend Micro-Commander IID for operation of 84 motors and inclusive of back-up system and motor control centre.

Motorized Rigging: 21 - point hoists, 1000kg; 24 - point hoists, 250kg tracked; 15 - loudspeaker and Vidiwall hoist and frames, 750kg; 4 - lighting truss hoists stage, 1500kg; 3 - lighting truss hoists FOH, 750kg; 6 - Lighting ladder hoists, 500kg with on/off stage tracks; 5 - scenery bar hoists, 500kg. All rigging sets have fixed speed AC motor, slack wire and overload detectors and inertia reel safety line or overspeed brake.

Trussing (all Thomas): 3 - triangular disco effects trusses, 5.9 x 5.9 x 6.8m; 4 - trapezoidal disco effects trusses, 6.5 x 4.8 x 3.2 x 3.2m; 3 - linear FOH lighting trusses, 4m, internally wired; 3 - Linear stage lighting trusses, 14.5m, internally wired; 1 - linear stage lighting truss, 12m with two backlight followspot chairs; 6 - side lighting ladders, 5 bay 2.8 x 1.2m, internally wired.

Tracks and Drapes: 1 - Traveller track with variable speed drive. 3 - Traveller tracks with fixed speed drive

Festoon Blind Mechanisms: Triple E supplied and installed three Stratus festoon blind systems; these are built into Trilite truss sections and are 4.5 metres wide and the material has a 10 metre drop. The systems have a central motor driven tube supported and guided by roller bearings and a custom-built control was made which can be plugged into a socket stage left, or in the control desk area in the stalls. This system was developed by Triple E's main distributor Gerriet GmbH.

Disco Lighting

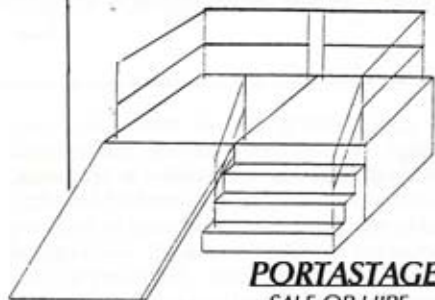
The disco lighting content of the rigs and other special effects were supplied by Prof Sound, and these are mounted onto three 6m sided triangular truss frames and three large trapeziums usually stationed at low level above the stage/dance floor.

Lighting: 800 - Major Par 56 spots; 20 - Par 64; 30 - Coemar Spartans; 6 - Foudre strobes; 6 - Coemar Bellos; 200m - neon.

Controls: ALS Enigma; 64, 4x1kW power packs. SFX: 8 - Safex smoke machines; 6 wind machines; Datronik Tandem 5W laser with 100m

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There is also a smaller (1.5 x 2.5m) special effects moving rig, called the Shuttle, an open picture-frame which has neon, smoke and lighting effects built into it. Here again, Triple E were given the contract to automate. The brief was that it must fly vertically and travel horizontally. The control had to incorporate a system that could send the shuttle on a diagonal patch at variable preset speeds, to precise positions on stage so the dancers can pass through the frame. A customized handset, based on Triple E's standard linear motor control was used to give manual control of either the linear motor or the winch motor. This also facilitated positions and speeds to be preset which in turn enabled the shuttle to fly diagonally from preset to preset. Operation is simply a matter of pressing one of the six presets and then a 'Go' button. A 19m long Linear Unitrack is used and heavy duty carriers support a cradle that houses the two induction motors which provide the horizontal movement, and the Flender motor gearbox unit provides vertical movement. Power and data for the motors and the shuttle effects is carried along the track in Iguus power-feed chain.

Stage Accompany claim that their 'Performer' system was selected by Philips because it offered the most economical package in terms of size, weight, quality, output and price. Also the SAnet intelligent control was also an important point in the final decision.

The amplification is by PPA1200 power amplifiers, 50 in total, which with the 74 Performer series speakers is capable of delivering an SPL of 115dB continuous and 123dB peak in the main listening area and thus is well suited to live concerts.

Sound transmission equipment:

26 x Performer P-26 mid-high cabinets (100Hz - 32kHz); 24 x Performer P-24 mid-high cabinets (100Hz - 32kHz); 24 x Performer P-16 bass cabinets (40Hz - 100Hz); 8 x Leader series L-27 stage monitors.

Processing and control:


50 x PPA 1200 power amplifiers; 2 x SA 900 power amplifier; 8 x PPE 2410 Parametric equalizer; 1 x SAnet stage control computer; 1 x stage control 1.0 software package with PPA and PPE modules.

So whether or not the name of this venue is appropriate, and what's in a name anyway, the achievements are entirely on the technical front (perhaps it should be renamed Technopolis?) and as such are considerable. Glantre's project team on site have done a phenomenal job, as have all the participating companies, with a concept which may prove a little difficult to sell to the public.

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TOUR SCENE AUSTRALIA

Catriona Forcer talks to four Australian Hire Companies

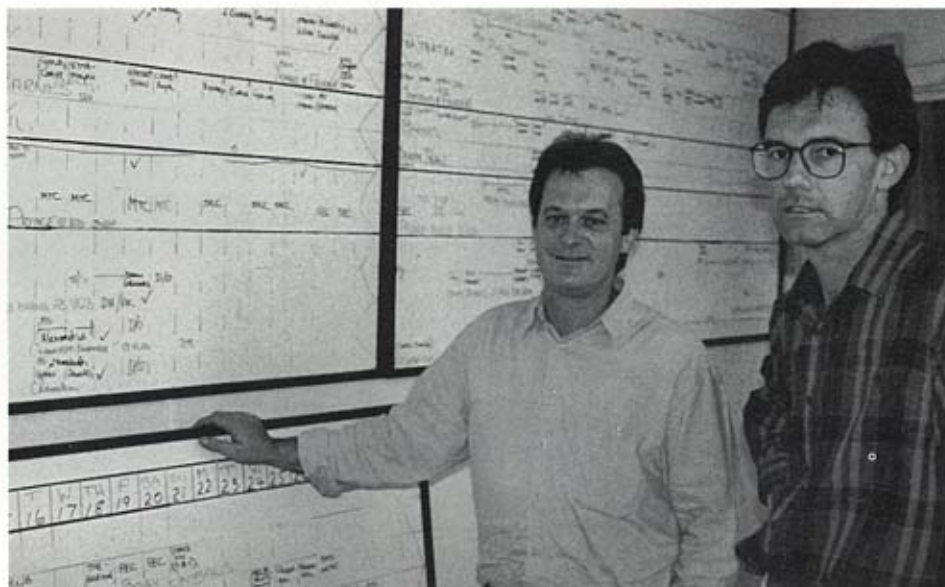
When considering Australian hire companies the first name that comes to mind is **Jands**. What started as a garage business in the early seventies is now a multi-million dollar concern. Jands hire department is a totally separate business from Jands the manufacturer - the two sites are miles apart from each other in Sydney.

The most important advantage that Jands has over other Australian sound and lighting companies is that they have always been able to offer a complete lighting and sound package deal to promoters. In fact, competing against Jands is almost impossible at certain levels because of their large amount of stock, and the years invested in gaining experience. In 1985, Vari-Lite opened an Australian office within Jands Hire and it was the first to receive the Series 200 system which Genesis were using on their tour of the time. Now they have six systems and somewhere in the region of 200 instruments.

"We're looking forward to the new VL5 which will again change the way that lighting designers see automated lighting going," Peter Rooney of Vari-Lite Australia told me. "I think it will be particularly successful in theatre, but also television because of the colour temperature. I also believe it's a real opening into opera because it has no noise whatsoever."

Australia has a total population of only 17 million and consequently there is not the room for too many companies in the market. In Brisbane there was a lot of investment in lighting and sound equipment for both the Expo and the Bicentennial year in 1988. When the year finished many people jumped in to buy the equipment and started up companies literally overnight. "It was state-of-the-art equipment but the new owners lacked the expertise to deal with acts, particularly those from overseas," explained Peter Rooney. "Jands have a good rapport with international productions as they've been working that way since 1982."

"With a surplus of equipment and people trying to get a share of the market, there was a price war which Jands refused to enter because we didn't want to set a precedent. There were a lot of companies going out with acts and only just covering costs. It's difficult for smaller companies to compete with Jands as we've a long-standing understanding with the promoters in Australia. We know what overseas acts require and can advise promoters. You've only got to look at the population to know it's not big enough here for lots of companies. Overseas



Peter Rooney (left) of Vari-Lite Australia with Steve Mulholland from Jands Hire.

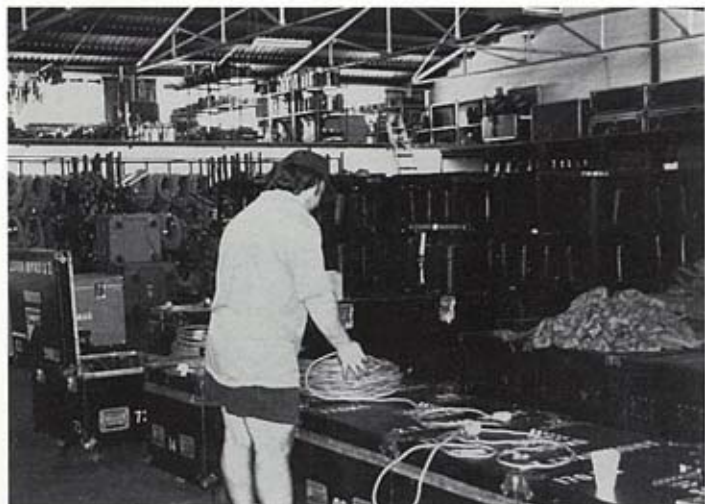
people seem to think that it's a big country and it's part of Western society so we should have everything that opens and shuts. Well, for a long time we didn't have everything we'd like to have had, because of the cost of buying equipment from abroad. We have some problems with overseas acts where they feel that in Australia the production costs are too high, but our costs are also high. Our tours are short so we can't get the discounts that overseas companies do. Some acts bring in a company like LSD because over a 12 month period, they've got a better overall deal."

Shipping to Australia is very expensive and these days Jands often reach a compromise where they will provide equipment such as trussing and motors, but ship in certain lighting effects especially when required in large numbers. For example, Jands have a fair amount of LSD equipment including Colourmags, but not always in the quantities required by certain acts. The same applies to sound hire. For instance, Clair Brothers will send Jands a S42 system to rent for the summer period. Obviously, for the local tours Jands can supply virtually all the lighting and sound as well as the staff. It is mainly pub and club tours, back to back shows, six days a week. The company tends to work with the cream of Australian bands as the smaller acts cannot afford their equipment.

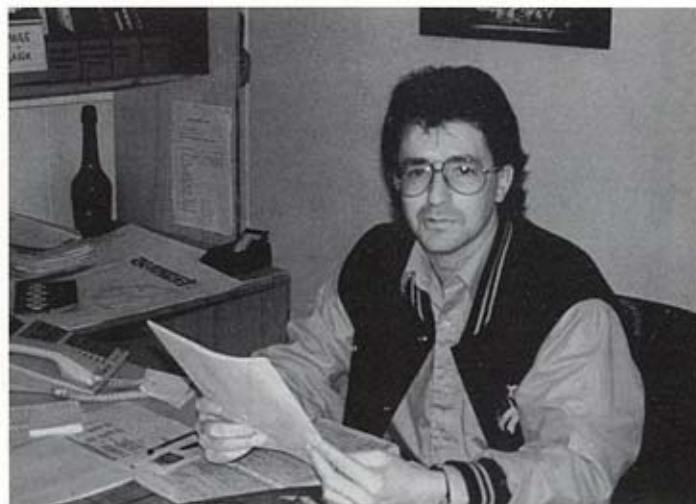
Incorporated in the Jands building is a rehearsal room used by groups including INXS, Midnight Oil and Crowded House, but very few bands have the budget for full production rehearsals. "They're lucky if they get a set up day!" said Peter Rooney, "and that includes major acts touring with large lighting systems, whereas overseas rehearsal times can run into weeks. Here, after an average two week tour you've exhausted the concert market, but you've finally got a show that sounds and looks good."

One of the difficulties of being a lighting designer in Australia is the smaller budget available. Colin Baldwin is the managing director of Sydney-based hire company **Showcorp**, as well as being a lighting designer for concerts and corporate and special events. He was awarded Best Lighting Director for 1991 in the Australian Music Industry Awards and has 19 years experience in the industry.

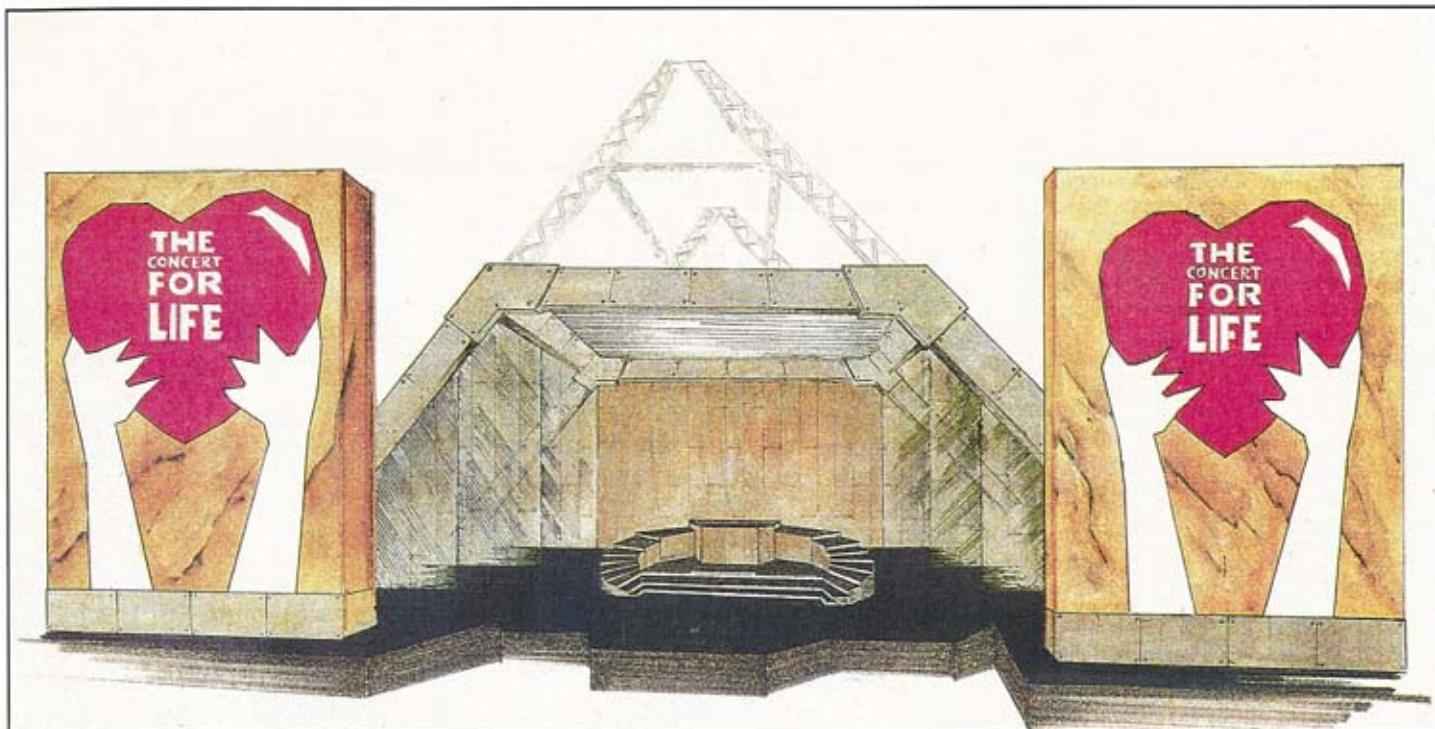
"I've worked on some very big shows but I guess in Europe I would have had twice the budget," he told me. "Usually, it's 'please design this but I've only got so much to spend and we've got to have it up in one day, and the show's tonight'. Half the time you spend winging it, bashing your Vari*Lite programme together in a couple of hours and there's not usually a rehearsal. Consequently, one thing Australian designers are good at is winging it on the night."



Stacking them high in the Jands Hire department.



Colin Baldwin, managing director of Showcorp.



Colin Baldwin's lighting design for INXS and The Concert for Life.

"Another problem is that being so far away from the rest of the world, technology takes a little longer to get here. The new Avo Diamond looks fantastic, but is probably too expensive for Australia by the time you add import duties and tax. So we tend to run on technology a little older than normal. We'll probably buy an Avo Diamond in about two years as lighting designers coming into Australia will be spec'ing them and whoever gets one first will be the new kids on the block!"

Since the New Year, Showcorp have been kept busy with Shirley Bassey, the Buzzcocks and Frankie Valli. At the moment there aren't many briefs coming in from promoters as Australian winters are traditionally quiet for touring acts.

"Our main stable of equipment is lighting for concerts, theatrical fittings and disco effects," explained Colin Baldwin. "Our lighting system consists of Slick Maxibeam which travels with the lamps inside the truss - thus saving space and transport costs. The trussing system along with the Socapex multipin bars, cables and Avolites dimming system make the lighting rig compatible with most international touring rigs."

Showcorp can provide several control desks including an Avo QM500, a Celco Gold and Jands 60 and 48 channel desks. There is the usual array of Par lamps, ellipsoidals, profiles, fresnels, zoomspots and Molefays as well as

Colourmag colour changers. Followspots are Xenon Colourarc, Lycian short and long throw and Pani HMI 1200 truss spots. Along with rigging equipment, there are special effects such as smoke machines, cracked oil machines and White Lightning strobes.

"We have a large quantity of curtains including tab tracks, cycloramas and sharks tooth gauzes, together with stage sets, rostra, props and pneumatic rams. Our staging design and manufacturing department offers a comprehensive construction service in both timber and metal. We have a moderate sound department with Meyer sound speakers and Bose. We can handle up to 2000 in a small hall. We do have affiliations with other sound companies to combine together - it's kind of an alliance against the monsters at St. Peters by the name of Jands!"

One recent event that Colin Baldwin was lighting and set designer for was the 'INXS Concert for Life' and, of course, he used his own company for equipment. The event was held in Sydney's Centennial Park and, with Crowded House in support, it attracted an audience of thousands.

"It was a real challenge, particularly with the budget restraints, as it was a charity performance. My brief was to come up with a stage set that looked reasonably spectacular but didn't cost too much money. I utilized a lot of

open white with four 12k HMIs, which are normally used to light football fields, as well as eight short throw followspots for 40% of the show. Then as it got darker I started to use the other lights. A lot of the stuff was held back for the last song, but unfortunately the band didn't return to the stage so I didn't really get full use of the lighting system as I designed it."

Sydney-based company **Revolver Sound & Light** have two complete systems available for hire consisting of sound, light, trucking and crew. Over the past 15 years Revolver has provided productions specifically tailored for some of the most well-known bands in Australia such as INXS, Angels, Cold Chisel, Jimmy Barnes, Ice House and many more as well as numerous international acts such as OMD, Nick Cave and Nirvana. The man behind Revolver is Lee Conlon who has his roots firmly in sound, starting back in Adelaide in 1976 before moving to Sydney.

"In the 80s the company could do the sound for venues up to 6,000 people with only Jands able to go further," explained Lee Conlon. "We then had to decide whether to invest in equipment to enable us to do the 12,000 seater venues. But then we would have to compete directly with Jands which we decided against even though it meant losing acts like INXS. I think 1986 was the peak of the company as well as the peak of the Australian pub rock scene.



Above, and right, INXS in performance.





Lee Conlon of Revolver Sound and Light.

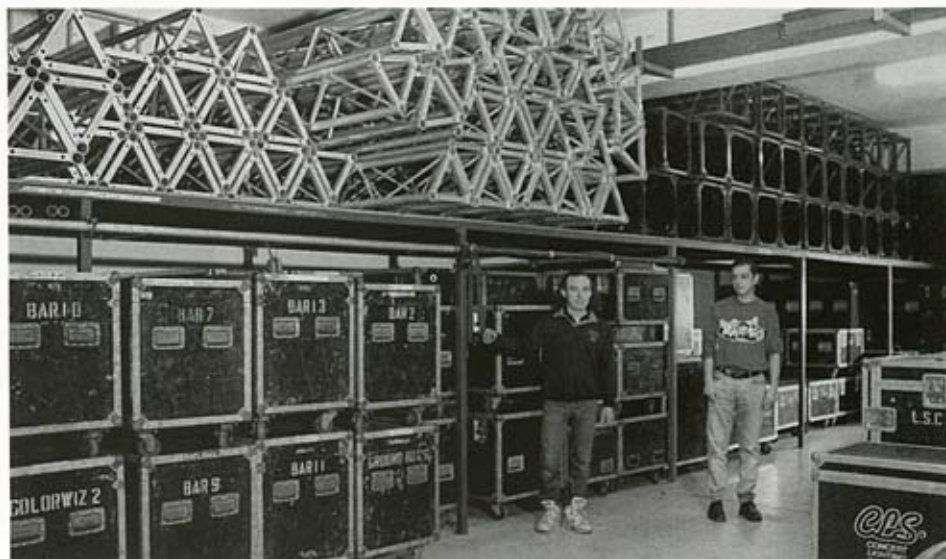
Obviously we weren't doing 6,000 seater shows every week. Most tours were for three months, covering 10,000km and doing maybe 40 pubs, ending with a large concert. The pub scene was good for us as there are no in-house systems like in London.

"In 1986 I bought out two small lighting companies because Jands were quoting sound and light as a package and I was a pure sound company knowing nothing about lights. Because I was doing 6,000 seater venues, I needed a lighting system capable of that size and, at the time, no other company could supply that for me, apart from Jands, but, of course, they would want to hire the band sound as well. Not knowing a lot about light, I lost an enormous amount of money buying those companies, but I did learn quickly!"

Today Revolver Sound & Light are doing well and their stock includes Jands desks and dimmers, Pars, ellipsoidals, groundrows, Molefays, trussing and drapes. Lee Conlon also owns a company called Showcraft which manufactures colour changers and we will look at them in detail in a future issue of L+SI.

On the sound side, Revolver have a selection of Soundcraft consoles, a Martin/JBL speaker system, Yamaha effects, Klark Teknik/BSS drive racks, Martin LE200 wedges, Shure, Beyer and Sennheiser mics.

Concert Light Systems in Melbourne have been operating as a lighting hire company since the mid-seventies. Many international acts will pick up gear in Sydney but, due to the size of Australia and freight costs, will then use CLS in Melbourne. Melbourne to Perth is 4,000km and that takes a lot of fuel so promoters pick up light and sound in each city.



Barry Owens and Mark Gason lining up with Concert Light System's hire stock.

"We're not the only supplier in Melbourne, but because we've been in the business 17 years we're the most established, and generally have what promoters want," explained Trevor Lloyd, managing director. "It's not a problem these days to offer sound as well, like Jands, because there are more individual companies. Lighting is more of a problem than sound because you have to invest more in equipment - everyone wants to make their show look different and the easiest way is to find new lights. Nearly every new show we see has some new piece of equipment we don't have. Whilst it's not a problem in Europe or the USA where the tours are longer, i.e. nine months, the longest tour in Australia could last two months. Usually it's only three weeks so we often have to buy special effects required by the band, but we only get three weeks rental back



Trevor Lloyd, managing director of CLS with Louise Brennan, the company's production co-ordinator.

on it. It almost makes touring music acts in Australia unviable as an end to running a business. Without our other types of work - sales, manufacturing, corporate shows - we couldn't afford to be serious contenders in touring rock and roll acts."

As it is not financially viable to import everything, especially if needed in a hurry, which means flight expenses, CLS manufacture a certain amount of equipment including wiring, switchboards, road cases, some lights, trussing and other metal work. Once they manufactured their own strobes, dimmers and control desks but opted out of that market. They also keep a large stock of accessories like gel, for retail and also instant access for their own projects. Recently they invested in a Morpheus Moving Light System to compete with Vari*Lite, and it has been very successful to date with their own clients and overseas touring acts, Simply Red and Cher numbered among them. Other acts CLS have worked with include U2, Diana Ross, EMF, Cathy Dennis and De La Soul.

"Fortunately, with a lot of our work we're the designers so we use the gear we've got," said Trevor Lloyd. "We certainly wouldn't be able to do the top acts without the other work. We'd love to do U2 again when they return to Australia but any act of that calibre is going to be very demanding. They'll probably ask for something we don't have, so we have to be prepared to buy that gear and end up with a loss on the job. But it keeps our crew in touch with what goes on overseas and keeps our standard of workmanship to the same quality as overseas companies.

"The recession just doesn't seem to want to lift in Australia. It affects everyone. We haven't increased any prices on our rental list, except the

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CLS Team Photo: Trevor Lloyd, Louise Brennan, Richard Grenfell, Barry Owens, Joe Goding, Trish Johnson, Wayne Rafferty, Chris Willie and John Andrews.

odd special effect, for ten years. Rental companies make more money now only because people use more lights, not because lights are more expensive to hire."

Back in the seventies and eighties, CLS did a lot of Melbourne acts but now the Australian music scene is a lot different. At one time Trevor Lloyd can remember having ten rigs out with Australian acts but now the venues are just not there. Government crack downs on fire regulations as well as stricter drink driving rules have contributed to the closing down of many venues. There are really only a few young Australian bands that are touring now, such as Baby Animals, but due to fewer venues they probably only tour a few weeks a year.

The two major international acts I saw in Australia were Prince and Neil Diamond who both flew in all of their equipment. This practice must obviously be annoying to Australian hire

companies.

"Most Australians are a bit upset when acts bring in their own gear and crew," agreed Trevor Lloyd. "We certainly don't get much opportunity to work in the UK or USA and it's not viable for us to take our gear overseas. The acts that like using our gear in Australia are not of the stature of Neil Diamond or Prince, where they can afford to stick everything in a plane and fly it around the world. Production companies have a right to be upset about it as well as the crews. Australian crews are put out of work in a market where it's difficult enough to find work because bands tour for such a short time. The Australian Theatrical Employers Union doesn't seem to mind having its union members out of work provided the promoter pays a fee for the overseas crew. That's a set six months fee, even if they are only here three weeks. I know that Australian crew can't go to the USA to work



Sparks fly in the CLS workshop.

without a green card, and this is starting to become a regular thing with bigger tours and it's putting people out of work. I'm sure the unions in the USA wouldn't put up with it. These tours aren't bringing in crew or equipment that is better than what we have here in Australia."

Despite the recession, Australian people are prepared to pay to see international acts and they seem genuinely pleased when acts include Australia in their itinerary. Although Neil Diamond (see June L+SI) had not visited the country for 16 years he sold out over 14 nights, attracting 15,000 to each show at \$47.00 a ticket.

It is worth mentioning that, on the lower end of the scale, Australia has a large amount of owner/operators involved in the hire business. These guys cater to the pub market and can provide lighting, sound, two crew and a truck for as little as \$400.00 per night.

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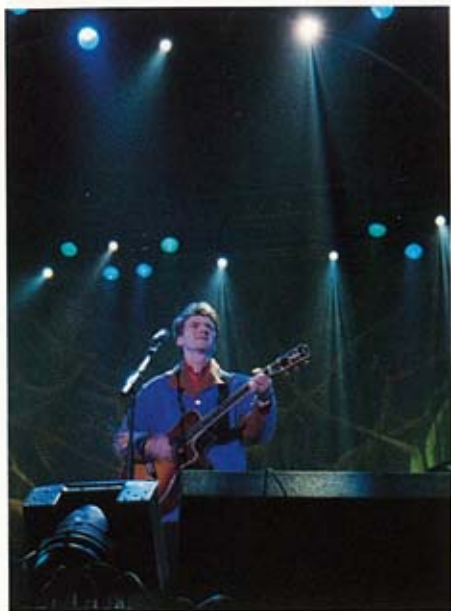


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Crowded House in performance above and right as part of their 'Four Seasons in Eight Weeks' European summer tour.

They work with the audience all the time."

During the tour the basic lighting design has not really changed although a few instruments have been added at times. The colours have remained constant as Steve admits to favouring a small colour base. In the USA they had the advantage of using VL4s. After the USA the tour continued to Australian territories they had not previously covered and was consequently scaled down to one truck only.

"In many respects not changing the plot greatly worked to our advantage because I already knew how it broke down to cater for many different styles of venue," said Steve. "In some clubs 24 Par cans with colour changers has been more than adequate. The basic rig for the European tour is two lamp dollies, two trusses and some groundrows -

about 160 lighting instruments in total. For this particular show at Wembley we've added a couple of effects lights, projectors, more colour changers and 32 VL2s. Unfortunately, we couldn't get 2s and 4s because there are so many acts out in Europe. We've flown Dave Harding from Australia to do the Vari*Lites. I've worked with him on a number of different designs in the past and I only have to say a mood and he'll programme exactly what I expect. That's the only way I feel comfortable making a one off show, by adding Vari*Lites. Vari-Lite in Australia were very good by giving Dave a couple of days programming time before he flew here.

"I'm using an Avo QM500 as I've got a lot of respect for Avolites' equipment. Concert Light System were the first company in Australia to bring in Avolites and they hired me to run the system.

Although the desk was an old 84 way, 3 preset board I got to like it. Then Jands bought a couple of QMs and I've been using them ever since. It's just a personal thing although I do actually like the Jands Instinct desk for the smaller stuff but without the additional monitor it's quite hard to handle. I don't mind using a Celco but, as a personal preference, I'm more comfortable with an Avo."

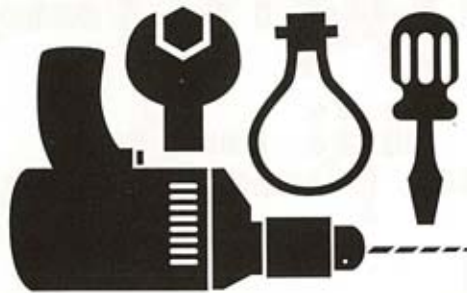
The stage set for Crowded House is truly stunning. There are two sets of legs and three painted gauzes that are on travellers. There is also a set of black drapes on travellers and behind everything, a fixed white gauze.

As performers, Crowded House are unpredictable and exciting. They always throw in a couple of songs that are not on the set list which is different every night. They also do a lot of jamming

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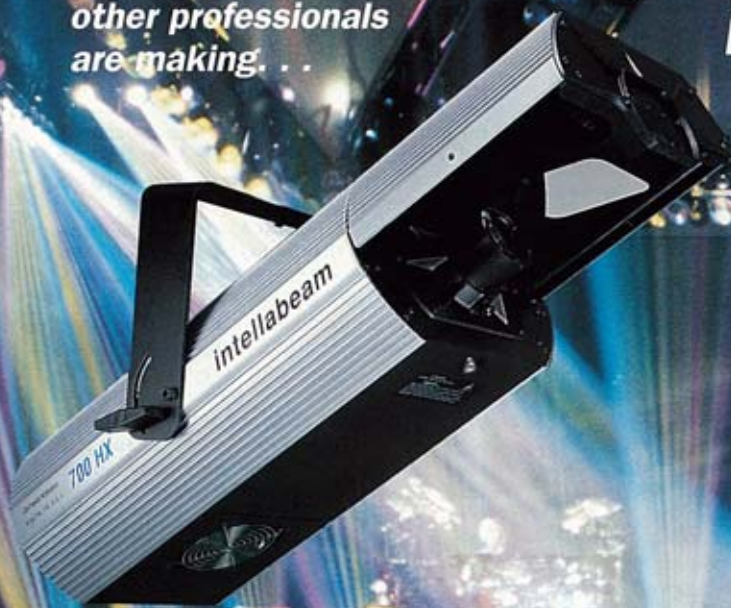
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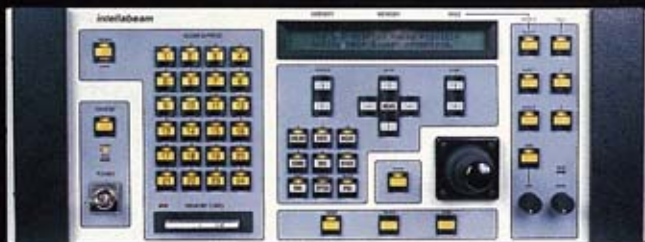
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Steve Swift in front of Meteorlites' crew members Joe Sherno, Sam Shalovsky, Alan Parker and general manager Tony Panico, with Vari*Lite operator Dave Harding centre behind.

and encourage the audience to request songs spontaneously. Not many bands can do this as successfully as Crowded House, especially at a notoriously impersonal venue like Wembley Arena.

"I prefer it in some instances," Steve said. "It allows me to run a couple of songs any way I want and there doesn't have to be a structure. The band is not shy to start an unfinished song on stage and see where it goes. The audience is appreciative, they understand what they are getting which is a bit of honesty that doesn't diminish the band. If anything it improves their image in the eyes of their audience. I think after working in film and theatre I really wanted to work with a band who weren't fussy with structure and would let me experiment. They've never, ever questioned anything I've done. I never like a light show to take over, I always try to work with the act and design the lighting

accordingly. Prince can have a totally over-the-top light show, and I loved it, but it wasn't a rock concert so much as a musical event. Half the time you couldn't see Prince or the band but it didn't seem to detract from how the show worked."

When Crowded House were touring through New Zealand all the wives became followspot operators which Steve thought was great.

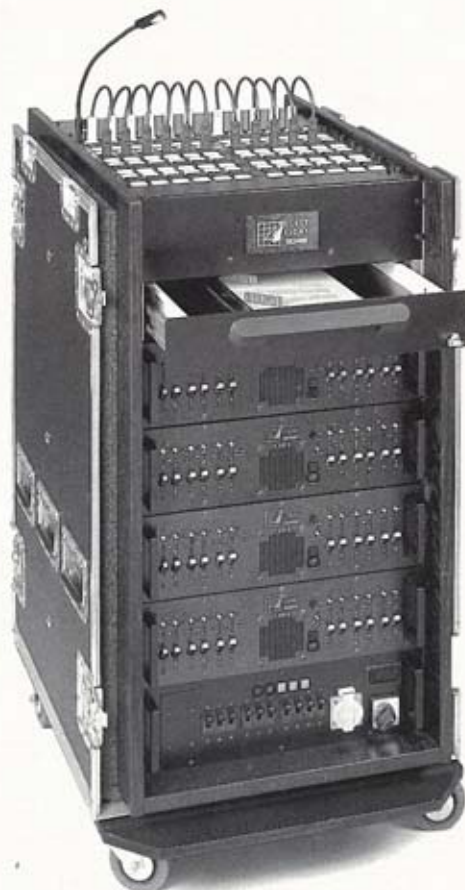
"They really started to see the show from a different perspective," laughed Steve. "All of a sudden they weren't saying the show was just OK, they had specific criticisms. In the dressing room after the show, they were raging at the band for not being in the right spots for cues! I love having a female influence on tour but you hardly ever see it in Australia. Touring is different there - we don't have tour buses. The average tour in Australia will have a truck driver and the crew drive themselves

in a hire car. That breeds a certain kind of work ethic of male bonding and all that bullshit rolled into one. It's pretty sad what happens to women; they just get sick of the whole male thing. Also they have to have a single room so the budget goes up. Let's face it, a lot of Australian roadies are just road pigs and who wants to be stuck in a car with them anyway? The sexual innuendo is just far too much. It's not so much the crew purposely not wanting women around it's just the way we work. It's a very hard way of touring but it also breeds a lot of skill into those who stick it out for a few years."

The Crowded House tour finally finishes in July when Steve Swift will return to Australia via the USA. In the States, Steve has been asked by another lighting designer to work on a project. He also aims to look at some new equipment and keep up contacts with associates on the West Coast.

"I'd love to work with an American band called Jellyfish as I think they would be perfect to design for - everything they do is a lighting chance. Back home I really want to work for Diesel because I think he has the potential to be huge on a world scale. He's got looks, he's a great player, has good songs and a strong band. The problem with Australian bands in general is they're not marketed very well although a lot of that is purely distance. The record company gets the master tape and presses for release in Europe and nobody in the company has had any direct contact with the band. We have some fantastic bands and they're working at a dismal level in Australia. In the mid-eighties on any given Friday or Saturday night in Sydney there were over 1200 bands playing and the club scene in Melbourne was even bigger. It's slipped a bit now though.

"We have no middle ground, you're either a pub band or a concert band, there's no theatre or college run in the middle. So bands get out of Australia, develop a larger market outside the country and come back to do to the concert tours. We've got great bands like The Falling Joys and The Clouds who should be getting world-wide attention but nobody's ever heard of them outside Australia."



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EQUIPMENT NEWS

Smart Splitter from XTBA

XTBA has introduced into its growing range of DMX512 products the Smart Splitter. The unit will distribute an incoming DMX512 data line into five buffered outputs in addition to the DMX 'loop through'. The input and output sections are optically isolated from each other and have separate power supplies so in the event of equipment failure voltage cannot get back to the control system.

Smart Splitter will also automatically terminate the data line when used as the last distribution box in a system. This removes the need for termination plugs or switches which can get left in the wrong position and cause data errors. Smart Splitter features displays for power, data and line auto termination and is available as an independent case or as a 1U 19" rack mount.

For further information contact XTBA in London, telephone 071-700 0996.

Celestion K Series Additions



A new addition to the Celestion K range of loudspeakers is the K6-50MR chassis. The 6", 50 watt mid range unit is designed for use in 3-way sound reinforcement enclosures. Celestion has also produced three new 12" speakers for the K Series, each offering a different sensitivity and magnet structure: the K12L-50, a 50 watt full range PA/sound reinforcement speaker; the 100 watt K2S-100, and the 150 watt K12T-150.

For further information contact Celestion in Ipswich, telephone (0473) 723131.

Rosco Long Life Filters

Roscolab has introduced a range of glass filters which they claim will maintain their vibrant colour while withstanding the abuse of hot theatrical lights.

Permacolor Glass Filters are guaranteed not to fade and are virtually maintenance free. A dielectric coating is vacuum deposited onto specially hardened, shatter resistant glass. According to Rosco transmission of light is significantly higher than gels and the filter will not burn.

A data sheet and full information on custom sizes is available from Roscolab Limited, in London, telephone 081-659 2300.

Corning Lenses

A new range of Pyrex Pebble Convex Lenses, designed for use in profile spot lights in the theatre and studio lighting industries has been launched by Corning Industrial and Speciality Products Division.

The new Corning lenses are manufactured from Pyrex borosilicate, low expansion glass and provide lighting manufacturers with a whiter light and good colour temperature. They have, also, a high thermal shock resistance which should improve safety levels as higher output light sources are introduced to satisfy the demands of lighting designers say Corning. Pyrex Pebble Convex Lenses are available in diameters from 120mm to 200mm.

For further details contact Corning Ltd in Slough, telephone 06286 68550.

CP Industrial Standards

CP Cases have developed a new Industrial Standards range of 40 standard size flightcases and containers, across three product types, to meet general casing requirements.

The IS Series features rigidized aluminium hand-carry cases which are padlockable, with slotted foam lining and removable partitions. The CB Series of cases are stucco aluminium finish on wood-ply, with bifurcated steel rivets (to give 'bite-back' for permanent fix), whilst lightweight aluminium shipping containers form the SC Series.

For further information contact the company in Isleworth, telephone 081-568 1881.

CD-R Launch

Developed by Taiyo Yuden, the world's first recordable compact disc, That's CD-R, will be distributed in the UK by Harman Audio. The discs, in 18, 63 and 74 minute lengths offer 100% compatibility with conventional CD players and CD-ROM drives and conform to the 'Orange-Book' world-wide standard for recordable CD.

CD-R software has a multitude of applications in archiving, editing and test production for audio, CD-ROM and CD-I. Conversion of film and sound to Photo CD is a further source of enormous growth potential.

For further information contact Harman Audio in Slough, telephone (0753) 576911.

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WALK THE PLANK

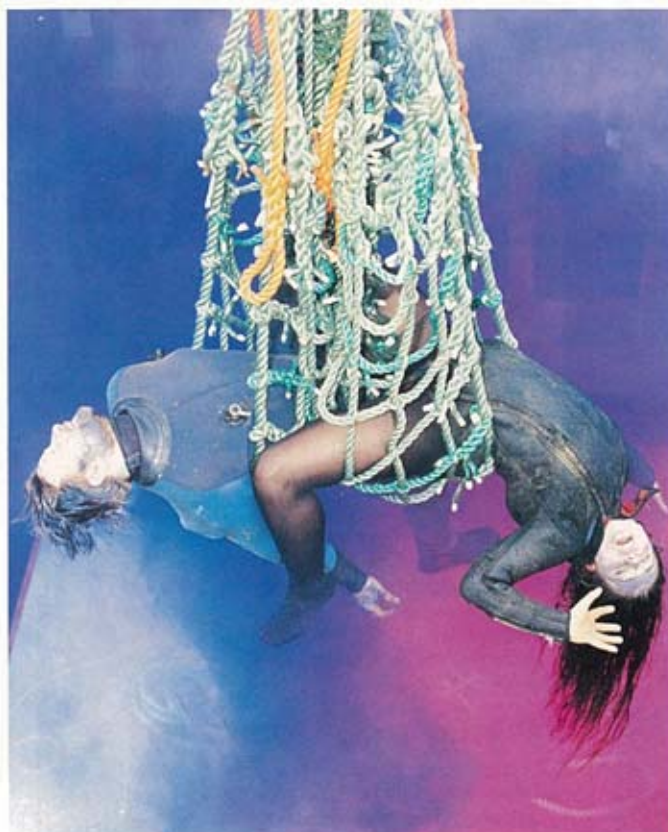
"Astonishing shows at the drop of an anchor"
John Offord goes aboard Europe's first theatre ship

If a touring technician is called a roadie, what do you call his/her counterpart who does the same job on water, whilst also encompassing the skills of able seaman and actor? Answers on a postcard please to the editor, L+SI, and you might get yourself into the industry record books as the person who devised a bright new buzz word for the show business dictionary . . .

Liz Pugh and partner John Wassell run Walk The Plank - billed as the world's first marine theatre contractors - from aboard their vessel Fitzcarraldo, a marginally converted 20 year old 300 ton former arctic ferry and supply ship that used to carry a vastly different cargo whilst serving remote islands off the north Norwegian coast. She was then called Bjarkoy and worked out of Tromso. Her price tag was £82,000.

The company has created a floating theatre, complete with a 150-seat auditorium at the aft end of the vessel, and is delivering its load of extraordinary and extravagant off-shore entertainment right round the UK this summer season - providing the winds stay below force 6. It was down to me to examine this nautical-theatrical experience and I **did** realise before I set out for Southampton that this would be no Monarch of the Seas job and nothing like the high tech report associate editor Tony Gottelier produced for our January issue.

Liz and John have some Arts Council and Regional Arts money and a lot of



Written by poet and playwright Adrian Mitchell, with music by Peter Moser, 'The Blue' is an ecological fairytale told through performance and song, pantomime, live music and astonishing visual images. Elements of the marine environment and the ship itself help set the scene. Giant images are hauled out of the hold, wonderful machines are craned out of the water and the cargo doors open to reveal an extraordinary laboratory.

energy and know-how - and so have their 12-strong 'crew'. Together they produce a day-time show, 'The Blue', various musical excursions, and a night-time show and finale, 'The Blue On Fire'. They anchor off beaches and piers, in harbours and docks, to present their wares, relying on almost every conceivable type of animation, from straight acting to massive pyrotechnics, to get the necessary results. And, of course, they use every possible piece of on-board equipment as part of their 'set'.

The idea came to the Pugh/Wassell partnership after they'd spent a couple of summers cruising the West Coast of Scotland with a cajun band. "There's something exciting about coming from the sea and bringing entertainment," said John Wassell, leaving plenty to the imagination.

I was beginning to get quite interested in all this artistic stuff until I realised that I edit a technical magazine and as such shouldn't be straying too far into the 'arts'. So, let's look at the 'theatre'. Fitzcarraldo is highly equipped, with sophisticated safety and navigation equipment, has a 10-ton crane and a fork lift truck, an air compressor, water jets and fire-fighting equipment. Her three 3-phase generators are sufficient to power a small lighting and sound rig, providing the crane isn't used at the same time. Her engine is a gorgeous-sounding 540 horse power Normo diesel.



Greenwich Festival spectacular.



Fitzcarraldo at Southampton Town Quay: note auditorium at stern.



Fitzcarraldo - artwork by Maddi Nicholson.



John Wassell.

When I climbed the gang plank there wasn't much equipment around to indicate Fitzcarraldo's theatrical bent. A central cross spar of Par cans (complete with adjustable spanner) gave a hint - but as I was to find out later much of the cargo for Walk The Plank's productions was neatly stowed away below decks. Come fit-up time, it became a different scene altogether.

Paul Highfield, more usually associated with the Lyric Theatre, Hammersmith, was persuaded to be lighting designer for the shows, and he no doubt had some idea up front that the project would have its own batch of peculiarities.

"When I first saw the ship it immediately became obvious that there were three major problems to overcome," he said. "The lighting budget was all but non-existent, there was a shortage of power, and no-one on the touring team had any experience of lighting and maintenance.

"To overcome the budget problem I approached White Light in London with a three-year plan. Not only did they agree to this, they also actively supported and helped the project along and their technical manager Dave Isherwood even took a week's holiday to look after the fit-up and production.

"We haven't solved the power problem. Only one of the three generators has been silenced and this means only 35kVA is available for the on-board show. This would be fine if it wasn't for the HIAB crane which is used extensively during the show. In fact the 'zoom' function of the crane alone almost stalls the generator. The result of this is that despite numerous lighting cues to fade and build around crane movements, there are two sections of the show which are under-lit.

"The third problem has - so far! - been overcome by restricting the lighting to maintenance-free equipment as far as possible. Apart from some 'fuzz' lights and a Patt 23, the rig is entirely made up of Parcans and outdoor floods. The desk is a Sirius 24 from Zero 88 which was chosen because of its simple manual operation as well as its programmable memories and effects facilities. Two members of the performing company were duly given a crash course in rigging, basic maintenance and fault finding, and they have coped extremely well.

"Because there are two totally different shows the equipment has to be re-rigged for each. The rig for the on-board show works quite well, apart from the shortage of power, but the rig for the night-time firework show has ended up being quite low key when the Rainbow scrollers and Posi-spots aren't affordable. Hopefully, this will be an area for future development."

I'd been introduced to Walk The Plank by the effervescent Bryan Raven of White Light



Liz Pugh in Fitzcarraldo's engine room.

London, who'd played a major sponsorship role - in fact they are billed in the programme as 'captains' of the project. "When first asked to get involved we didn't quite realise what we were letting ourselves in for!" explained Brian. "Paul Highfield said it was a chance for us to fly the flag, so taking him at his word I duly sent them a flag which is now proudly flying from the mast! We were worried about some of the technical implications of putting a lighting rig on a boat on a semi-permanent basis but in the

context of some of the other problems they had (i.e. weather) these were soon overcome."

The third element of the technical trio involved with getting Fitzcarraldo 'on the road' was Tim Foster of Hardware House, who always enjoys projects which involve sound systems in the open air. Tim had worked with John Wassell on the WSI project in Cardiff in September 1991 and when he heard about the plans for a theatre ship he could not resist the challenge of sound combined with water and open air.



Dan Fox prepares for sound.



Giles King and Caroline England set up Sirius.



The 'stage' - cargo doors will reveal 'backstage' and more of the set.



Performer's view of the covered auditorium area.

"Walk The Plank had a limited budget for sound," explained Tim, "which meant that the system could not be very sophisticated - it was selected with an eye to survival and simplicity of operation. And simplicity was paramount as musicians in the show also have to double up as sound operators. The two shows have quite different demands on the sound system: the first serves the live, on-board production, the second is required to project taped music across the water to an audience on land. Despite these constraints on the system, the potential for sound in the two shows is very exciting and can be developed as Walk The Plank gains momentum, especially if a full time sound operator can be afforded."

Liz Pugh paid the Highfield/Raven/Foster team due tribute: "It has been a great partnership between the technical people and without their help it couldn't have been done," she told me.

Having emphasised the input of our noted professionals, it is important not to forget the Walk The Plank on-board team who all have an essential part to play in keeping the show on the 'road'.

"They were picked for their mix of capabilities," said John Wassell. "And I reckon our 12-strong team are producing the work of three different companies."

Equipment (Lighting): 28 Par 64, 10 outdoor floods, 4 high intensity fuzz lights, 1 mirrorball, 1 JEM ZR21 smoke machine, Sirius 24 and dimmers, 6 way relay rack. Extras for special shows: 8 Rainbow scrollers, 2 Amptown Posi-spots.

Equipment (Sound): (on-board show) 8 Shure SM58, 2 EMO DI boxes, 1 Yamaha EMX 12 channel powered mixer, 2 EV S200 speakers, 6 Galaxy Hotspots, 1 Rauch P120 amp, 1 cassette deck; (night show - fireworks) 2 Shure SM58, 1 Yamaha EMX 12 channel powered mixer, 2 cassette decks, 1 BSS FDS320 crossover, 2 Amcron PSA2 amps, 4 JBL 4550 bins, 4 JBL 2 x 12" mids, 2 JBL 2" horns.

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The Crew in Close-Up

John Wassell - Specialist in the creation of outdoor site-specific events, project director, theatrical engineer and pyrotechnician. Also wooden boat builder who plays baritone sax, loves cooking, eating and parties.

Liz Pugh - has sturdy sea legs and a tendency to bossiness. She is a qualified VHF radio operator and has never sung in public before.

Deborah Barnard - administrator, professional outdoor pursuit instructor and picture framer. She is Walk The Plank's land anchor.

Max Orton - engineer/technician. A supreme mister fix-it who drives too fast but can make anything go. Builds exploding birthday cakes and gets very seasick.

Daniel Fox - musician, performer and cabin boy. First went to sea with a boat band.

Susan Clarke - performer who ran away to sea with Walk The Plank. Previously directed Beaver Arts who practised dramatic misbehaviour both nationally and internationally.

Caroline England - performer who has worked in community and repertory theatre and on TV.

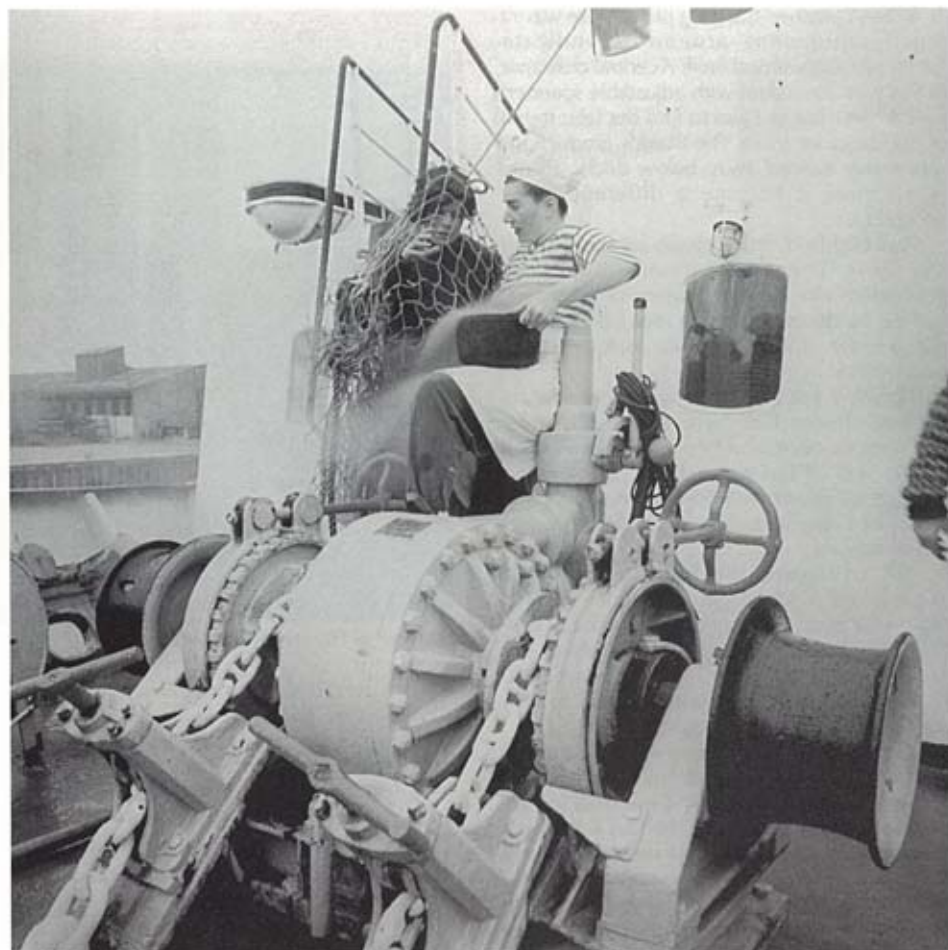
Jeremy Dolan - performer/musician. Makes theatre in bizarre situations including eating fire and lying on broken glass in the street.

Giles Gulliver King - performer/musician with an appalling sense of direction and dreadful memory of names, addresses and numbers.

Mandy Dike - designer and pyrotechnician. Has an extraordinary collection of plastic dolls and 40 pairs of unused stilettos. She's in it for the crane.

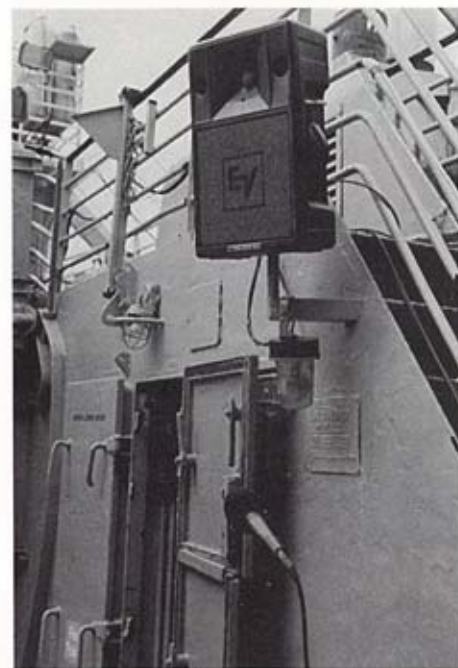
Margot Hardman - musician/performer. One time dancer who was last seen on stage tap dancing by torchlight.

David Turner - pyrotechnician/designer. Climber and mountain biker who likes setting things on fire. He hates water and has negative buoyancy.



Another scene from 'The Blue'.

photo: Mark Borkowski



Speaker above, engine room doors below.



Margot Hardman prepares for performance.



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SHOWTECH SHOWSTYLE

Ruth Rossington reports from Berlin

This year's Showtech in Berlin had grown considerably in size from the last edition in 1990 with an extra 12,500m² added to the floor space, and a huge leap in exhibitors from 138 in 1990 to approaching 200 this year. It reflected an increased interest from the industry in light of the show taking place against the background of an expanding market valued by some in the billions. In the developing situation in Eastern Germany investment in technology is a prime motivator for growth, and with the imminent creation of a single European market you had all the makings of a major focus for the lighting and sound industry. Anybody who was anybody in manufacturing terms was there (albeit in many cases via their distributors) but sadly it seemed the visitors weren't.

The Americans and East Germans were conspicuous by their absence (to me at least) and the promise of two years ago, with the wall only recently removed and the first East Germans coming through the doors, seemed to have been affected by the tidal wave of recessionitis.

Of course, with so many trade shows jostling for position on the international stage, it was a major exercise to route out any really new products. However, there were plenty of worthwhile things to write about.

First port of call was **Strand Lighting**, by virtue of a dominating entrance stand, and my guide for the tour was marketing director David Brooks. The company launched a number of new products, foremost of which was the Galaxy Nova (the first Galaxy was shown in Berlin 11 years ago), which combines lighting, colour and motion control with dimmer reporting information in one system. Nova is being promoted in four formats - standard and advanced versions for both theatre and studio use - but as a modular system it can still be customised to individual specification. The system now supports DMX512 protocol as well as Strand's own D54 and MRL (motion control) protocols. New key features include digital recording of time, advanced control of colour changers (integrated with the standard system), easy to read monitor displays with enhanced information, and more customer programmable features and user definable system features - all

contained in a new style desk in tune with Strand's lighting fashion colours for the season.

Next on the catwalk, so to speak, was the Alto range of spotlights designed for 2500W lamps. This powerful series includes fresnel, PC and three zoom profile options. Intended as a lighter weight replacement for the Cadenza 2kW spotlight range it can also be used with the alternative 2kW lamp. One of the points of interest is the inclusion of a fully rotatable gate - an innovation first introduced by Strand on its Cantata spotlight range.

Seen for the first time in Europe were developments for the EC90 intelligent dimming system and MX control desks. The EC90's Supervisory system enables the advanced reporting facilities of EC90 dimmers to be received by a standard PC operating either as a local terminal addressing single racks via an RS232 port or as a system remote terminal using RS485 communication giving access to all dimmer status displays, diagnostics and fault logging. Also provided is the ability to configure custom options.

Strand's MX control desk specification has now been expanded to include a terminal facility providing a display showing the status of output channel levels, playback, effects, systems, scene memory, held channel and patch. This is an optional facility introduced to provide added user display information. An off-line editor has also been developed for MX.

New in colour effects were the Colour Call scrollers (custom-built for Strand by Camelont and already covered in L+SI), and an expanded range of high temperature polycarbonate filters in the Chromagel range. On view for the first time in Europe was the Self Climbing Barrel Hoist, with load sensing, part of a new range of studio suspension systems. The use of helical winding is a major improvement over old pile winding hoists and should ensure a constant lifting speed. The new 4kW single-ended MSR sourced Quasar Quattro was also on display, together with a recently introduced range of Reporterlight lighting kits and a full range of 'flicker-free' electronic ballasts for use with Strand Quartzcolor 'daylight' systems. New to Europe were American control desks - the Mini

Lightpalette 90, a derivative of the Lightpalette series, and a new version of Lightboard M.

Just down the corridor were Austrian company **Pani**, without whose appearance exhibitions wouldn't quite be the same for me. I always make it one of my first calls simply because I'm guaranteed an enthusiastic welcome, a cold drink, a chance to rest the already weary feet and time out for technical discussion with some interesting turns of phrase.

Berlin was the first showing of Pani's new BP2.5 projector, finished only days prior to the show. However, the paint was dry and the Austro-spiel shipshape. This 2.5kW HMI houses a single-based MSR lamp is compact in size, and weighs only 40kg. Its light output is nearly equal to that of its big brother, the BP4. Aimed at the theatre market, a dual handle allows quick or fine adjustment and the slide carrier is now black, whereas previously silver, thereby eliminating reflection. Use of aluminium means it has no need to diet and the double wall system leads to a much cooler outercase. There's a new optical condenser system which gives a much sharper image with the light from the edges of the images to the centre almost flat, eliminating hot spot. In all other areas, it remains the same as other Pani projectors.

Whilst Hermann Sorger chatted and handed his balls of chocolates around, Stefan Ettmayer moved on to show me the prism effect, an add-on attachment for the front of projectors or dimming shutters. The actual unit was designed quite independently by a German lighting designer working in television who was using it in tandem with Pani projectors. He approached the company who agreed to produce the design and so Pani set about manufacturing a disk drive and shaping glass prisms, of which there are four at the present time.

Moving on, without coming within a whiff of the chocolates, I bumped into Greg Moger of R & G, on the stand of German distributor **Imax**. Nominated as housefrau, he was busy looking after all and sundry, so I nipped in to see if he had chocolate balls. Imax were showing the newest additions to their daylight followspot range, but the thing that caught my eye was the new Nova 'Memory Mate'. This unit has either



Arri threesome: Tim Burnham, Bernd Lipfert and Sabine Muggelberg.



The rotation prism effect from Ludwig Pani.



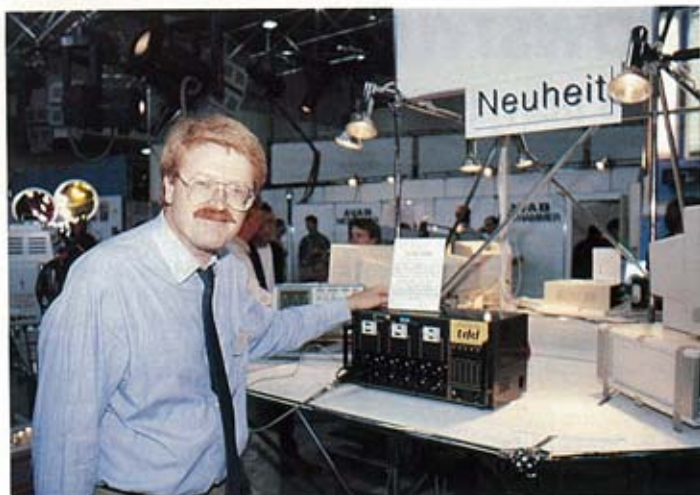
Manfred Ott with Transtechnik's 'Geographic Mimic' for the T90 desk.



The stand of Rosco - busy as ever.



Home territory for Lightpower.



AVAB's Ralph Dahlberg with the transistor digital dimmer.

24 or 48 channel outlets and is designed to plug between existing control desks and dimmers. Using a standard TV or monitor (Greg had borrowed his daughter's portable) the system allows computerisation of manual systems and offers 100 presets, full chase facility, menu prompting and information on lighting status. In tandem with this is a remote control unit which allows the dimmer status to be altered and which you can clip-on to your trousers, rather like a pager, leaving the hands free to operate followspots. He even demonstrated his rare vocal talents to me on a nearby karaoke machine - sadly I had a pressing engagement and had to leave.

Another front hall resident was **Arri (GB)** who, this year, have started setting up a new distributor network in Germany, Austria and Switzerland, and this is being coordinated in Germany by Bernd Lipfert, who is Arri GB's German lighting sales manager. Arri are now able to ship direct to dealers in Germany and elsewhere, as opposed to distributing through the parent company in Munich. Tim Burnham told me: "Arri will be able to offer much more efficient service and support, as well as better pricing to the customers in their own region." 50% of the total number of dealers have already been established. On the stand, Arri had two new products - a 4kW compact daylight spotlight which extends their range of compact HMIs and the ArriSun 4000 which is the first 4,000W open-face fixture on the market. It has three exclusive Arri lenses giving flood mechanism or spot beams.

At Showtech there are always plenty of sideshows that add flavour to the exhibition. It reminds me of SIEL in that respect, with manufacturers rubbing shoulders with service companies and fringe activities. Some very strange people opposite the PLASA stand had us all confused with a kind of do-it-yourself video montage which somehow, by means of a sensor I presume, responds to body movement - and all this to the tune of Frank Sinatra. The novelty had worn off within an hour of the show opening, and from then on it was like Chinese water torture.



Petra Winkler from the Berlin Opera called in by Strand to demonstrate the Galaxy Nova.

Other stands staged regular performances ranging from the sublime to the ridiculous. **Lobo** mounted a spectacular laser show with an Egyptian theme, whilst others relied on in-house light and sound demos. On the information exchange side, various seminars and workshops ran in tandem with the exhibition.

Unless the bier had got to me, I'm sure I clocked a fairground masquerading as a stand, the jokers on the stand of the **Smoke Factory** were roving the exhibition with their mini fog machine 'Scotty', putting the fog up the backsides of unsuspecting visitors, and quite what exhibitors Maggie's Farm were up to I never got to find out. There was even a fortune teller. Having no silver on me I ignored the outstretched palm, and stuck out mine in return.

Many companies were there to consolidate recent gains. **Harman** showed the new JBL 4892 array series, and Soundcraft's new Vienna console. Projection people **Hardware for Xenon** and the ubiquitous Yves Ruellan are about to establish a German subsidiary, hence their presence at the show. **Bose** were demonstrating their Modeler computer-based acoustic design system, Coemar lined up their full light brigade, whilst **ADB** were giving a second airing to a range of new products first introduced at SIEL.

Meanwhile, **Sylvania** were pushing their BriteArc and BriteBeam lamps as **Multi-Lite** showcased the designer labels of Tomcat, Jands, Rainbow and LLT. **DeSisti** were all lit up, **Yamaha** and the **Mark IV** group of companies were talking sound, and **Oscar** and **Teatro** were doing what they know best in light terms for the theatre. **Art Lab**, the company responsible for the lighting scheme in the Magic Balloon nightclub in downtown Berlin, used the show as a springboard to invite various exhibitors, clients and press to the club for a full blown demonstration of their talents.

Transtech was a name new to me, though I later discovered that they've been going some 20 years, albeit for only a short time in their present form, after a split with Siemens two years ago. Based in Munich, the company design and manufacture a range of control desks starting

with the T20 and working up to the T90. All work with DMX512 protocol. The T90 has individual control times for several circuits and comes with a modern-day version of the once-popular geographic mimic - which always was, and still is, a good idea. On the **Soundlight** stand Eckart Steffens was promoting the Compudesk 800, a microprocessor controlled, two-preset lighting desk. It offers several programming functions and softpatch, with variable output characteristics selectable. The unit also features integrated disk drive or RAM-card memory, real level memory and real-level chaser. Also on stand was the MIDI Light Extender, which was introduced in 1990, and now comes with a new operating system based on the revised MK 3.05 software. Different MIDI implementations are now fully supported.

The British group set up camp in hall 22 and **Zero 88**, **Cerebrum**, **CCT**, **Rosco**, **Telestage** and **Rossula** were all waving the flag (literally, cos the DTI gave us all one) for British expertise and technology. Zero 88 pulled the covers back on a brand spanning new addition to their professional dimming range - the Rackmaster 290, six channels of 3kW (hence 50% more power in the same space) with breakers in a 2u high package. Cerebrum had three new Powerdrive stands - the Lighthoist, Scanstand and Heavy Duty Followspot stand, alongside Show- and LightCAD software packages, and a host of products they currently distribute. Rosco talked gels, fabrics and gobos, whilst Telestage showed a range of theatre machinery. At present they are designing the understage machinery and wagons and supplying mechanical drive systems and wagon fabrication for shipment to the Soeul Arts Centre in Korea.

For CCT it was their fourth visit to the show, and they confirmed rumours of a sole agency agreement with Lightpower Showtechnik for the distribution of their products in Germany. Operating out of Paderborn, Lightpower have already made their mark with Clay Paky and Pulsar products and should prove quite a strong link in CCT's European dealer network.

Lightpower, of course, had a large stand at Showtech which played host to their own



Dirk (left) and Lucien Van Nieuwenhuysen (2nd left) with Gerhard Steldinger and Ralf Schonian.



Coemar/Space Cannon in combo.



Café Gerriets.



Rossula's Graham Norman (left) and Mick Hannaford (right) show their latest products.



Yves Ruellan of Hardware Xenon (right).

products as well as those of Clay Paky and Pulsar who were both showing previously launched products to new eyes and hands in Germany. Other British interests had spread themselves about a bit. Uli Petzold and LMP played host to Celco's Keith Dale and Colin Whittaker and the well-established Navigator and Pathfinder boards - the only new thing being Keith's shirt. They saw you coming mate. Neil Rice was to be found on the stand of AHA (the German company, not the Norwegian pop group) projecting forth with his Solar 575s and Gerriets had a massive stand for fabrics of all natures.

AVAB/Niethammer had one of the largest and busiest stands at the show. Loads of new products were on view, in fact this was something of a record for the greatest number of new products at a single show; I lost count after the fifteenth. Showtech was the launching pad for the Auto Focus range, a joint development project between AVAB, Sweden and Niethammer, Germany. It's a new series of automated luminaires aimed at the theatre market. As Ralph Dahlberg of AVAB explained, the design concentrates on five elements: high light output from a quality luminaire, wide speed range, sophisticated speed control, high positioning accuracy and quiet operation. The system is currently delivered with five motors for pan, tilt, zoom, focus and iris. The first versions are delivered with a sophisticated 2kW quartz halogen unit from Niethammer. In the pipeline is a 5kW quartz halogen luminaire and 1.2kW and 2.5kW MSR versions.

One of the products attracting most interest was the new silent dimmer from AVAB. The TDD dimmer (transistor digital dimmer) is based on new dimmer technology which relies on extensive use of micro processors and transistors which, in theory, should make the dimmer lightweight and quiet. Heavy inductive filters are redundant as a result and of course so is acoustic and electrical noise from the dimmer, and filament noise from lamps. The present rating is 2.2kW at 200v. Also on the stand was the AVAB VLC (very large capacity!) console which controls up to 4096 channels and is designed to accommodate the ever increasing use of channel consuming peripherals.

Another first at Showtech was the introduction of the trendily-named MIDI Happening sequencer software developed for the Expert light board. Representing the Expert control buttons and faders in graphic form on a computer screen, it can harness the most



Anders Stuart and Krister Blom of Oscar Lighting with Lucien Van Nieuwenhuysen of ADB.



AVAB's Midi Happening screen layout.



AVAB's big launch: the Auto Focus range.

complex effects making it suited to live applications. A Happening by the way is a group of MIDI events, and the programme supports MIDI Time Code/SMPTE Time Code and comes in Mac version where it supports the Apple MIDI manager. A Windows version is planned for release early next year.

New accessories are being developed for the high definition Niethammer MBP stage projector, so in addition to the complete range of new lenses, the DIA 32 random access slide changer was introduced. This contains a



Kupo followspots on the Mobiltech stand.



Thomas Löhr with the Bose Modeler system.

magazine for 32 slides and is controlled by DMX. Also on stand were the new SSB range of flicker-free electronic square wave ballasts for MSR luminaires available in 1.2kW, 2.5kW and 4kW versions. Other products worthy of mention are a joint venture between the two with DIN norms to create the LumenLux light measuring system. Further newbies on the stand included the PDD-III dimmers, displayed in three versions; AVAB's new line of controllers (the LCX panels) and dimmers (the LDX dimmers) for their range of architectural lighting control with redesigned electronics; Niethammer's cool light mirror to reduce heat stress on the gobo, and finally the ENF 1000/1200 fresnel luminaire.

Of course, with 193 exhibitors there was a lot to get round, and it wasn't possible to visit each and every stand. My 'Product of the Show' award however, went to the company who arrived at the halls with a fully equipped bar in a flight case. Next time, I'll find them before 5 o'clock on the closing day.

Rumours were circulating at the show that Showtech will take place next year instead of 1994 so that it can take up the odd years and leave Photokina to the even years. If this is confirmed let's hope that by then the East Europeans have money in their pockets, and haven't spent it all trading in their old Trabants for brand new Mercedes.



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Sound and Light

PLASA NEWS

Good Years Ahead

Despite hearing from the Association's treasurer Matthew Griffiths that 1991 had been another loss-making year for PLASA, there was an up-beat mood at the Annual General meeting held at the Forte Crest Heathrow on June 9th. The overall loss on trading was considerably less than that recorded in 1990 despite a significant down-turn in space sold at the 1991 Light and Sound Show. The Association's new auditor's representative, Paul Potter, stated that he expected the association to show a good overall

surplus to be produced in 1992, particularly as bookings for the 1992 show were way ahead of last year. As a result the reserves would be replenished.

Chairman Tony Kingsley reported on the Association's work during the year and reports were also presented by Matthew Griffiths (treasurer), John Offord (chief executive) and Ian Sharpe (marketing and PR). Printed reports were provided by George Thompson on Standards and Mike Wood on membership. George Thompson's work on Standards was commended in several reports, and John Offord

explained moves being taken to work more closely with other organisations within the industry. Tony Kingsley closed his report with congratulations to JEM and Glantre Engineering, both of whom had won the Queen's Award for Export in 1991.

More than 50 member delegates representing almost a quarter of the membership were present, with several new faces including representatives from international members Sky Light France. After an open question and answer session the meeting concluded with a buffet lunch.

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Vice Chairman Paul Adams and chairman Tony Kingsley (left) at the AGM 'top table' with Paul Potter, Andy Collier, Tony Akers and Ian Sharpe. Out of camera range were Steve Halsall, Colin Whittaker, Mike Wood and Matthew Griffiths.



Many well-known industry 'names' feature in this shot of part of the AGM 'audience'.



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A SHEPPERTON DOUBLE

Tim Frost talks to Marquee, where the K word's OK . . .
and Delta where the junk is all hand picked

Marquee have come a long way from their origins as the sales section of club to PA hire company Marquee/Entec, whose twin offices were one of the less elegant areas of Shepperton Studios, and the other buried deep in the bowels of London under the original Marquee club from which it draws its name.

In the three and a half years since the company struck out as an individual entity, MD Spencer Brooks has created an organisation that has grabbed more than its fair share of sales to the PA hire and installation business. The company remains at Shepperton, which is being revitalised as a new base for TV production, and continues as one of the country's few film-making centres. In fact, Marquee now rate as the largest outlet for Soundcraft's sound reinforcement mixers and are also a major dealer for JBL, BSS and DDA; not to mention karaoke systems, something that other companies would prefer not to mention.

Isn't a professional audio organisation admitting to a healthy karaoke business a bit like a Harley Davidson dealer paying its rent from sales of Sinclair C5s? Not a bit of it says Spencer: "The dreaded K word? It has been wonderful, we have done outrageous business with it. We have now separated the Marquee 'consumer' side that really derives its turnover from karaoke, as some customers may not feel we are a serious organisation if they were faced with karaoke systems in the demonstration room. But we have a contract as sole importer of two Denon units, we are bringing in the Pioneer 8" Laserdisc and we also have TVs and videos, so we are continuing to push 'consumer' sales to the fun pub and disco markets." Marquee have taken karaoke very seriously, offering the same level of service and back-up that they present to their more traditional PA customers. And they aren't afraid to admit it.

There is a recognition within the organisation that entertainment no longer rests purely with a sound system and that sound and vision increasingly go hand in hand. A recent fun pub installation involved a sound system that took inputs from tape, CD, mic, phono, karaoke, video and satellite - and Marquee supplied every element.

While the core of Marquee's business remains



Mark Brown, Spencer Brooks and Chris Sullivan of Marquee with Accord wedges and JBL speakers.

theatre and touring, they are also progressing in the area of sub-contracting sales. Spencer explained what that involved. "A lighting company will get a contract for the whole installation, but as they don't know anything about sound, we will design, supply and commission it. Now we have flight case manufacturing, cabling and panel making facilities we are able to wire, pre-build and test in-house and go on site with a rack system to which you just have to supply power and a signal. We do as much as is feasible in house without over stretching ourselves. We've done this for Julianas, Lighting Technology and Squires, so we are now working with some large companies and we are trying to do more of this."

Marquee has opened a branch in Glasgow which has done well despite difficult trading conditions. Having two branches has also helped the perception of Marquee as a national organisation. It helped gain a contract to re-fit Tower Records first in Scotland and then in London. "Ironically we had been talking to Tower Records for years, and had quoted for Kensington and Piccadilly which we didn't get

because they did the work themselves. Eventually we won Glasgow because they knew us from London and that we could do the work from a local base. Now we have got the Piccadilly refit because of what we've done in Scotland. It's a two way thing; if we didn't have both branches we wouldn't have got the work at all."

The mainstay of Marquee's speaker business is JBL, about which Spencer remains constantly enthusiastic, especially with the release of the new Array series. This is a JBL alternative to the Meyers and Apogeos that have found favour, especially in the theatre business, because of their compact size and high power. Spencer is monitoring these and other new developments from the US speaker company; specifically their new digital controller and the MKII version of the CADP computer program for modelling speaker systems. "The one thing you get with the Array system using the new processor is the system alignment - it hits you perfectly. For just a pair of speakers the cost is going to be too high; but for a bigger system, whilst it is still a bit more expensive, it becomes worth it once you've



An Altec multicell horn from the original system put to good use by Marquee.



Mike Dowson in Delta's Footsteps Theatre for which Marquee have supplied equipment.



The Footsteps Theatre viewed from the mixing console.

started adding up the cost of using separate delays, graphics and so on."

Although JBL have been at the stage of "just finishing off" CADP MKII for a couple of years now and there is still no firm release date, Spencer has played with a test copy of the new Windows-based program on a recent visit to the States. Allowing full colour print-outs of the predicted system performance, he sees these computer packages as part of a general aim to improve the quality of presentations to clients, and this is an area where he believes that UK companies have a lot to learn from the US. "Having seen the latest CADP program, which is very good, we are looking to buy in a dedicated powerful PC and do the design work completely in-house. As well as a design aid, it gives you very high quality information that you can give to the client. By comparison to what is done in the UK, they present and market themselves so well over there. While I was in America I learnt a lot about presentation."

On the mixer side of things, Marquee have been successful with both Soundcraft and DDA desks, primarily into the theatre and hire markets. He is pleased that after a lot of prompting, Soundcraft have now released dedicated theatre modules for the Venue 2. With its individual group assigns and direct outputs, the new module will fill what Spencer perceived to be a gap in Soundcraft's line-up. "We kept hassling them and they have now come out with the module. Because the Venue already had mutes you can now have a well priced theatre console that does a lot, although if you want eight groups you would still go for the DDA."

The other product that he thinks will have a significant impact on business is BSS's new vari-curve equaliser, which combines noise source, analyser and manual or automated equalisation in a single package. "It is a very interesting unit, and although there have been programmable equalisers before, there has been nothing quite like the BSS unit, dedicated completely to the reinforcement and installation market."

Marquee's offices, now being completely revamped, occupy a central position in the Shepperton Studio complex. There have always been good opportunities for business literally on their doorstep, especially in the supply of cinema-related equipment. But the position is becoming even more attractive as Shepperton's large sound stages undergo a complete re-fit to make them ideal for both TV and film work with two of the stages already being used for major TV game shows. So without moving an inch, Spencer believes that Marquee will soon be at

the heart of one of the most dynamic TV and film sites in the country. They are building two full audience participation stages and an overspill stage, each with large control rooms. "We have just secured our lease and we are going to be at the hub of one of the most technically up to date and successful studios. And these people are all right opposite our front door!"

Delta is one of Marquee's Shepperton customers, with both dubbing and footsteps theatres within a couple of minutes walk of the office. Marquee have supplied all the monitoring equipment for the two studios, which are effectively two compact cinemas with audio mixing facilities and full film and video playback. The speakers inevitably are the JBL systems which have become a cinema standard on both sides of the Atlantic since the early eighties. Mike Dowson, sound engineer with the company that recently won a BAFTA Craft Award for the sound on Inspector Morse, showed me around both the dubbing theatre, where the latest Peter Greenaway project was being remixed, and around the footsteps theatre where they record, well, footsteps.

"Originally the system behind the screen was Altec A4s, which with their huge boxes and 'wings' were really something to behold. We first changed the multi-cell horns, then converted to an active crossover and eventually changed the whole system to JBL," he told me. "The main reason for going for the full JBL rig was to bring the studios in line with first run cinemas. If a new cineplex is built then that is the system likely to go in there, so we need the same."

Nearly every major movie is now released in the Dolby format. Dolby lease the encoding equipment and as part of their system support, their engineers check the alignment of the whole playback system before any major dubbing project. Dolby specify playback levels and system equalisation so that, on paper at least, every properly set up installation will measure within at least a dB of the Dolby auditorium replay curve. This ensures some level of correlation between the mixing and replay environments. It is a theory that isn't always translated into practice.

On most movies the dialogue is placed for most of the time through the centre channels, with music and effects being given the full benefit of the stereo and surround spread. Clearly heard dialogue is obviously critical to a film's plot; however, directors who know the text back to front may accidentally submerge it under impressive music or sound effects. It is something that seems to happen more in the US



Behind the screen JBLs and some very important junk.

than here. "These are the sort of traps that can occur during a mix, and we pipe up a bit here to tell the director if we think the dialogue is becoming borderline," notes Dowson. "But what happens is that American theatres turn up the centre channel to compensate for low level dialogue and then when they play a British mix film they criticise it for being a bit bare."

Dolby have also introduced a secondary version of the system, Dolby Surround, which is tailored specifically to TV and video production and domestic playback.

This is an example of the cross-fertilisation of technology between the video and film industries. Stereo sound is moving from film to TV and hard-disc computer based recording and editing systems, readily accepted in the video world, are gaining acceptance for film sound editing. The Peter Greenaway project in the dubbing theatre for example, was being made in two versions, one for film and one for video. Prestige TV productions now have bigger budgets than many movies and help merge the technologies between the two industries.

The first four Inspector Morse TV series had sound edited using sprocketed magnetic tape strictly in the film tradition. After the move to the Audiofile editing system, which is linked throughout the Delta facilities, it was the digitally edited fifth series that gained the BAFTA award for sound. The footsteps theatre is one of the most bizarre recording facilities that you are likely to come across. Much of what you hear on film and TV soundtracks in the way of background noises - doors opening, cups being put down, cars going past - is not recorded at the time of filming, it is all added later by a team of Foley artists (named after Mr Foley who started it all).

At first glance it is another small cinema with a large screen and sophisticated mixer, but pulling away the carpets reveals a whole variety of surfaces to walk on from cobbled stones to lino, sand and steel plates. Drawing back the curtains on the walls to one side reveals every possible door, window and garden gate you would see on screen, including the complete side of a car bolted to the wall for car door closings. Behind the screen are the JBLs and behind these is a total clutter. Masses of different telephones, cans, bottles, chairs and cutlery. "It may look like junk to you," says Dowson uncannily reading my mind, "but every item has been hand picked for a certain sound."

So purely in the spirit of co-operation we broke for lunch to choose some particularly fine sounding beer bottles that would be great for breaking glass effects; it was just a small problem of how to empty them.

MAINTAINING A SOUND SERVICE

On Call Cover for the West End - L+SI visits Autograph Sales

Family outings can take on many forms but a journey to London's West End, to see one of the current crop of hit musicals, is often the single most significant event in a family's social calendar. The seats will have been booked many months in advance, the anticipation will have mounted steadily over the preceding weeks and eventually the great day will arrive. The investment involved, in both adrenalin and income, is likely to be considerable for most families and one can never underestimate the event's importance to an audience, who need to perceive and remember their night out as a complete success.

Whilst the audience's enjoyment depends on many factors - the quality of the songs, the standard of the singers' voices, whether or not the orchestra played in tune - the clarity and reliability of the show's sound system can completely make or break the evening. The occasional wrong note or a missed lighting cue is either not noticed or quickly forgotten, whereas a failure in any part of the sound reinforcement system would be immediately obvious and could ruin the evening's enjoyment.

It takes considerable effort to stage a show, and this is as true for those responsible for the technical aspects of a production, as it is for the performers themselves. Large-scale productions, such as the modern sing-through musical, are using ever growing quantities of technical hardware, and the shows' sophisticated sound systems necessitate substantial investment. Currently, this level of commitment is provided either by the show's producers, or by the rental company supplying the hardware. The direct financial commitment to the system itself has to be supported by a considerable investment in people and technical resources, in order to ensure that the initial design and installation are complemented by long-term monitoring and maintenance. The role of ensuring that the equipment operates effectively night after night is a highly significant one.

The reliability of a theatre sound system depends on the inherent quality and reliability of the equipment specified by the sound designer and on the standard of its subsequent maintenance. In addition to ensuring that all members of an audience, in all areas of an auditorium, can hear all the show on any given night, a sound designer has also to consider the time factor of an installation. Whilst any one audience's enjoyment of a show takes place purely in the present, the designer has to make due allowance for possibly several hundred performances. Long-running shows, such as the London production of 'Cats', with its ten-year history, can easily notch up a few thousand performances.

The sound system must be capable of delivering a quality result every time and its longevity is naturally related to the inherent dependability of the individual components. These will be selected for the job through a mixture of reputation, experience and testing. A system's serviceability is an important design factor, and has to be considered by the sound designer in addition to the primary aspects, which will include venue acoustics, show orchestration, radiomic management, speaker locations and delay times. Andrew Bruce, sound designer with theatre specialist Autograph Sound Recording, explained the procedure:

"As part of the design process, basic 'reliability insurance' will have been allowed for in any



Testing a radiomic receiver rack.

installation. A spare amplifier will be fitted into the amp rack and an input module will always be left unoccupied in the mixing console, ready for instant substitution should a fault develop. Before including any item of equipment in a system, we have to be very confident of its reliability and carry out extensive testing of any new candidate hardware.

Once installed, the theatre systems are visited regularly for listening checks, to monitor the viability of any particular decision or choice. Service access is obviously very important and care has to be taken to ensure that equipment is not sited in locations which would encourage failure through extremes of temperature or humidity."

However, even with the best equipment and the most stringent checks, the demands of theatrical productions do cause failures to occur. Being available as fast as possible to attend to faults is the responsibility of the installer, who will have to make decisions regarding the type of service cover required and the appropriate stocking level of spare parts.

Autograph, for example, carries at least one spare for nearly every product on its hire list, ranging from spare modules for each type of mixing console, to around 70 transmitters for the company's huge complement of radiomics. With upwards of a dozen shows in London's West End at any one time, the company has to maintain extensive service cover and has a team of engineers working from its London base. The company's senior service engineer is Tony Robinson, who has been with Autograph for over ten years. He commented on the development of service provision:

"In the early days of the company the main service transport was a motorbike, enabling a

small quantity of spares to be carried. Although it represented an easy and rapid method of getting into London's West End, we now use a small van dedicated to the task. The requirements have evolved, along with changes in technology, necessitating us carrying a greater range of spares and test equipment."

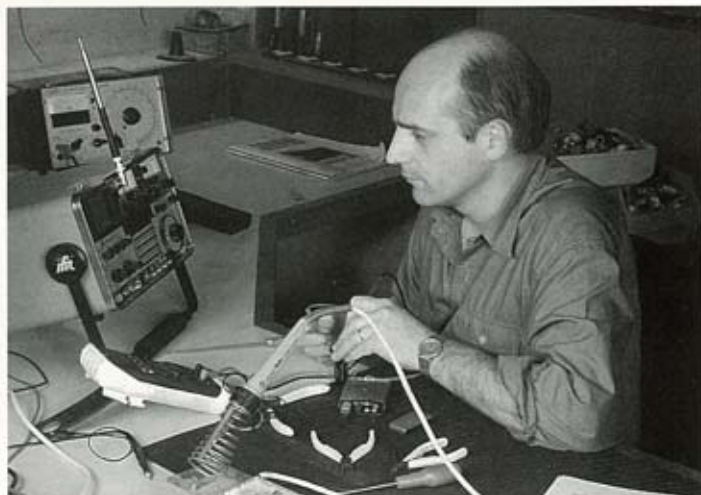
The engineers provide on-call cover every evening up until 9.30pm, which is sufficient to respond to any faults discovered up to interval time. Fortunately, over 90% of faults are noticed during the pre-show checks, although this sometimes results in a mercy dash immediately before curtain-up. Most West End theatres can be reached by the engineers within 15 to 20 minutes of receiving a request for help. A call for assistance was received recently from the London production of 'Starlight Express', just 30 minutes before opening. Following a rapid journey to the theatre, the fault was traced to a loose connector and the show still began on time.

The international nature of many productions produces problems of a different kind. Most servicing in this context is conducted locally, supported by the air shipment of major spares when necessary. However, telephone help is always available. During the Zurich production of 'Cats', which is staged in a converted railway engine shed, the air temperature reached a sweltering 40 degrees centigrade. Tony Robinson outlined the problem:

"Digital equipment does not enjoy high temperatures, which were peaking at over 60 degrees centigrade within the mixing console itself. The desk computer was in grave danger and the sound operator was advised to rig an air conditioning system. Helped, over the telephone, he managed to connect a portable



Tony Robinson of Autograph Sound Recording on the road.



Out of the condom, onto the bench.

air conditioning unit to the appropriate parts of the mixer's chassis, in order to feed cooling air throughout the console's interior! The metal roof of the theatre also contributed to other problems, the most serious of which was the amount of sweat produced by the performers in their cat costumes. Vast quantities of sweat tend to ruin radiomic transmitters very quickly but fortunately an economic and almost universally available remedy was discovered. The performers' transmitter packs were wrapped in condoms, which combine the perfect qualities of light weight and moisture resistance!"

Heat, damp and connector problems seem to account for a large majority of service calls, with intermittent faults being the most common. No electronic equipment takes kindly to high temperatures and digital circuitry is particularly vulnerable. The summer period is dreaded by the service engineers, as the frequency of apparently random faults increases.

A keyboard player in the orchestra of 'Les Miserables', London, produced a loud bang over the system when he tapped his foot during a quiet passage. His instrument had become an excellent generator of static, which discharged via his foot to the stage. The remedy took the form of a rubber mat, to insulate the discharging limb. As the abundance of digital gear increases, perhaps equipment manufacturers will have to put more specific

design effort into high temperature operation, especially if our summers become hotter for longer.

Damp is the other main enemy of the engineers and hair dryers have become an established part of the service kit. Performers' radiomic transmitters, because of their common location beneath clothing, often fall down toilets. Patience and hair dryers can help, with condoms again being called into service as a preventative measure! The standard of most equipment in use for theatre sound is very high indeed and amplifiers, mixers and radio transmitters normally recover from a dowsing. At a performance of '42nd Street' in London, the theatre's drencher system tripped into action unexpectedly, one hour before curtain-up, soaking the orchestra pit and stage, and the amplifiers below. Rapid deployment of fan heaters and hair dryers enabled sufficient equipment to operate and the show to start on time.

The skills of the audio service engineer, working in a theatrical context, have to encompass lateral thinking, a natural talent for fault-finding to impossible deadlines and an affinity for the theatre, in addition to a thorough training in electronics. Autograph's Tony Robinson summarised his attitude:

"Each time you visit a theatre to rectify a fault, you have to be aware of every possibility, from

the totally obvious to the completely obscure. You have to work as fast as possible, keeping in mind the audience, who are due to pour through the doors at any moment! They will have committed a large portion of their monthly income to visiting the show and it really is a case of the show must go on at all costs. Experience of electronic fault-finding is obviously necessary but one does need to be particularly sensitive to all aspects of the theatre, including the needs of the audience, the performers and the show's producers."

Maintaining theatre sound systems is a highly specialised role. Successful maintenance stems from a harmony between the system design itself and the care with which it is installed, supported by skilled service engineers who have developed an informed awareness of all theatrical forms. Equipment manufacturers are also major contributors to the cause, and need to continue research into the long-term reliability of their products, which have to survive the often surprisingly hazardous conditions encountered in the theatre.

An audience's enjoyment is paramount and their night out is sacrosanct. The profitability of the production company involved also cannot be ignored, as any down-time for a show means less income from seats and less investment available to stage new productions. The shows must go on.



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THE STRAITS RETURN

Ben Duncan catches up with Dire Straits' sound crew at Woburn Abbey

On June 20th, solstice eve, Dire Straits supported by US bands Lyle Lovett and Was (Not Was), played in perfect weather to around 60,000 people in front of Woburn Abbey, the Marquis of Tavistock's residence. The arena field, faced by a lake and avenue, is surrounded by 3,000 acres of gently undulating parkland landscaped in the 19th century by Repton, including ancient pollard oaks, and populated by nine species of deer. Given the fine weather, a more pleasant environment is hard to imagine. A day earlier, it would have been a mud bath! The show was one of the main outdoor events in the second UK leg of Dire Straits' world tour, and was broadcast live to some nine million people via BBC Radio 1.

Britannia Row are the main contractor, with Concert Sound's Robert Collins and Paul Boothroyd doing the outfront mixing, and Adrian Fitzpatrick on monitors. Concert Sound also supplied the control gear, including a pair

of brand new Midas XL consoles. The PA system was chosen by Straits' Mark Knopfler; he listened to a variety of boxes, and decided he wanted to use Turbosound's new Flashlight system, operated by Britannia Row. It's supplied as a standard package with BSS Audio amplifiers and Turbosound's LMS 780 controller, which comprises a BSS crossover and delay line for aligning the separate bass cabinets.

I asked Robert Collins about the tour's background: "We began rehearsing last June. In September '91, we started in Ireland, did the arenas in England, and went to Europe." The show then went to the US, Canada, and Australia and New Zealand. "We're in Europe now, finishing on August 5th. Ticket sales have been phenomenal all over; we could spend weeks just in Holland; and it's the same all over." The tour is planned to finish in October but with continuing sell-outs, it wouldn't surprise the crew if it's extended.

System Structure

Of the outfront PA, the arrays in the stage wings and delay towers set off from the wings were all Flashlight. These comprise a flown, point source array of 3-way enclosures, with bass cabinets stacked on the stage below, and more cabinets on the ground. There were a total of 96 hi-low Flashlight boxes, with their integrated flying system. The 3-way enclosures look tiny, delivering the sound of an older stack typically six times their size. Half a dozen TMS-3 cabinets provided 'in-fill' in the centre, under the stage. The delay towers behind and either side of the mix tent employed TMS-3 cabinets and TSW subwoofers. Behind the mix tent, slung from the lighting tower were some MSI (Maryland Sound) long-throw HF cabinets using JBL 2445 giant 'Baby Bums', to reinforce the HF, which would otherwise be blocked by the tower, to the

audience on axis.

Two Midas XL consoles and an extender were in use for Dire Straits FOH mixing. I asked Robert Collins how they were finding them.

"I took them out of the box at production rehearsals and plugged them in. They're lovely, clean, very precise, very good at travelling around on aeroplanes, falling off lorries, being rained upon and suffering mud and sun. In all that we had no problems, except one sticky mute switch. We got into them right away. Midas obviously think of desks going into a field and 20 engineers using them; it's got to be user-friendly. There was nothing to get used to; compared to the older boards, it's just a lot more precise. When you turn a knob, it does something. So we're more than happy with them."

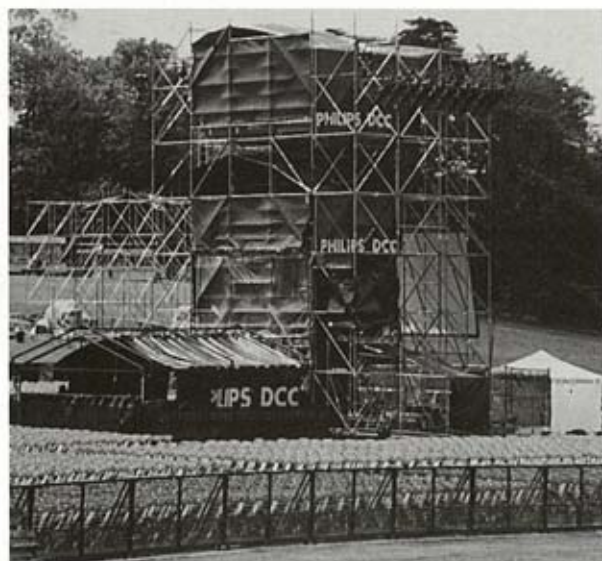
Robert was also full of praise for the Lexicon 300 multiprocessor, and BSS Audio's graphics. "Up to now, I've always been a Klark Teknik



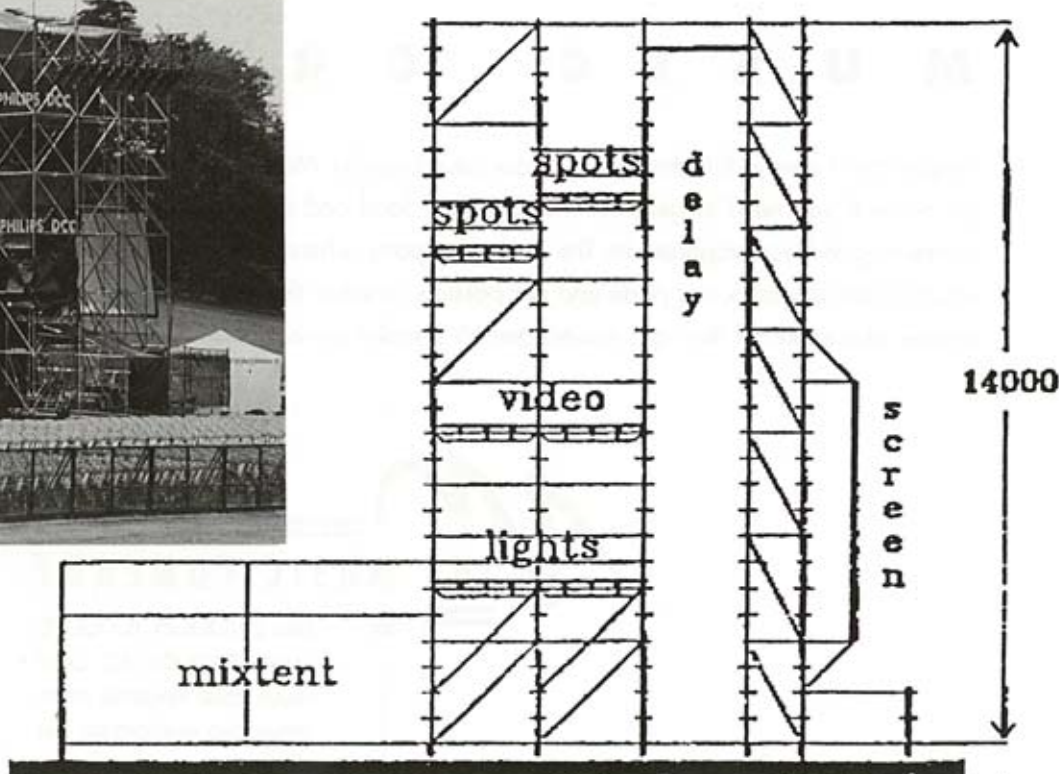
Paul Boothroyd.

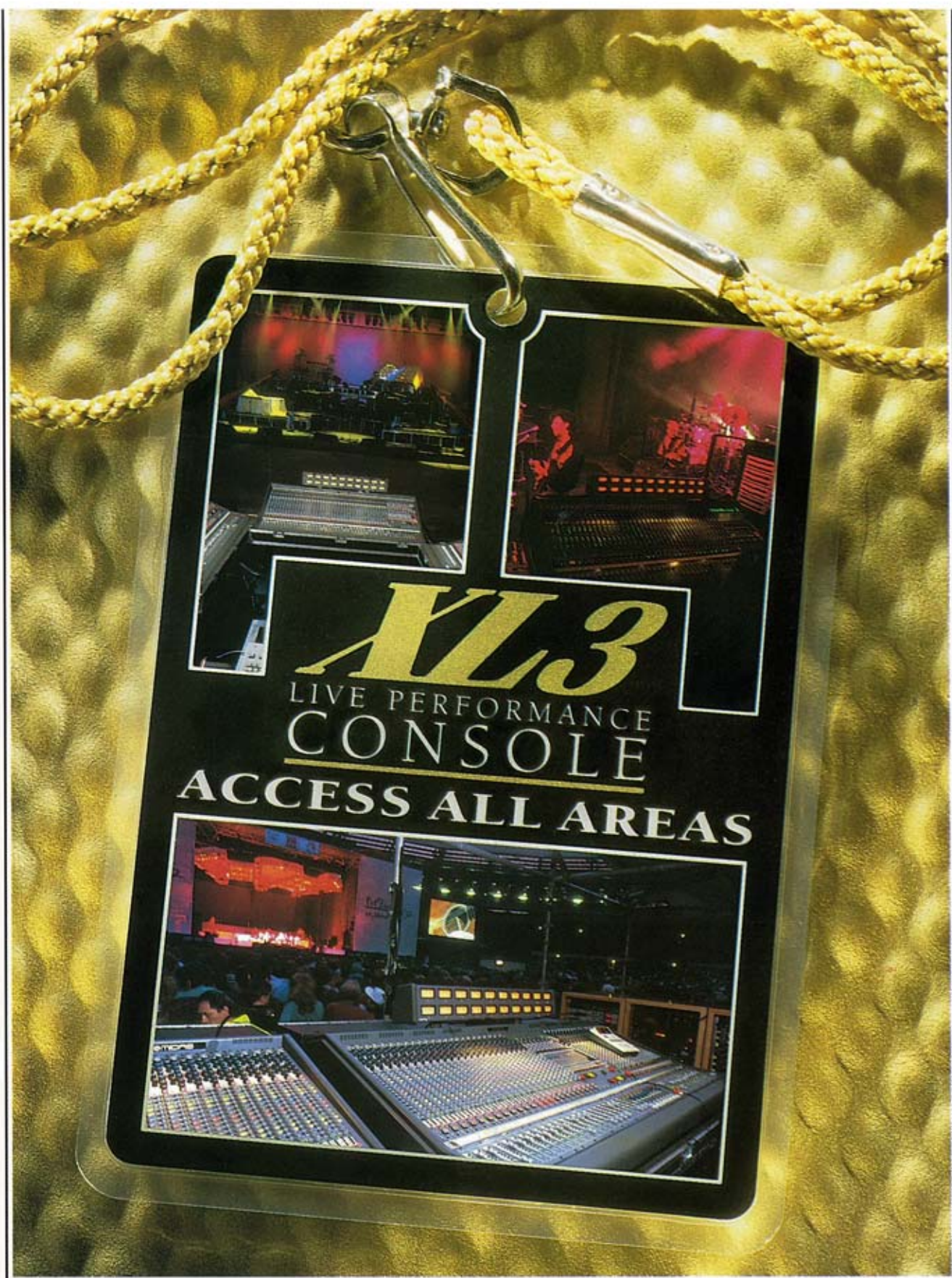


Robert Collins.



The soundmix tent banked up against the lighting tower. One of the two projection screens can be seen at the rear.





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Preparations for the concert are well underway.



One of the processor racks with BSS compressors, BSS and Drawmer noise gates and Orban parasound parametric EQs.



The main flow Flashlight system within the PA tower.



All three Midas XL3 front of house consoles.



Main stage with scrimms masking the PA system.



The effects rack complete with Lexicon reverbs and Eventide harmonisers.



Dave Coombes on the Yamaha PM3000.



Lyle Lovett on stage with PA centrefill in view.



Hugh Richards (left) at the FOH mixing position.

man." At the Earls Court show a few days before Woburn, they'd used BSS's new Vari-curve equaliser, which was inserted after the FOH graphic, using its deep and precise notching capability to overcome the worst of the hall's infamous eigentones. Robert was also impressed by the BSS amplifiers which are part of the Flashlight package: "I believe a big part of this system is the BSS amplifiers. Any good speaker enclosure would benefit from the EPC-780 amplifier for headroom, power, and clean signal. We're now using the smaller EPC-760 for the highs and mids and still evaluating it."

I asked about Concert Sound's experiences with the Flashlight PA system:

PB: "We're still learning about angles and where to point it. It's always developing. In the last show we were experimenting with the stacking of the bass bins. We're always searching for the perfect sound - albeit a personal thing. Flashlight is a very new system; I've never used it before on a tour of this scale."

RC: "It's a great, very powerful system but very unforgiving. It'll highlight anything you do wrong, so we have a love-hate relationship! It reacts differently to what we're accustomed to, and for example, this is only the sixth show we've done outdoors, and we've been finding it does something unexpected and different at each new type of venue. The lower registers is where we've had the most trouble, but we keep experimenting with the positioning of the bass cabinets. On the plus side, getting the texture of Mark's vocal right has always been a problem in the past with tours, but with this system, we don't seem to get that problem at all - you can just push it up."

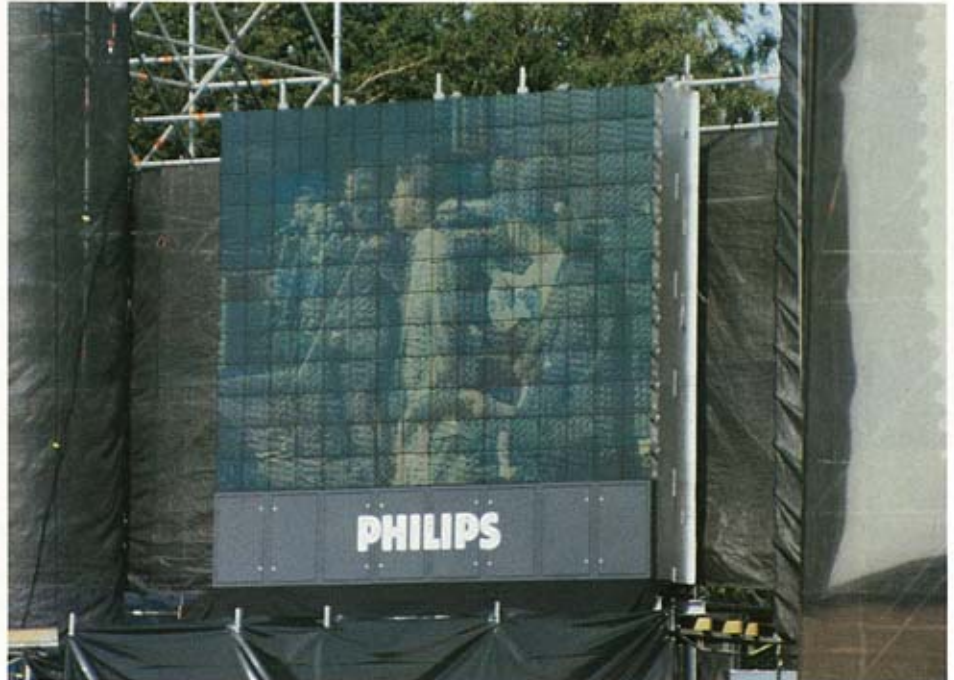
Practical Acoustics

The team have earned a reputation for perfectionist approach to sound. At Earls Court, custom acoustic treatment was installed to overcome the hall's dreadful, 15 second underfloor reverb. I asked Paul Boothroyd about their mixing philosophy.

"We mix amid the people at ground height, so we're not in our own little world as far as what we're hearing. As soon as you go above head height, you get 'sound skim', particularly with a tightly packed crowd. This and the heat rising from them seems to cause the sound to skim over them. So mixing above head height gives an unrealistic perspective on the sound."

To get a good image, Paul explained how the mix tent had been designed with a draw-back tarpaulin, so weather allowing, it could be open on all sides and even overhead during the show - but could be drawn back in seconds in the event of a shower. Even the 'mojo' barrier in front and down the sides has as low profile and is perforated, so it doesn't reflect the soundfield.

RC: "We're able to get a lot of natural depth in the mix. You can layer the instruments really well, whereas a lot of other systems would sound flat. We've had a phenomenal reaction, particularly from people in the business. They really like the layering and space in the music." Robert hastens to add that a large part of this hinges in the first place on the musicianship of



Philips Vidiwall.



Night falls and the full effect of the massive lighting rig comes into play.

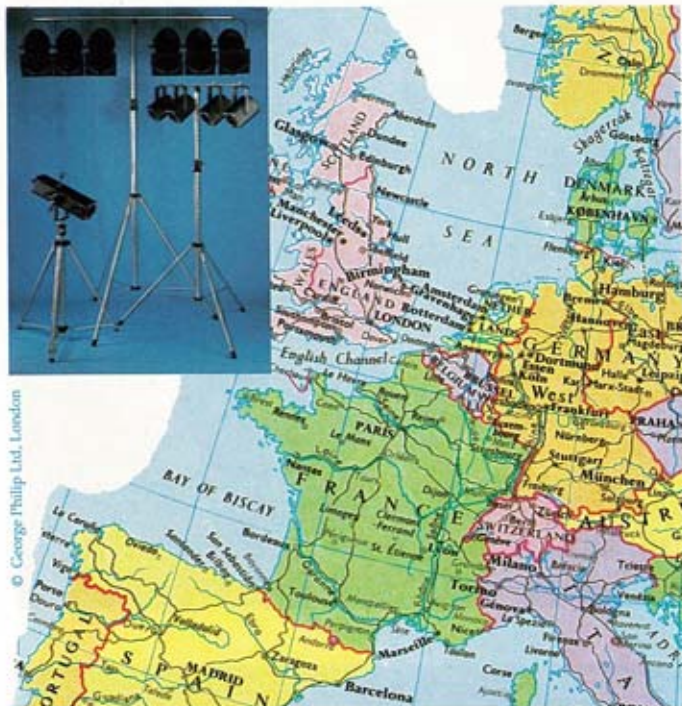
Dire Straits.

Sound levels were monitored by Health and Safety officials from mid-Bedfordshire District Council. A one minute limit of 103dB Laeq was provisionally set at the mix position, but levels were also being evaluated over five minute periods, as the officials (who haven't that much experience with concerts) became aware that one minute Laeqs were a bit unrealistic for the dynamics of live music! There was also environmental monitoring at six sites, each

about a mile away. A lack of equipment at these meant that readings were all 'A' weighted, which worked in the concert's favour, as the main residue from the Flashlight system at this distance is bass, which is filtered out by 'A' weighted readings.

Crowd safety was aided by the 'lawn seats' comprising a seated enclosure extending the full width of the stage, and back, to behind the mix tent. Audience density within the compound was low enough for the security officials not to worry

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Above and below: Dire Straits on stage.

about them leaving their seats and crowding to the front as the show progressed, giving a relaxed atmosphere.

Mike Lowe, one of Britannia Row's directors, reiterated the learning process with the new system, and how it was easy to be too critical, as it sounded so good. At the show at Cardiff a few days earlier, he and Robert Collins were discussing improvements that might be made: then they realised it was nonetheless one of the best sounds heard in any stadium.

Sound quality was good all around the site while being different. Amongst the lawn seats, I preferred the sound close up and on axis to either of the main arrays. Towards the centre, a strong stereo image was gained, but the bass became 'throbby' - the kind that hits the solar plexus. Wherever you walked there was no 'phasiness', other than that caused by the gentle breeze. At the back of the site, in front of the lake and on axis to the stage centre, I shut my eyes and had no trouble imagining I was listening to a £20,000 hi-fi system in a large living room. This is a tribute to the quality of the sound coming off the delay towers, which is all too often 'second best'. The system even sounded good and seamless at a position where sound was being received from two delay towers and the main stage i.e. three different sources, all at different distances.

Equipment List

FOH Speaker System (inc. delays)

96 Turbosound UHQ 780H (high/mid enclosures)
96 Turbosound UHQ 780L (Bass enclosures)
32 Turbosound TMS3s
8 JBL 2445/Long throw horns Turbosound UHQ (Flashlights) driven by BSS EPC 780 and BSS EPC 760 amplifiers
Turbosound TMS3s driven by GSC 3800 amplifiers

Monitor Speakers

8 Turbosound TMS3s (4 flown each side) for sidefills
18 Turbosound TFM 350 2 x 15" woofers
5 Turbosound TFM 1 x 12" woofers
2 Turbosound TXD 518 (1 x 18" drum fill low end)
All monitors driven by BSS FDS 360 crossover and C Audio 707 and 202 amplifiers

FOH Control

96 ch Midas XL3 system driven by
2 BSS LMS 780 controllers

2 BSS MCS 200 controllers
BSS FCS 960 system EQs
BSS Varicurve system EQ
All system delay units were BSS TCS 804s
4 Lexicon 224 and 480 reverbs
10 BSS DPR 402 compressors
10 BSS DPR 502 noise gates
4 Drawmer DS201 noise gates

Monitor Control

80 ch Midas Pro 40 (into 24) monitor console
Klark DN360 EQs
Apex Paragraphics
Yamaha SPX 1000 multi effects processors

Dire Straits Crew

Production Manager - Alan Hornall
Sound Engineer - Robert Collins
Assistant Sound Engineer - Paul Boothroyd
PA crew - Paul Johnson, Paul Giansante, John Shearman, Julian Tether, Rick Pope, Hugh Richards
Lighting designer - Chas Herrington



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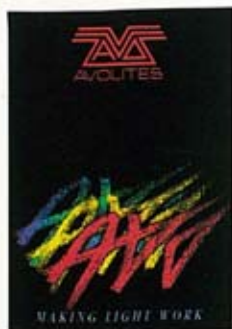
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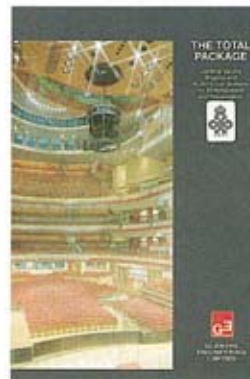
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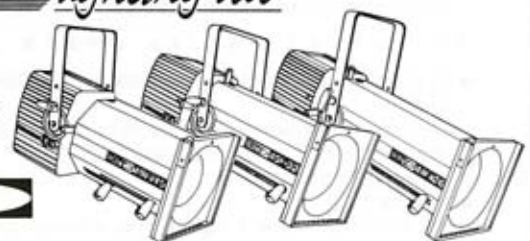
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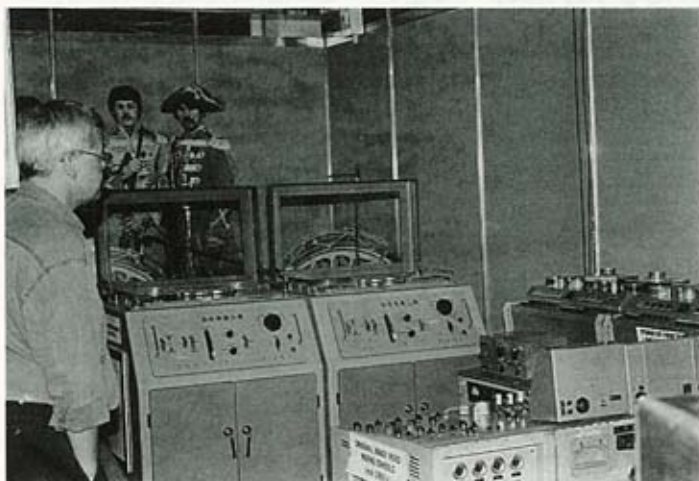
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APRS ANNIVERSARY SHOW

Tim Frost brings back the briefs



The gear that recorded Sgt. Pepper - it could all be done on Portastudio now.



Mark Dodd (left) and Graham Hendry with Tannoy's CD dual concentric.

Twenty-five years ago, the first APRS exhibition coincided with the release of the Beatles Sgt Pepper album, and the organisers took this as their theme this year, with a re-creation of Abbey Road Studio 2 where the album was recorded using much of the original equipment.

Things have come a long way in that quarter of a century and as the industry has become more broadly based, APRS exhibitions are no longer purely studio based. They attract the cream of the sound reinforcement products as well as home recording, audio for video and even disco. **Formula Sound** is one of the non-studio APRS exhibitors of long standing who consider the show good for meeting old and new customers. Formula have recently updated their disco mixer and the new PM90 has, according to Sandra Cockell, created a lot of interest and sales.

"From its release, it went totally berserk and we are still trying to catch up with the orders; the noise level controllers CX4 and Sentry have also kept us busy. It was the right thing at the right time. Word of mouth has promoted it well, to the point where we are only now beginning to advertise it."

Studer/ReVox, now being distributed by their own companies in the UK, shared a stand with ReVox losing its 'domestic' identity and the company looking for more and more niche professional markets. The ReVox brand is being given an increasing range of purely professional

use products including the C115 cassette, C221 CD and the D740 CD-R unit. Studer are embracing hard-disc technology with sister companies Dyaxis and Numsys. "As you can see," noted Brian Whittaker, emphasising that Studer is no longer a one product brand, "there are only a couple of tape machines on the stand."

Clive Green was very pleased with the response to his new CADAC J series desk which has been selling at the rate of one a month since its release at the beginning of the year. Moving to a modular construction, CADAC have maintained the build quality whilst making the desks easier to construct and allowing hire companies to re-arrange the configuration of their stock. And for those with even more money to spend on a desk, **Neve** launched their all-digital Capricorn studio desk.

Stephen Court is back in business as **Court Acoustics**, having bought all his names back. "We believe in a system approach and have a commitment to develop products together," said sales/marketing manager Alan Kilford, explaining why the new company has launched with a full range of cabinets and electronics. The new Court speakers will be using specially developed drivers and Court also showed a new 'processing crossover', the CN240.

Amongst their installation speaker systems **Tannoy** showed a major new development - the constant directivity dual concentric speaker. This driver is yet to appear in cabinet range, but it looks very interesting as it combines into one full range driver high power, point source and constant directivity.

Klark Teknik had their first new products for some time. The DN728 delay line, which can be set in units of mS, feet or metres and DN800 active crossover are both configurable units that will have applications both in the studio and on the road. **Akai** have made a few important software additions to the DD1000. "This takes the sampler and turns it into a hard-disk recorder," said Graham Noon, who showed that the system upgrade maintained most of the sampler's original features whilst adding the ability to record directly to a range of media, including erasable magneto-optical discs.

Dolby, not content with dominating studio noise reduction and film soundtracks, showed that they have their sights also set on the signal processing market. According to Tony Spath, the new 1U Spectral Processor adds control over low level signals, restoring detail on both live and recorded programme material and also includes a single ended noise reduction system. Sounding similar in name at least, **Drawmer**'s new DL251 Spectral Compressor is also aiming at the live sound and broadcast markets. It is a compressor that restores the high frequency energy during



John Carroll of Soundtracs with the Live version of Solo.



Akai's DD1200 - sampler turned recorder.



Formula Sound - busy as usual.



LMC's Paul Ward and a sweeter sounding Crest.



EV MC OK.

broad band compression, avoiding the problems of loss of HF during compression.

TC Electronics were introducing an 'open architecture' reverb unit, which according to Phil Beaumont "is a frame which can be loaded with a mix of input/output module and processor cards." The unit can also be configured with a variety of channel options.

Downstairs, **Autograph** continued to promote the Meyer SIMII system control and analysis tool which has made its first UK sale to Sound Hire. Aviva Ozin made the point that although the system is used most often with Meyer speakers "it is not restricted to Meyer and is a lot more versatile than that." Autograph also showed the range of Milab microphones for which they have just taken UK distribution.

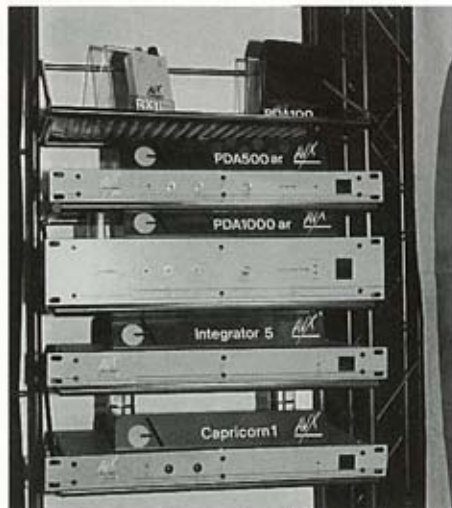
Shuttlesound showed the range of Behringer



Three weeks after setting up Apogee UK, Daryl Vaughan is still smiling.

processors for the first time along with several new products from the mass of brands the company now distributes. Most noteworthy of these was Amcron's Geodyne 1 and IQ compatible Micro-Tech 5000 amplifiers and a new pair of floor monitors from EV including the dual-concentric EM12CX. **Howland West** have swapped Carver for QSC as their amplifier range. "Although we've just made the announcement here," said Alf Allenstein, "sales have already started and we are very enthusiastic about the quality and reliability of QSC."

HW have at last got DTI approved Shure radio mics in a whole range of formats and they also showed a nice range of heavy duty foldaway instrument supports by Ultimate Support. **Carver** turned up with AKG who are now the distributors for this amp range that might go well



AVX systems getting to grips with hard of hearing installations.

with their new Turbosound Musician series. With their own brand, **AKG** launched the Blue Line condenser microphone range, destined eventually to replace the C451 series.

Audio Technica also continues to expand its range of microphones, chipping away at the mid and top end professional user. MD Shig Harada said that his UK office has just supplied the three-capsule RDS303 tripod mic for use at the Olympics and showed the new miniature 'hair-line' mic, provisionally numbered the P106, which is at the prototype stage, but will be made in any required colour.

Recognising that the use of multiple radio channels is common place, **Sennheiser** showed for the first time the SK50 16 channel switchable radio system which will be available later in the year. Paul Whiting noted that the unit was not



Allen & Heath's Sabre.



Kelsey's Julie Clark with the new range of bantam jack fields.



Graham Noon with Akai's DD1200 sampler turned recorder.



Harman's Bob 'what recession' Goleniowski.



Sennheiser's new multi radio mic system.



Tony Waldron explains the new Cadac J series.



Denon's CD-R, one of the few not made in Europe.



Tony Spath and Dolby's Spectral Processor.

only more compact but also "starts becoming cost effective if you are using more than six channels."

Beyer had come to a similar conclusion and also had a new UHF transmitter rack with Eurocard based receivers. Each rack is capable of being used with anything between two and 12 channels. In an effort to reinforce their 40 year history in audio and microphones in particular, Sony used APRS for the first UK showing of the C-800G, a new valve microphone. Well that's progress!

One of the new companies to show at the APRS exhibition Apogee UK, was headed at the show by Daryl Vaughan. "We officially announced the opening of Apogee UK just three weeks before the show; it is starting from scratch and there is a lot of work to be done," commented Daryl, who also made it clear that the operation will be totally independent of sister company Alpha Audio.

"Up until now Alpha have been the biggest UK user of Apogee, but Apogee UK must be seen as an independent company and all hire companies will be treated the same."

LMC showed an addition to the Crest amplifier range. The 4601 is a class A/B amp that LMC's Paul Ward believes will have a specialist application in touring systems. "With a sweeter sound than the Crest 4801, it has been optimised for mid/high use."

There were two new patch bays on offer, a bantam jack field from Kelsey Acoustics and on the Plasmec stand, the Flexipatch unit which uses circuit boards for internal interconnection with the option to build in distribution amps.

Yet more hard disk recording systems were given their APRS debuts. Yamaha's CBX-D5 is a 4 channel recording processor that can be linked to any SCSI controlled storage system. With a target price of around £2500 it is likely to start delivery in the UK in November. Roland's DM80 hard-disk system will be available in 4 or 8 track versions and can be linked to offer up to 32 digital tracks. Sound Technology showed the



Shure get on the right frequency with DTI-approved radio mics.

long awaited Alesis ADAT S-VHS based digital recorder which was shown in a 'full production' version although with no firm shipping dates.

Reflecting the move to Speakon connectors on touring systems, EMO have added a Speakon equipped version to their range of cable testers which also now have phono connectors to check cables to CD players and other domestic and semi-pro units.

In the big desks, Soundcraft (for the first time) had the theatre version of the Vienna, with a recent sale to the Mean Fiddler. Bigger still, the Europa on the stand was about to be shipped straight out after the show for use on the James tour. The Spirit range is being separated from the main Soundcraft product line and had its own stand with both live and stage monitor versions. Not to be outdone, DDA were showing the Forum 8 buss desk that will be available from the summer and Soundtracs showed the Solo Live, a very tidy 24/4/2 desk.

Harman's APRS stand always seems to sport a new brand. This year takes them into the MIDI software with distribution of Steinberg. C-Audio - last year's new brand - featured the IA series amplifiers with remote controllability. Harman's Paul Dunkley pointed out the Allen & Heath GL3 desk, with a sub £1500 price tag. "It is aimed at live sound for front of house, and with the aux to group switching it can double up as a monitor desk." The other notable changing product on the stand was Urei's complete updating of their compressor/limiter range.

Tascam didn't sneak preview their hard disc



Soundcraft's Vienna moving into live work.

system at APRS, as they had at other exhibitions, but they did add Dolby S to the 238 8 track cassette. They also merged the AV market 133 three channel cassette with the 234 to create the 134, a 4 channel cassette with full AV features. Fostex continued their work on Time-Code DAT with an enhanced version of the D20.

The NAB cart seems to be almost dead and replaced by units using high capacity floppy discs. Sonifex and ASC both showed variations on the theme with Discart and DART, both becoming increasingly flexible.

Being the year of affordable, recordable CD, several units where being shown for the first time at a UK exhibition. HHB showed the Marantz CDR-1 unit and Denon was the only company to show a CD-R not developed by Philips, and they matched this with the DN951 and the DN961, two new versions of their instant start CD players.



Competition for Tannoy with a dual concentric from EV.



Shig Harada and AT mic in use at the Olympics.



Alan Kilford 'Court' in the act.



Klark Teknik's reconfigurable crossover and delay.



Stephanie Scrope with Beyer's multi radio mic.

NATIONAL THEATRE STUDIO VISIT TO LITHUANIA

From the diary of Bryan Raven, general manager of White Light



The Artist's Palace, Vilnius.

Theatres were shut all over Lithuania recently to enable a group of 45 of the country's leading actors to take part in a series of workshops, seminars and master classes run by a group of leading British theatre practitioners.

The idea behind the scheme set up by the Royal National Theatre Studio was to establish friendly links between British theatre groups and those from the Baltic States, and to share skills and information. A whole 'variety' of top British talent took up residency in the Artist's Palace in Vilnius to pass on their skills in areas as diverse as acting, writing, design, stage management and administration. With theatre lighting specialist White Light as one of the principal sponsors for the cultural visit, I was chosen to accompany the National Theatre team to Vilnius and to contribute technical advice to both theatre and national theatre television engineers.

Lithuania has only recently been freed of Soviet occupation and is entering an unknown stage in its development. The National Theatre visit and contribution to that development

meant a lot to the people of Lithuania. We were followed by film crews almost everywhere we went, and received warmly by our hosts at numerous formal receptions. What follows is my diary of a long weekend in Lithuania.

On the Friday I set off from Heathrow with Annabel Arden from Theatre de Complicite and designer Alison Chitty, flying to Vilnius via Frankfurt. Arriving at 2pm local time we were met by Dalia Ibelhauptaite, the inspiration behind the trip, and Juozas Budraitis, one of Lithuania's most respected actors. We were treated to a brief drive around the city before being shown to our hotel. Everything in Vilnius is so different - the air, the buildings, the people, the cars! But curiously it was just how I had expected it to be. Even our hotel seemed straight out of a movie set - rather primitive but with magnificent parquet floors and long corridors.

On the first night all our doubts and worries about the food we would be eating during our stay were quickly relieved. The restaurant served us a starter of cold meat and fish, followed by

borscht and then a choice of fillet steak or pork! The quality and quantity would not have been out of place in London. Walking through the city at night we couldn't decide where the architecture reminded us of; at times it was Paris, at others, Italy. The most stunning buildings were the churches, many of which have only recently reverted to their original use after the Soviet occupation. Returning to our rooms we briefly checked each others' rooms to discover that none of them was the same! Mine had the cleanest bathroom, but with no hot water. Annabel had hot water but a disgusting bathroom and no radio. Alison had everything including a second bedside light which did not work. We tried to call White Light but . . .

After a trouble free night and with bright sunshine outside we were taken to a restaurant for breakfast; three fried eggs with chopped ham - they don't understand vegetarianism in Lithuania! We then took another brief tour of the city before we were whisked off to Dalia's parent's flat where we were fed with the most enormous feast, with plenty of cognac and emotional speeches.

I had to miss the second half of the feast because I was escorted to the Vilnius Television Centre where I was introduced to its lighting designer and a studio engineer who had a working knowledge of English. Unfortunately, for the first time since we arrived, there were no interpreters around, which made for an interesting visit!

The actual equipment being used in the TV Centre was not as out of date as I think they thought it might be. They were using a few HMI units, but they found the lamps very expensive. One major problem they had was that when the Soviet army left the centre after the occupation, anything they didn't steal was wrecked. They therefore had to rebuild everything with little or no money. So, if anyone wants to donate some old TV/broadcast equipment I know of a few very grateful recipients!

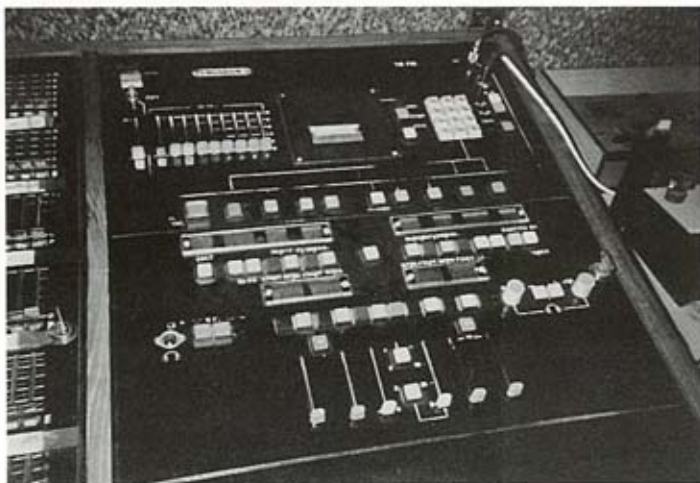
During my visit, they showed me a film, narrated in English, with the full uncensored story of 'The Revolution', particularly of when the Soviet troops invaded the TV centre in an attempt to gain control. 15 people were killed



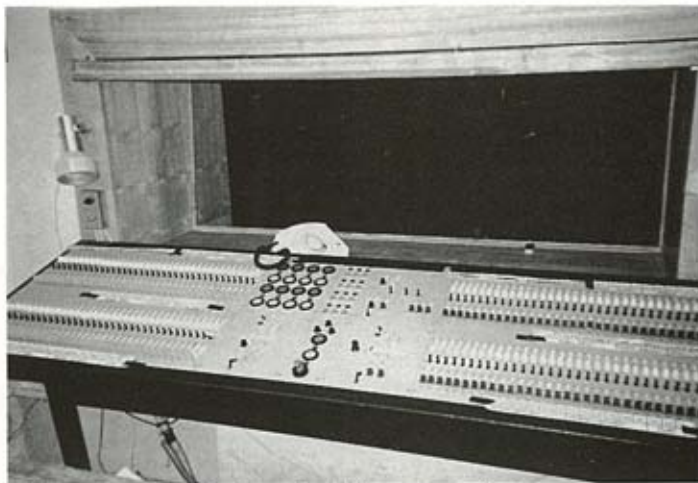
Jovaisa Algis, chief technician at the National Theatre pictured with the dimming system.



Entrance to the National Theatre - the brass statues are expected to be stolen within a year.



Tungram lighting control desk at the National Theatre.



Lighting control desk in the National Theatre's Studio Theatre

and there were no holds barred. The most distressing part in many ways was watching film of tanks on streets that I had been walking down earlier, and people being killed outside the building I was actually sitting in. I had to confess that up until then I was quite ignorant of the situation in Eastern Europe. I had always written Lithuania off as part of the Soviet empire. I'd never considered it as a separate country with a separate culture and its own language, yet occupied by a foreign army.

After I left the Television Centre I visited the State Theatre to see a production of Cogol's 'The Nose' directed by their favourite director Nekrosius. We were provided with simultaneous translation and it proved to be an excellent show. The technical standard of the production was far higher than I had expected, but I have to confess to one scary moment when they set fire to the set as part of the script. Both myself and Eddie Keogh, the National Theatre company manager, were looking to check out the nearest exits. They obviously have a much more lenient inspection system! After the show we were given a brief backstage tour. Although the theatre's technology was very simple, the actual layout and design of the theatre was of a high standard.

The majority of the equipment was of Russian origin, although there were a few pieces of German equipment. The low voltage beamlight, a parabolic reflector with a crown silvered lamp, seemed to be the workhorse of the rig with front of house cover from Plano Convex units. There were no profile spots and very few fresnels. The actual lighting control system was amazing, and the lighting for the show seemed even more impressive after seeing how limited the control was.

Like most European countries the theatre ran on a repertory system with daily changes of shows, meaning hundreds of shows were introduced into the system over the years. From what we gathered they only re-focused the rig and added the odd 'special' for each show, which has obviously resulted in each show having very much the same 'style' in lighting design.

Straight after breakfast on Sunday we were taken to the Artist's Palace which is a magnificent building with high ceilings and parquet floors and each of us was given a personal interpreter. We were then taken to the National Theatre and I was introduced to the technicians, one of whom, Jovaisha, spoke a smattering of English. This was an amazing place. The technical facilities were in many ways more advanced than many of our large UK theatres, although the actual technical standard was quite low. For example, the flying motors had a fantastic control system but the motors only had one speed and were incredibly noisy.

Here again, the equipment was mainly of East European origin, and a lot of it looked as if it was directly copied from Pani or Reich & Vogel equipment. The lighting desk was a reasonably sophisticated Hungarian Tunggram board which had both memories and manual faders offering similar facilities to a Duet. The studio theatre had a magnificent Polish manual board. One of the most amusing aspects of my National Theatre visit was playing a guessing game as to what position each person held - just from their appearance. It's funny how theatre designers, techies and actors can instantly be recognised at a glance all over the world.

Later in the day, after yet another enormous meal, we were taken to yet another 'official reception' at one of the many Vilnius art galleries. The television crew which covered the visit from the beginning interviewed the British actors Anthony Sher and Jim Hooper.

Monday was the first day of the workshops, and with everyone wearing their White Light sweat shirts we actually looked organised! The Lithuanians, who had come from different theatres around the country, were immediately separated into different groups and away from their usual colleagues so as to encourage new working relationships and ideas. And they found the workshops a complete revelation. The National Theatre teams talked about a range of subjects and demonstrated techniques which had obviously not even been considered by the audience before. As the activities progressed

there was a great sense of liberation as the 'audience' participated. Under the previous political regime they had obviously been discouraged from speaking their minds.

As the token 'techie' on the visit, I was initially talked into setting up the projectors. Then, during the workshops, I slipped away to meet with the general manager of the State Theatre who explained to me some of the problems they were experiencing. He also told me about the new Nekrosius production of Carmen which they hoped to tour with around the world later this year. However, as with most of Lithuania, a desperate shortage of money was the main cause of difficulty.

On my final visit of the day, indeed of my whole trip, I was introduced to Jouzas and Kestutis, the Theatre Union's commercial directors. The union is funded by their lipstick factory, although they are looking at other projects to help continue the union. They told me of other ambitious money-making plans involving exporting various products, including cable!

Since my visit I have been asked by the State Theatre for some theatre lamps which are needed for Carmen but which they cannot afford to buy and which we have decided to send. One of its future projects is to tour Lithuania and the other Baltic States and to take lighting and sound touring systems with them. The theatre is looking for equipment including smoke machines, dimmers, control boards . . .



State Theatre of Lithuania: stage management corner.



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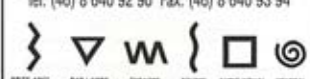
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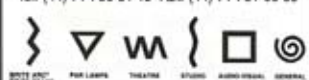
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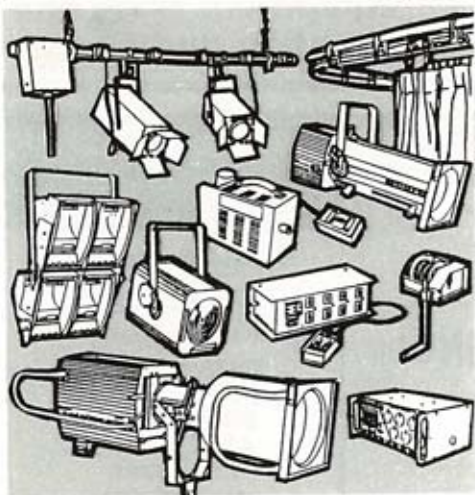
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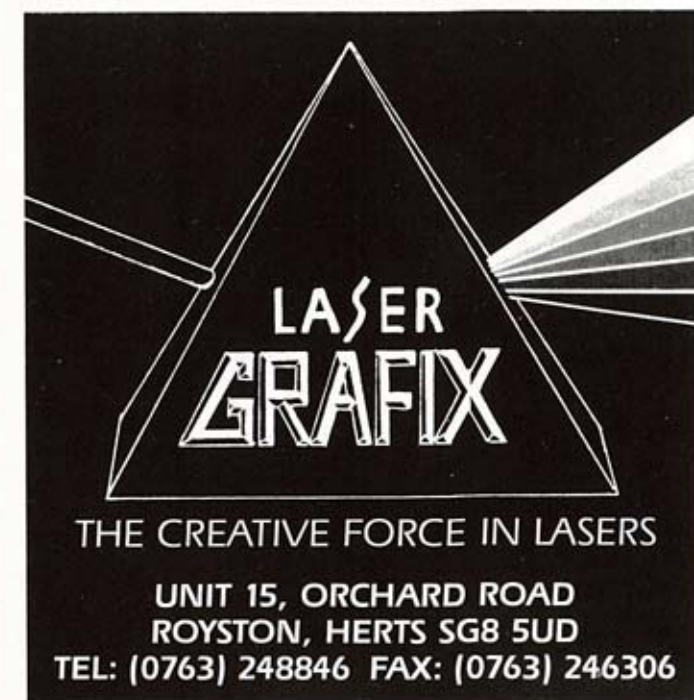
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VIEWPOINT

Simon Croft on Integration and Survival

One of the functions of a trade or business publication is to point the readership in the direction of new sources of business. In the case of Lighting+Sound International, it could be argued that it has gone one stage further by placing a major clue in the very title of the magazine.

The drawing together of lighting and sound within a single control system is probably one of the most significant developments in theatre and venue presentation technology during this century. Although lighting and sound operators tend to be divided by operational specifics (including brand names of lamps or speaker cabinets) they are invariably serving a common purpose. Whether the cue points are provided at 140 BPM on a dancefloor, or measured in minutes in a theatrical drama, sound and lighting act in unison. This in itself is nothing new.

But today's computer-based technology has created a generation of tools that have the inherent capability to 'talk' to each other and the intelligence to allow a central controller to communicate with all parts of the system.

Hence, a central computer can be used to store cue points and scene numbers, which are then fired to the subsidiary units via communications protocols such as MIDI, SMPTE, or just simple voltage triggers.

John Reddie, managing director of ProCreation, has developed a system based on the Apple Mac computer whereby a single operator can control all aspects of the lighting and sound in a theatrical production.

His system communicates with the lighting desk and the sound mixing console. In addition, it cues specific delivery devices such as slide projectors and CDs holding sound effects. The Mac holds not only the cue points but also displays on-screen information about the cue such as "... and now you tell me THIS (Thunder and Lightning)."

Because the devices that his system addresses are inherently 'intelligent', Reddie's system does not need to place great demands on the controlling computer. For instance, the Out Board Electronics SS2 theatre automation system, already used in major theatrical productions, includes motorized level faders and an automated matrix that will send a sound cue to any speaker array in the system.

However, Reddie is working on a number of 'black boxes' that could replace the sound and lighting controllers, once all the cues are programmed. Therefore, dedicated sound or light controllers are used only in rehearsal. In production, the moves created are replicated by the central computer.

It is unlikely that a major theatrical production would ever relinquish so much control to a centralised system. While a 'one button' system is attractive in theory, most high profile users will want the benefit of manual over-ride when profitability depends on 'bums on seats' costing £20 or more.

The same logic does not apply to major growth areas such as theme parks and multi-media displays in museums. Here, automated systems are



A freelance journalist specialising in electronic entertainments technology, Simon Croft is editor of *Broadcasting Visions* and contributing editor to the *European Multimedia Bulletin*. In the early 80s he ran a pro audio sales division of Thorn-EMI and subsequently sold audio mixing consoles across the globe. He lives in Surrey, is happily unmarried, and does not have three children.

employed to bring an audio visual experience to millions of visitors, and repeatability is the name of the game. The final production may rely on a combination of lighting, laser disk video, CD audio and physical models. This is truly a multi-media environment and one that spells the way ahead not just for museums but for all information and entertainment providers to the public.

While the delivery system involves a number of formats, there is often another element again: interactivity. As any Nintendo playing button-pushing kid will tell you, fings ain't fun unless you call the shots.

Apart from computer games, interactivity has been limited in the main to Point of Information (POI) services. But now there is a new trend that makes pushing buttons on the jukebox the province of the terminally passive.

A German company has developed a completely interactive entertainment system for use in exhibitions and other public events. It combines live video footage of the participants with clip shots against a fast moving dance beat created in part by the audience. Large user-friendly button access

sound samples from the latest hip-hop noises to Bavarian yodels.

The creator's careful pre-selection sound and video samples means that it is not possible to create anything more objectionable than the totally bland but each participant is given a VHS of their efforts.

Beyond the controlling system itself, the major ingredients are a powerful sound system and a lighting array that would make Stevie Wonder twitch. There are also enough video monitors to light up the average football stadium. The presentation is designed to attract young people: the sponsor is a cigarette manufacturer whose best marketing gambit is to say nothing about the product at all. But certainly the presentation is a draw. Exhibition organisers fight to get this system at their event. Rock band U2 has demonstrated the power of multi-media on its latest tour *The Zoo*, which combines on-stage action with live television via satellite, video and graphic captioning. And yes, they play music as well.

In the face of such innovations, it is too late to wonder if lighting and sound belong to a unified working environment. They are just tools to address an audience that has seen the movie, read the book and bought the t-shirt.

From the operator's or the contractor's perspective, the questions now are a) how is this merging of media facilitated at a technical level? b) who should be controlling the delivery system? c) what other elements should be incorporated in order to secure the interest of our target audience?

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9
26
46
6
67
50
50
50
43

Lee Filters 14/15
Le Maitre 40
Light and Sound Show 3
Light Angles 26
Lighting Technology 8
Lightpower Showtechnik 4
Lightwave Research 27
London Laser Co 29
Marquee Audio 58

12/13
32
28
11/58
20
7
50
24
35

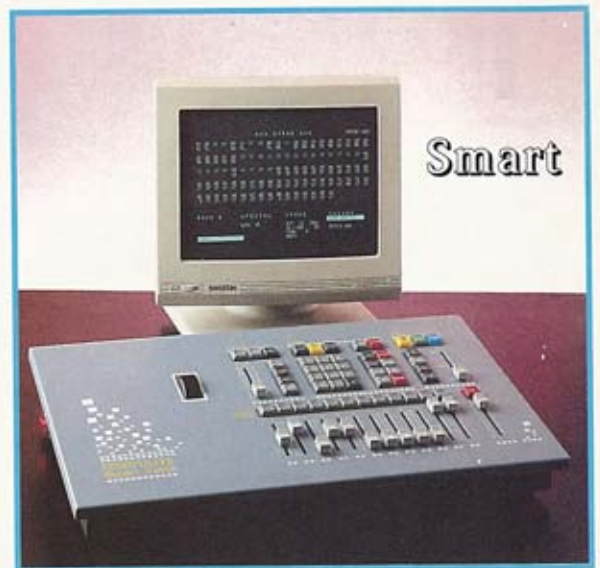
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2
11
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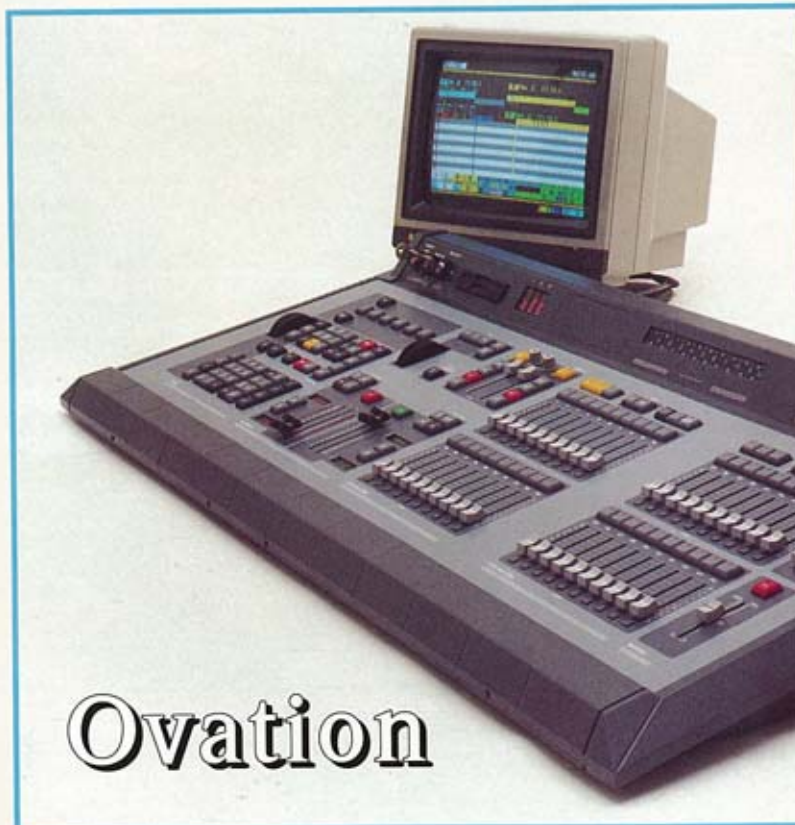


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