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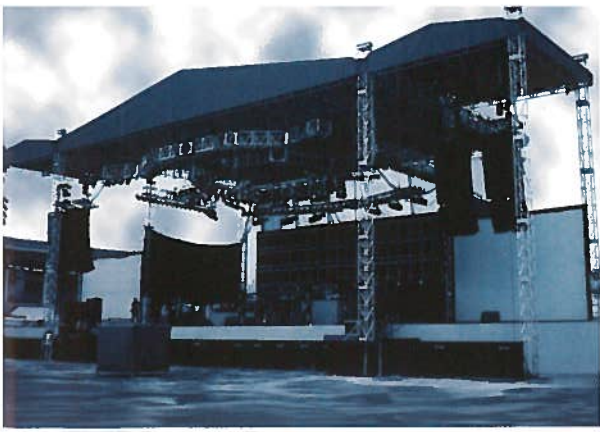
THE ENTERTAINMENT TECHNOLOGY MONTHLY



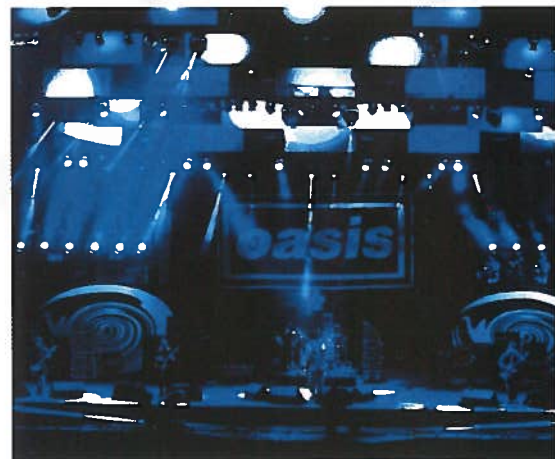
FLASHLIGHT BELGIUM LIGHT CLEYDAEL CASTLE FOR 'HELMUT LOTTI GOES CLASSIC III'

- The 1997 PLASA Light & Sound Show: Product Launch Highlights
- Lighting the Ice Warriors at Manchester's Nynex Arena
- Helmut Lotti Goes Classic with Flashlight Belgium
- All that Jazz: Chicago returns to Broadway
- Vikingland - a new attraction in the cold north
- Cinema Sound - the Best of Reproduced Sound

SEPTEMBER 1997



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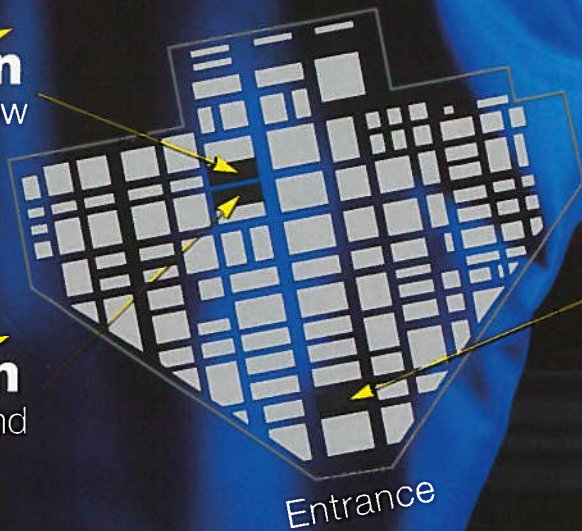
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A Different Light will be available at the PLASA and LDI trade shows and via our web site at www.vari-lite.com in September.

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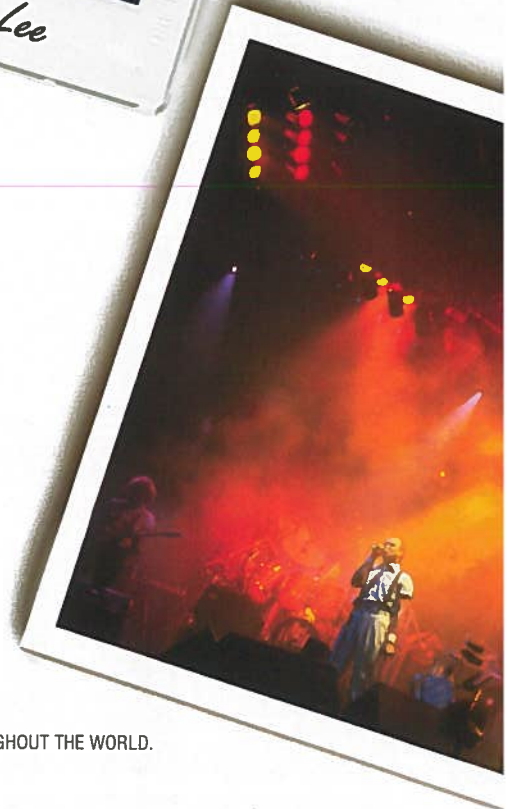
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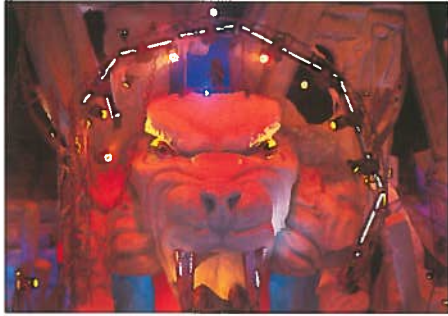
SEPTEMBER 1997

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The views expressed in Lighting and Sound International are not necessarily those of the Editor or the Professional Lighting and Sound Association



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PLASA

LIVE AT EARLS COURT

7-10 SEPTEMBER 1997

Whilst the UK has been sweltering in temperatures of 80° plus, the pace has been hotting up for PLASA 97.

Throughout the 43 pages of industry news in this major issue of L+SI you will find details of the highlights you can look forward to at this year's record-breaking show. This is just a taster of the many new products and initiatives being launched at the show. You can also find details of the free seminar programme on page 107.

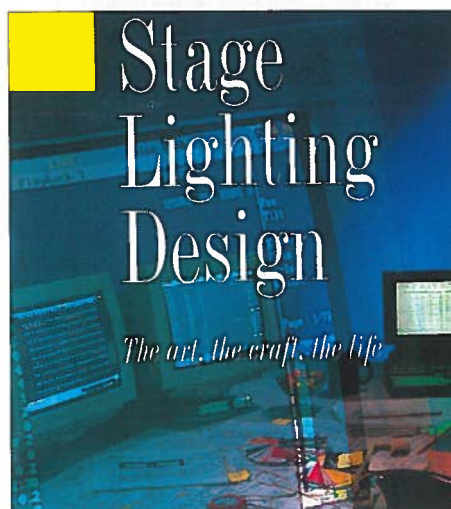
Once again, our team of writers will be on the show floor at Earls Court to bring you the most comprehensive report on the PLASA Show and you can catch up on all you missed in our October issue.

For the first time ever, the entrance to Earls Court will be given a completely new look for the show. Scenic furnishing specialist Blackout will be adding a theatrical flavour to the area by dressing the entrance columns in starcloths and creating a series of fake proscenium arches draped in red velour.

Look out also for the new A4 format show catalogue, redesigned to offer more information to the visitor and available FREE to all those who come through the doors. We look forward to welcoming you to Earls Court.

• PLASA - F1

Richard Pilbrow Book Signing



Lighting designer Richard Pilbrow, founder of Theatre Projects Consultants, will be signing copies of his new book, *Stage Lighting Design - the Art, the Craft, the Life*, on the PLASA stand during the show.

This is a new substantially rewritten, considerably extended and updated version of *Stage Lighting*, the book that first appeared in 1970: "Hopefully the reader will find so much new 'stuff' that he or she won't mind the old chestnuts that remain," explains Pilbrow. "The world changes at ever greater rate, but some things do stay the same. Sex, politics and the behaviour of light seem to possess certain immutable principles that bear repetition for another generation."

Pilbrow will be on the PLASA stand to sign copies of the book following his seminar on his lighting of the Broadway musical *The Life*, which begins at midday on Tuesday 9th. Copies are available on the PLASA (F1) stand at £29.99.

Opinion Pieces

There have been a couple of newsworthy comments in the media of late, both directly relevant to the entertainment industry. The first came from Roger Barrett, a leading member of the Production Services Association (PSA), who stuck his head over the parapet and spoke out against Leeds City Council and their inconsistent safety policy with regard to promoting their own shows.

Speaking on BBC television and radio news on Monday 11th August, Barrett took the Council to task for not heeding previous warnings over the use of certain towers for PA delays, which were not recommended for use outdoors in windy conditions, "... a fact drawn to their attention several weeks prior to the catastrophe," said Barrett, referring to the accident that occurred during the Council's self-run and promoted event in late July, in which a 14 year old girl was seriously injured when said tower fell over (see news, L+SI August).

Meanwhile, the Evening Standard's Brian Sewell had this to say in a recent edition of the newspaper on the newly named Department for Culture, Media and Sport: "It is madness to expect a single Department to deal with all this chalk and cheese, and inevitably it is the arts that suffer. The Department will immediately point to its success in pop music, trash films and anything else that it can redefine as a creative industry ... but woe betide us if Mr Smith fails to recognise what culture really is."

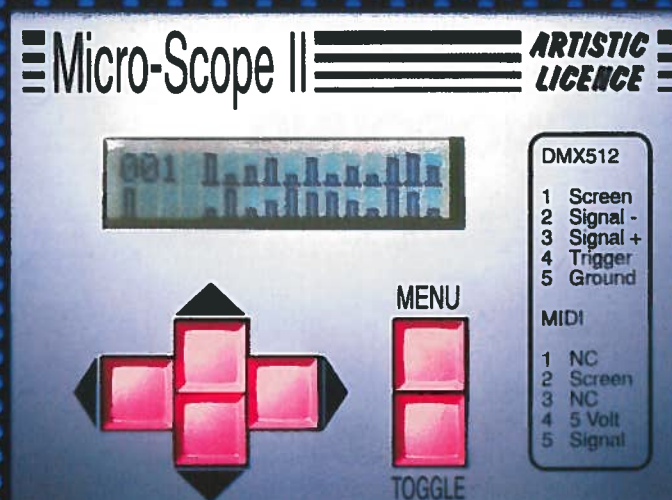
Despite the plummy overtones, Sewell does have a point. With the cross-over of technique, equipment and personnel now so well established, there is some virtue in the service side of the industry supporting Sewell's cause for an approach that does not neglect the less popular art forms. Accessible or not, they do stimulate practitioners and equipment manufacturers to do and learn new things. We'd all be the poorer without these experiences.

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Nautical Ambience On Board The Queen Mary



Chrysalis Retail Entertainment (CRE) has helped bring London's most unusual floating conference and party venue, The Queen Mary, to life with the installation of a comprehensive entertainment system. As part of a £3m refurbishment of the ship by Bass, CRE has installed a range of bespoke audio equipment with a nautical feel throughout the five spacious areas on board what has to be the most stylish floating venue on the Thames.

In the disco area, CRE has installed a nightclub system, which includes a DJ booth with Technics turntables, Denon CD players and a DJ mixer. An array of disco lighting has also been installed with a smoke machine to create a nightclub atmosphere. A Denon music management system has been used to enable the nightclub area to be used without the need for a DJ. The system can store up to 200 CDs and can be programmed to mix tracks picked by artist, title or music genre in order to provide seamless music. A sound to light driven light show creates ambient movement

effects and to prevent reverberations throughout the ship, directional speakers have been installed. The two large conference, function and dining room areas are brought to life with a fully integrated sound and lighting system adaptable for any occasion. This includes a stand-alone BGM system with a Denon multiplay CD, microphone and DJ point and Pinpoint and Equinox lighting.

To ensure that all the speakers blend unobtrusively into the ship's new interior design, CRE has sourced a range of bespoke speakers. These include speakers which have been specially brass-plated to complement the wooden finish of the traditional bar area and waterproof nautical speakers designed for use on merchant ships which have been used for the open-air bars and BBQ area on deck.

The music systems, PA and fire alarm system is linked throughout the whole ship and is controllable from a central point and can be zoned to any combination of areas.

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PLASA
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7-10 SEPTEMBER 1997

Academy Audio



The Samuel Goldwyn Theatre is something of a unique venue. It is here that all the Academy's screenings of films nominated for Academy Awards take place, making it the benchmark site for cinema technology. The theatre has recently undergone a major upgrade to its sound system, as Academy committee chairman, David Gray, vice-president of Dolby Labs outlines: "Our goal was to lower the distortion and increase the resolution in the Samuel Goldwyn Theatre, achieving better pattern coverage from the speaker system."

The Academy team tackled the project in two principal stages, initially upgrading the Goldwyn's subwoofer system whilst continuing to run the existing two-way screen channel set-up. The headroom problem was manifesting itself on a routine basis, particularly with some of the larger effects films, and this had to be addressed first. JBL 4675Bs were selected for the purpose, and the Committee conducted a wide-ranging evaluation of power amplifiers for operation with these. As a result, eight channels of CyberLogic NC-812s were chosen.

The second stage involved the main screen channel system, with David Gray working in conjunction with JBL's John Eargle and Mark Mayfield. The same trio had developed a three-way prototype system for Dolby's own Larry Umlang presentation theatre, which formed the basis for the Samuel Goldwyn project. The challenge was to translate a system designed for a 25-seat theatre into one which could cope with a much larger auditorium. The only element to be taken from the original prototype three-way system was the mid-range horn, with the team concentrating their efforts on designing a new four-woofer sub bass cabinet and finding a suitable high frequency horn to provide the extensive coverage required.

Overcoming problems with horn acoustic slopes by using multiple crossover points, as well as testing a vast range of different horns, drivers and diaphragms, the finished result produced what is now marketed by JBL as the 5674 three-way system. The final configuration comprises five systems for left, left extra, centre, right extra and right.

As with the subwoofer system, the power amplifiers were the final link in the chain. Using the previous multiple stage testing and listening process to find the optimum solution, and the left extra and right extra speakers as test beds, the process involved sweep testing to check that the amplifiers were performing according to their quoted specifications, followed by semi-destruction tests. The final stage involved listening tests to identify the degree (if any) of colouration which the amplifiers were introducing, using the Academy's original units as the benchmark. A consensus opinion was reached after a wide-ranging evaluation, and the CyberLogic NC-812s were again chosen.

Future plans for the Goldwyn Theatre upgrade involve the booth monitoring and surround system, with the team close to completing a new three-way summing device - this will take all the outputs of the NC-812s, mixing them and dropping them down to line level, before taking them back to the booth. On completion of this project, the Academy has targeted its Little Theatre facility for a similar three-way system installation.

PLASA

LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

The latest product from Light Processor combines a DMX merge and a 0-10v to DMX multiplexer. Once multiplexed, the 24 channels of DMX data can be merged with either or both of the two DMX inputs.

The QMerge combines the two DMX lines and produces a master DMX output signal based on the Highest Takes Precedence (HTP) rule, or according to offsets programmed by the user with a view to avoiding channel overlaps.

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- **Light Processor - E8**

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- **Denon - H42**

Taking centre stage at this year's show will be SoundLAB's brand new desktop Professional CD player - the CDJ700 which incorporates many new features. Key amongst these is a large jog wheel, to speed up or slow down the CD, which gives the feeling of using vinyl. Also making their debut will be two new twin CD Players - the CDJ500 and the CDJ600.

- **SoundLAB - J40**

Special effects company CITC is presenting four new products this year: Florescent Snow, the DigiFogger II water-based haze machine, the new oil-based SpaceHazer and a stronger Hurricane II fan. Also new is a 'fine and medium' line of the award-winning SnoBiz biodegradable 3D snow. CITC are now looking for dealers outside the US.

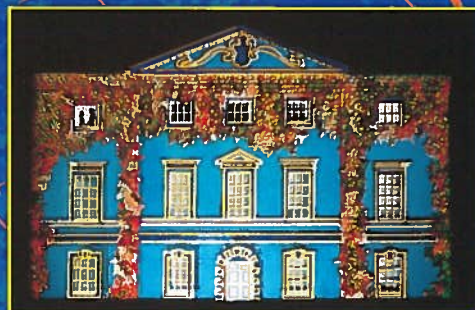
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PLASA

LIVE AT EARLS COURT

7-10 SEPTEMBER 1997

AC will launch no less than 10 new products at this year's PLASA. In a year that has seen AC produce many new products such as the Chroma-Q colour changer, there is no let up in the process. The Vision Parshell will have its first UK showing at PLASA. This is a new product, brought about through the increasing safety regulations, which enables users to upgrade their standard Par cans so that they become far safer to install and work with.

The Chroma-Q Broadway is a smaller 5" version of the Chroma-Q colour changer enabling it to fit directly onto many standard theatrical lanterns.

Jands Electronics from Australia will also be making a European launch with their new 72-channel touring DMX dimmer rack system. This new design takes a fresh look at the need of a touring dimmer system on the road, and has plenty of new features installed accordingly.

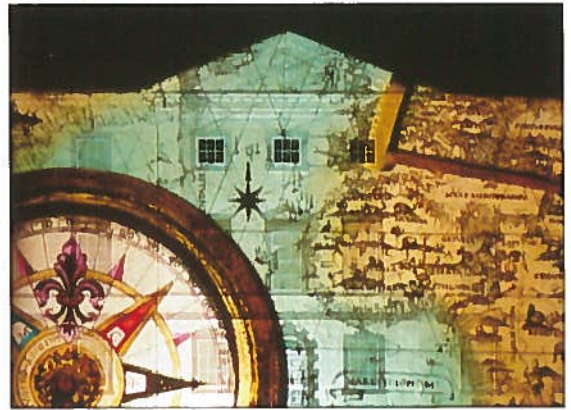
• AC Lighting - G20

The new Cloud 44/50 is a fully integrated, multi-source four zone mono mixer with four 50W power amplifiers, in a single, compact (2U) package.

Its unique design offers a one box solution for licensed venues seeking to provide both music play and announcement facilities, for retail premises split into different operating areas and for small hotels and leisure venues.

• Cloud - G11

Classic Projection



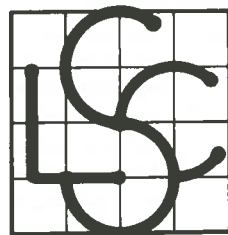
Being somewhat deprived of warm balmy evenings most of the year round, the UK tends to go mad at the first sign of summer. Off come the fleecy tracksuits and on go the sarongs, sun-hats and Factor 10. Whilst most are content to scorch burgers on the barbie in the back garden, there exists a small army of devoted music fans who dust down their hampers, fill them with every delicacy they possess and head off to the nearest English Heritage property to enjoy an evening of classical music.

Thus it was that two of the L+SI team found themselves at Marble Hill House, near Twickenham, London, on a very hot summer's evening to witness the English Heritage-promoted 1812 Fireworks Spectacular. Whilst the English Sinfonia gave it their all on the main stage, projection company ETC were providing visual drama on the facade of Marble Hill House with a demonstration of their PIGI high power projection system - in this instance a pair of 5kW double scrolling projectors, each fitted with a 60cm lens. The images were stunning and ranged from Italian travel posters of the 1950s, through a wonderful sequence of stars and planets moving behind an image of the Coliseum to a frieze of musicians silhouetted in the windows of the house, which actually drew a round of applause from the audience.

The climax of the evening was the 1812 Overture and whilst one eye was fixed on the fireworks cascading into the night sky, the other was turned to the house, where, right on cue, the face of Tchaikovsky made an appearance before slowly fading into that of Napoleon, a prelude to the battle scenes that followed with Russian and French soldiers, abstracts from battles and ghostly troops all entering the fray, to be triumphantly rounded off with a dazzling display of colours.

Quite where Ross Ashton of ETC (who ran the show from a small bunker built by Serious Stages with power provided by Phantom Power) gets all his images is a mystery, but they are rather strange and wonderful and they do complement events on the stage very well and, if truth be known, more eyes were on the projection than on the English Sinfonia.

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PLASA

LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

Vari-Lite Europe, Theatre Projects, CPL and Brilliant Stages will once again combine forces at PLASA. All have had a busy and varied year and visitors will see videos of the latest and best work from the last few months, as well as equipment from Vari-Lite including the first PLASA outing for the VL5Arc wash luminaire.

Theatre Projects are celebrating their 40 Anniversary this year and to mark this special event tea and cucumber sandwiches will be served on stand every day at 4.00pm.

Visitors can also get a copy of the recently published book of Lewis Lee's concert photography entitled 'A Different Light'. The book is a memorial to Kirby Wyatt and proceeds will be donated to AIDS charities.

• Vari-Lite, Theatre Projects, CPL and Brilliant Stages - F20

Martin Professional India

Danish lighting giant Martin Professional A/S, has further strengthened its grip on the burgeoning Far Eastern region with the opening of Martin Professional India. The new joint venture company sees Martin taking a majority shareholding with its former Indian distributor, Esco Audio Visual.

The two companies already cooperate with great success in Singapore via Martin Singapore PTE. Now Martin are intending to develop the highly lucrative and largely underdeveloped Indian market.

The company are looking to achieve a first year turnover for the Indian subsidiary in the region of £1.5 million, but expect that the ultimate turnover will reach £40 million. "The potential applications for Martin lighting equipment in India are immense, and often very specialist," confirmed Martin MD Peter Johansen. "India has the largest and most productive film industry in the World, the so-called 'Bollywood'. Its requirement for modern, high technology lighting is almost limitless," he continued.

Martin has worked hard for two years to finalise this vital distribution deal, taking into account the many complexities of the Indian marketplace. All Martin India staff have been intensively trained to support Martin equipment, and, of course, Martin customers in India. In charge of the rapid establishment of Martin India is George Baekelmans, who was formerly head of sales at Martin's Belgian distributor EVDV.

Martin Professional has also just entered into a cooperative agreement with Matsushita Electric Works Ltd of Japan which allows Matsushita to market and sell Martin equipment into new areas of the lucrative Japanese marketplace.



Seen at Martin's Aarhus base after finalising the Martin Professional India deal are, left to right: Lars Dige, Martin Pro financial director, Ashok Vohra owner of Esco Audio Visual Ltd, George Baekelmans, managing director of Martin Professional India and Karl Kristian Bro, Martin Pro sales director.



Pictured after signing the Matsushita deal on Peter Johansen's yacht are (left to right): Jens Helmer (Martin), Ken K Ohmori (Matsushita), Peter Johansen, Karl Kristian Bro (Martin), Poul Schluter (Martin), Lars Dige (Martin), Waverley Cameron and Kiyohiro Ogata, both from Matsushita.

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QUALITY

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PEOPLE

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CUSTOMERS

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EAW at Eiffel Tower



Eastern Acoustic Works (EAW) loudspeakers were recently installed with a new high-end sound reinforcement system in the main hall at the Eiffel Tower in Paris. The room, which can hold up to 500 people, is situated on the first floor of the tower and is used to host a wide variety of events, including fashion shows, conferences and private parties. Bruno Ghidionesco, sales and marketing director of Origin V, EAW's exclusive distributor for France, worked closely with the Eiffel Tower technical staff in formulating the system design. He recommended two EAW LA325 loudspeakers to serve as a portable front-of-house system, combined with two EAW LA118 subwoofers.

The mobile LA325 and LA118 combinations are generally positioned to the left and right of the front stage in the main hall, but can be moved around to match the desired configuration of the room. In addition, six EAW FL 103 loudspeakers are flown along the side walls of the main hall, three per side. They can be time-delayed in reference to the front-of-house system, or can act as a stand-alone main system when needed.

Battle Orders!

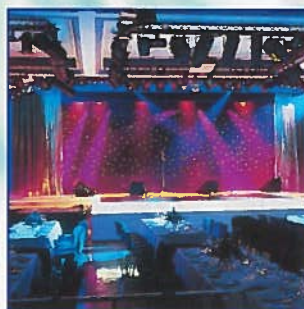
Eastbourne-based company Sam Woodward Pyrotechnics and Fireworks, who produce the FXM range of digital pyrotechnic firing systems, were awarded the contract for the control equipment at the four fireworks displays in Jersey's Battle Of The Flowers festival in August by PyroMac Fireworks Ltd, who are based on the island. The displays featured a world record-breaking simultaneous launch of 40,000 rockets, and the synchronised firing of 60 giant confetti cannons spread over a front nearly a mile long.

Pulling Power

Theatre Vision's production department have recently finished a two-week stint at the UK's newest and most modern power station - Powergen's Connah's Quay Power Station, near Chester. Powergen contacted Theatre Vision just 10 days before the official VIP launch of the multi-million pound site to provide effect and ambient lighting in one of the the four massive gas and steam turbine halls. Tim Routledge, project manager and lighting designer for the event, originally supplied 150 lanterns (a mix of floor Pars, Fresnels, four-cell groundrows and MBI discharge floods), but this was quickly doubled by the client after just one day on site as Powergen requested that the original rig be mirrored in another of the turbine halls. The brief stipulated that no lanterns should actually be visible, so Routledge and his crew set about the task of providing a spectacular lightshow, whilst ensuring that all lighting, cabling and sockets were hidden away.

As one might expect from a venue with busbars the size of small cars, power was not a problem. However, as it was required in the roof of the building, a few poor souls were forced to climb stairs 60m high to pull two runs of 63A three-phase cable to the top of the boiler house - not a pleasant job, especially as the ambient temperature in the roof was 98 degrees! The installation was completed on time for the Press Day in late June, but due to a sprinkler problem in the new complex the day before the Public Open Day, the Theatre Vision team were called back overnight to replace a sizeable portion of water damaged equipment.

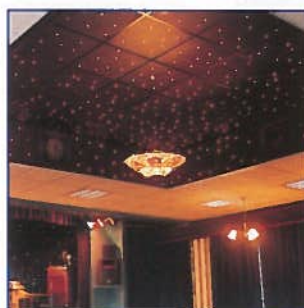
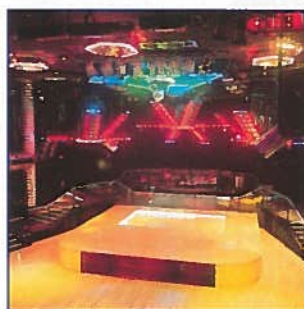
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Electrosonic Engineer Visual Display For Heliride



An exciting 'helicopter ride' has been installed as a main feature of the Commonwealth Institute's new redevelopment programme.

Heliride presents a ride over Malaysia, culminating in a spectacular 'fly through' the twin Petronas Towers, the world's highest building. Sponsored by Genting Highlands Resort, Malaysian Airlines, Kodak and Tourism Malaysia, the Heliride takes 18 passengers at a time and creates a stunning simulation of helicopter flying with spectacular visual content.

Project director Dr. John Stevenson was determined to create a high-quality attraction that was both fun and educational. The film was made by award-winning producers Helifilms Ltd, while the smooth motion base and its control system were designed and built by McFadden of California. The show format and projection layout were specified by Electrosonic. The projected image is shown on a large compound curved screen, measuring 14m wide by 5m high, which enables it to be viewed whatever the visitor's position on the ride platform.

In order to achieve a balance between system and production cost, and the required image quality, 35mm eight-perforation film format (with

film travelling sideways through the projector) was chosen. This format gives almost the same projected area as a 70mm film, but with appreciable lower print cost (the ceiling height also precluded the use of conventional 70mm). The film runs at 30 frames per second and the projector is sited above the audience with the lens at a point well forward of the rear of the motion base. This allows the screen to go down to the floor - well below the level of the motion base - and ensures a realistic 'tilt forward' helicopter ride without the audience being aware of the bottom line of the screen. The special optics, based on a proprietary wide-angle projection lens, were developed for Electrosonic by Hughes Leitz.

The Electrosonic engineered projection and sound system works as a fully-automatic sub-system to the McFadden simulator control. The projector mechanism is from Westrex, now a subsidiary of Christie Corporation, who specialise in automatic special purpose projectors. The film handling is via an Electrosonic-specified endless-loop cabinet built by Triese Inc, whilst the high-power four-channel sound system is sourced by an entirely solid state sound replay system, based on Electrosonic ESTA products.

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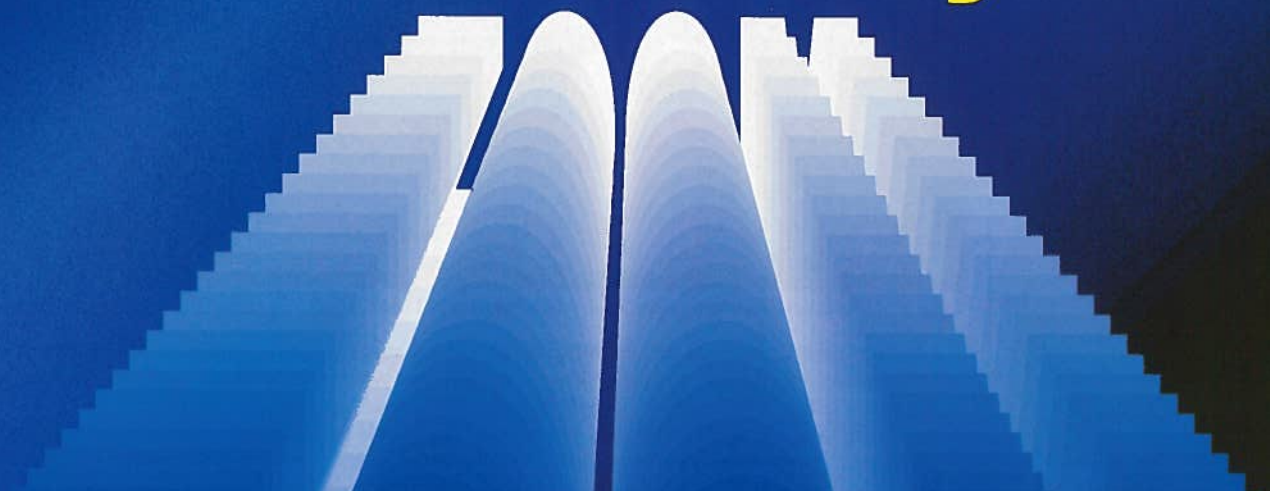
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PLASA

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7-10 SEPTEMBER 1997

MAD Lighting will be displaying their full range of products across two stands. The first, in the no-sound area, will feature intelligent lighting fixtures aimed specifically at the retail, architectural and themed design markets, as well as effects for the discotheque and bar sector. One of the highlights will be a sneak preview of MAD's new scanner, available later this year.

June 1st saw the launch of the DJ series from Mad and their second stand is dedicated to the mobile DJ and his lighting needs.

- Mad Lighting - E11/A12

Elektralite, a division of Group One Ltd, will be launching the new CP-5P reprogrammed controller. This is a pre-programmed controller with shows ready to run for selected fixture types. A total of 16 fixtures can be controlled.

- Elektralite - EP46

Dance Xchange Lighting Design Course



Tutor Rui Horta (centre right) with Paul Swansborough of ADB (centre left) and the course students.

The Dance Xchange, Birmingham's National Dance Agency, recently held a week-long lighting design course for choreographers, dancers and designers. The course was held within the Dance Xchange's Studio Theatre, and led by Rui Horta, artistic director and lighting designer of Germany's S.O.A.P. Dance Theatre.

The course looked at lighting design as a conceptual tool and key composition element for choreographers. The use of alternative light sources and instruments were also investigated, such as overhead projectors, fluorescent tubes, mirrors, water and even ice, as used in Rui Horta's latest work, *Khora*, which the participants were taken to see at the Crucible Theatre in Sheffield as part of the course. The course was supported by ADB UK who provided luminaires and technical support from their regional agent Paul Swansborough. The week ended with the participants performing various pieces of work that they had developed during the course in the Studio Theatre. Anyone interested in future courses should contact the Dance Xchange, Birmingham on 0121-622 3253.

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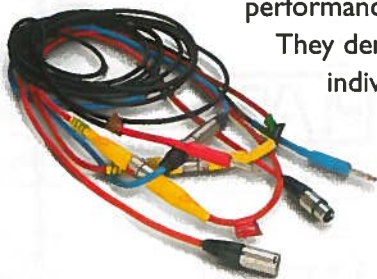
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PLASA

LIVE AT EARLS COURT
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ETC Europe is releasing three new products - the Obsession II, the CE Source Four Jr and CE Source Four Jr Zoom. The Obsession II has been developed to combine control of both moving lights and traditional theatre fixtures in a console which offers more power and speed of operation.

The CE Source Four Jr comes in three fixed beam angle ellipsoidals and new Zoom! At 575W, it is a little powerhouse with bright, efficient optics, better imaging and beam quality. ETC Europe will also be showing its existing range of lighting and control equipment, including CE Sensor dimming, the Express family of consoles and the CE Source Four Ellipsoidal and fixtures.

• ETC - H8/H9

Gemini Sound will introduce the NX Wireless VHF Systems - NX-201 single channel, NX-210 True Diversity and NX-220 Dual Channel. Receivers feature distortion-free circuitry, RF and AF signal indicators, adjustable output level switch, plus a 150 feet range for the 201 and 220, and a 300 feet range for the 210 model.

Another show debut is the company's newest professional dual CD player - the CD-9800. Featuring dual access keypads for each transport, the CD-9800 offers direct access to any track. Gemini will also unveil its new rack mounting 10 Platinum Series mixer, the PS-626 Pro. Utilising a -26dB cut feature for the bass, mid and high end of each channel, users can create unusual special effects.

• Gemini - D40

New Lighting Website To Strengthen Links

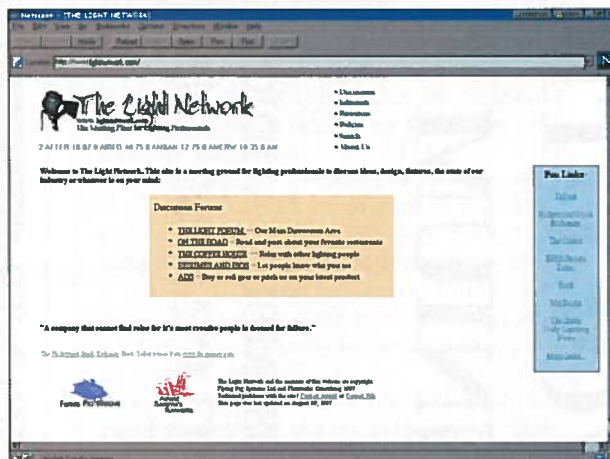
A new website, the Light Network, has been established to make the exchange of ideas and the discussion of issues and products quick and easy for lighting professionals around the world according to its developers Arnold Serame of start-up web firm Fluxworks and Nils Thorjussen of Flying Pig Systems.

The site, which can be accessed at www.lightnetwork.com, provides an impartial and easily accessible forum for professionals across all lighting fields - concert, theatre, theme park, film, television, architectural, industrial and all other specialities - as well as students. The Light Network is open to everyone, whether manufacturers, sales and rental companies or end users. Nils Thorjussen told L+SI: "Along with many other people in the industry, we thought that an information exchange would be enormously beneficial. It could help lighting professionals to identify the best products for their needs and help manufacturers gain quick, accurate product feedback. It could also help further innovation in the industry by providing a nurturing environment for creative brainstorming."

Existing industry meeting points, such as LDI and the PLASA Show, are few and far-between and those attending often have busy schedules, according to Arnold Serame: "The lighting industry is distinct in that its greatest practitioners have wildly varying schedules and are scattered around the world. The Light Network allows professionals and students to stay in touch with

the latest trends and get feedback from their peers.

"But meeting with other people on-line is just the start. We are now in the process of implementing our plans for on-line seminars to disseminate techniques and insights on the cutting edge of design and technology that only working lighting professionals could possibly share. Tied into our education initiative are on-line chat rooms, discussions with manufacturers, the latest internet technologies and, most of all, reader-created editorial. By providing a medium for our fellow lighting people to pool their experiences, this forum could give us all a shot at trying to figure out what technologies are best for our shows."



Largest Ever Lighting Project at Daytona

Musco Lighting has won the contract to provide what is believed to be the world's largest outdoor sports lighting project - at Daytona International Speedway motor racing stadium in Florida. The company will manufacture and install 2,025 lighting fixtures on 130 poles ranging from 60 to 140 feet (18 to 43 metres) in height, providing 3.6 billion candlepower - equivalent to the light from the high-beam headlights of 87,000 cars.

The project will require 150 miles of wire, 800 tons of concrete and 2,600 square feet of mirrors to properly light the famous 2.5 mile high-banked trioval track. The company is using its special Mirtran lighting system to provide a precisely-controlled, directional lighting system to

remove spill-over light from the off-track areas. Daytona has been home to the famous Daytona 500 (the Great America Race) and the Pepsi 400 race since 1959.

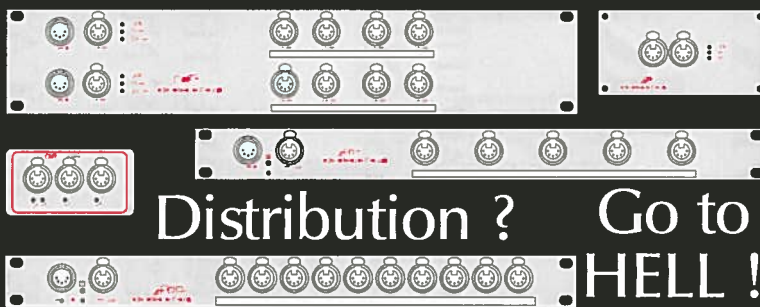
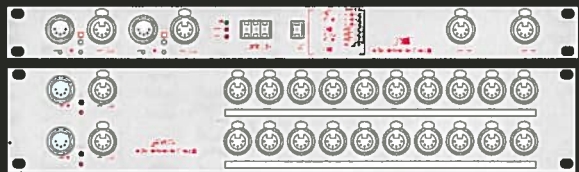
Seating is being increased to create almost 140,000 permanent grandstand seats by the time the new lights are turned on for the first time on July 4th, 1998, for the Nascar Winston Cup Pepsi 400 event.

Musco has provided lighting systems for many of America's most prestigious sporting venues. In the UK, the company has installed systems at Wolverhampton Racecourse and at

a number of leading football grounds around the country, and is set for expansion across continental Europe.

"2,025 lighting fixtures providing 3.6 billion candlepower - equivalent to the light from the high-beam headlights of 87,000 cars."

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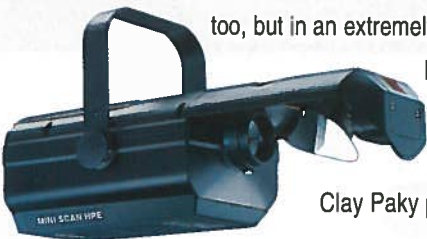
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PROFESSIONAL SHOW LIGHTING

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PLASA 97 sees the launch of the first commercial version of Virtuosity's AV lighting software. It allows the operator to work with luminaires by name or grouping, rather than by conventional DMX addresses. It also removes the snapshot position ties allowing the user to create flowing movements not possible on most scene-based lighting boards. The software supports the Artistic Licence DMX dongle providing 512 channel support, and third party control surfaces can be used providing flying fader support not found on most lighting boards. AV can be run from a lone notebook computer making it one of the most compact show controllers in the world.

• Virtuosity - R68

Glantre Engineering offers a worldwide service in the design, supply and installation of entertainment technology. With successfully completed projects in some 30 countries, the company is also the market leader in the specialist field of entertainment technology installations for cruise ships. They have just opened a dedicated Stage Engineering Design Office in Newmarket and will be demonstrating the Gala Spiralift, ideal for stage and orchestra pit lifts, on its stand.

• Glantre - F26

Martin Stamps its mark on Old Post Office



When Banks Brewery decided to convert the former Royal Mail sorting office in West Bromwich into a young people's venue, they called in Leamington Sight & Sound to write the sound and lighting specification. A substantial sound and lighting budget was allocated and the team from Leamington, led by Ian Potter, set about designing a system for the front-of-house café bar and the large dance area at the rear of the 450-capacity venue. Two distinct sound systems were required, both based around Martin Audio EM Series components. To also accommodate the open-plan style of the venue, zoning mixers were installed at both ends so that the sound sources can be routed across or operate independently. In the front bar Leamington have installed eight compact EM26s, matched with a pair of EM150 2 x 10" subs, sourced by DMX satellite music and multiplay CD. In the DJ-fed dance area, Leamington specified four stacks of the high-power EM186 and EM251 subs, with the top boxes biamped.

Live from Capital Café

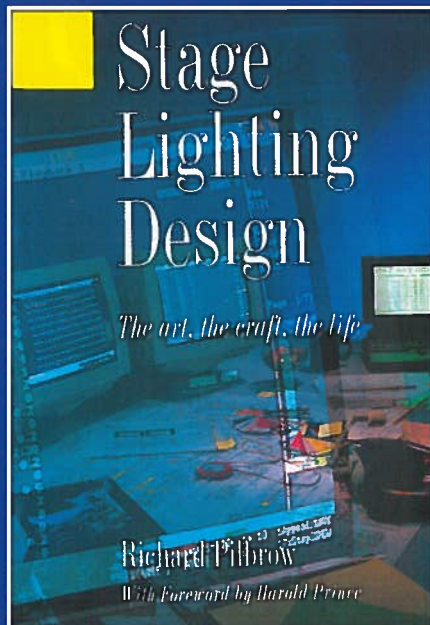
Specialist audio company John Henry Enterprises, supplying in-house sound equipment for the Live from the Capital Café TV programme, included Electro-Voice Sx200 cabinets both for the acoustic stage and around the Café. The additional speakers replaced the existing in-house system. Extra Sx200 cabinets discreetly placed around the venue linked into JHE's master audio control console solved the problems of feedback which had occurred as presenters circulated the Café. The main acoustic stage uses Sx200s, along with ND757 microphones for the likes of Sheryl Crow, Eternal, Connor Reeves and Shola Ama.



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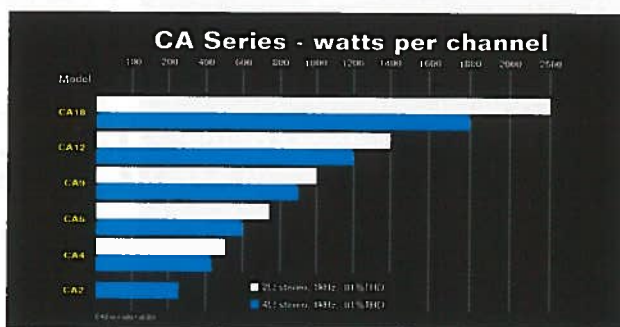
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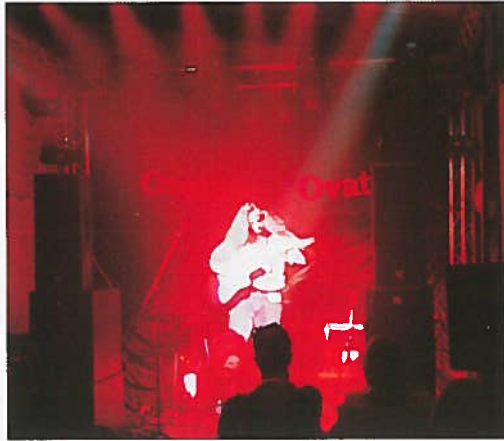
LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

PCM have dramatically increased their stand space following the company's most successful year to date. The stand will sport a hands-on theme featuring examples of the extensive Columbus McKinnon range of motors. The difference in hoist speeds will be demonstrated by six adjacently-rigged motors of varying speeds.

New at PLASA will be the Gis Speedy, a high speed, low noise hoise, specifically designed for theatre applications. In a bid to raise awareness of the internal workings of motors, a PCM hoist engineer will be continuously stripping down and reassembling a Lodestar throughout the show. The company puts much emphasis on safety and sells a complete range of fall arrest gear which will also be on show.

• PCM - E30

NJD at JHS



NJD recently supplied stage lighting and control to one of the largest independent live music events in the country. John Hornby Skewes, one of the UK's largest distributors of musical instruments and audio equipment, invited NJD to provide both stage lighting in their specially constructed demonstration theatre and a demonstration on the use of intelligent lighting for live music applications.

NJD kit included Chroma HX colour changers, Predator scanners, Datamoon effects and Xenon 25 strobes, controlled by a Merlin desk. Music shop dealers and distributors were flown in from all over the world to take part in the four-day event which included demonstrations of Ovation Guitars by Preston Reed from the USA, Harmon Kardon loudspeaker systems and helicopter and flight simulator rides.

UFOs in Beaconsfield

AFM Lighting Ltd and Vertigo Rigging have been involved in some galvanising and exacting tasks during a film shoot for one of the UK's highest profile pop bands (no prizes for guessing who), in Burnham Beeches, a woodland location near Beaconsfield.

For Vertigo, the project involved the flying of a circular, three tonne lighting rig, suspended at the centre, from a 62 tonne crane with a fly jib giving a 70ft reach at 120ft. The crane was supplied by Lee Lifting, specialists in this type of work in the film business.

The lighting rig was 10 metres in diameter and hung from a crucifix-shaped truss by four electric chain hoists to give it tilt and pitch movement. It contained 160 Par cans, six smoke machines, six large fans, and was required to pan back and forth over the tree tops in the dark - returning to exactly the same position - at an altitude of 100ft, emulating a flying saucer.

Vertigo also handled the complex task of cable management, which had to take into account movement of both the crane and the lighting rig. The cable trips for lighting, motors and control ended up over 400ft long! The rig slewed to and fro over the trees until the required shot was achieved. Vertigo then had to land it in a clearing just 10.4 metres wide and strip it down!

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Clubs Chill Out With Eskimo Noise



PA designers and installers Eskimo Noise have been kitting out London's top clubs with Klark Teknik and Electro-Voice gear supplied by The Pro Audio Group. The management at new Piccadilly club The Base (aka GC2 or Xenon), impressed by Eskimo systems they had heard at other venues, called the company in for technical advice. As orders go, this one was fairly tall, because the £75,000 system had to be installed within four days. A massive rig, consisting of 20 Electro-Voice powered Eskimo bass bins and 10 DeltaMax 1152s along with Sx200s for monitoring, was duly installed in time for the Friday night opening of 'Sweat'.

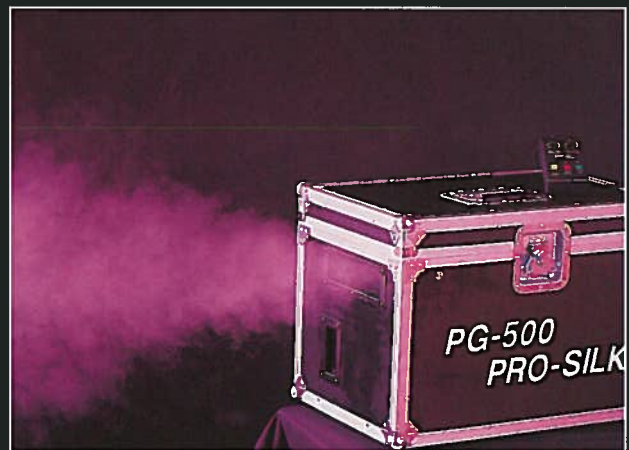
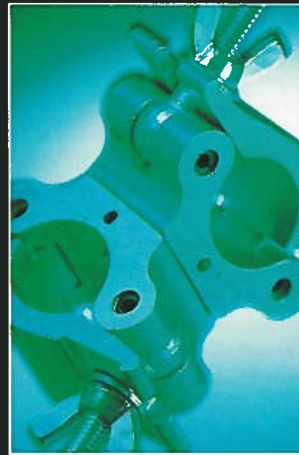
The Jazz Bistro/Smithfields was also recently fitted with an EV-based system which includes six DeltaMax 1152As, nine Sx200s, two Sx200 powered cabinets, 18EV loaded Eskimo bass speakers, four DeltaMax controllers and a Klark Teknik DN360 dual 30-band graphic EQ.

Prestige London venue Browns, a favourite haunt of celebrity clubbers, was fitted with a pair of KT DN3600 digitally controlled analogue programmable graphics for use in the main disco area, while The Bank Bar and Grill's new rig, with six Sx200s, was installed ready for its opening in late April.

Spiders on the Move!

Having successfully been approached by Stewart Grand Prix and Bridgestone to build flightcases, Spider Engineering, the heavy-duty flightcase manufacturer, need more space.

To cater for growing interest in their products, the company have moved into a 4000sq.ft unit to combine all operations under one roof and can now be found at Unit 6, Arians Lichfield Road Industrial Estate, Tamworth, Staffs, B79 7XF. Telephone: (01827) 60009.



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Earlier this year Triple E announced a joint distribution agreement naming Automatic Devices Company (ADC) of Pennsylvania as its exclusive distributor for North America, Canada and Mexico. Now, for the first time at PLASA, Triple E will be showing both their own and ADC's track products. Triple E has several new products including UniClamp, which will enable riggers to reposition luminaires, speakers or other fixtures on bars without lifting the fixture.

The new 180v dc Friction Drive unit, which has been designed to fit both Triple E's Unibeam and Gerriets Joker tracks, will be of great interest to effects companies and is being shown on the stand on a 2m radius circular track.

• Triple E - D14

Updated Edition of British Theatrical Patents at PLASA

The authors of British Theatrical Patents 1801-1900, Terence Rees and David Wilmore, have been working on an updated second edition, which will be launched at this year's PLASA show. They have also begun work on a book of 20th century theatrical patents, which includes a vast amount of information on software and intellectual property.

Meanwhile, shown here is a 50 year-old patent which relates to a self-contained stage setting, complete with machinery and scenery. Many more patents are being unearthed daily, covering everything from moving lights to lenses to sound effects, including that well-known effect, 'making an elephant turn a somersault'!

British Theatrical Patents 1801-1900 will be available at PLASA priced £17.95 and further information concerning the database of the twentieth century theatrical patents can be obtained by writing to: Theatresearch, The Lodge, Braisty Woods, Summerbridge, North Yorkshire, HG3 4DN, England.

644,003. Theatre Stages and Scenery. E Gilbert, L Sillman & E Barber. Feb 21st 1939

644,003. Theatre stages and scenery. GILBERT, E. SILLMAN, L., and BARBER, E. A. Feb 25, 1947, No. 5432. Convention date, Feb 21, 1939 [Class 132 (i)]

A stage setting, with which change of scenery and properties may be conducted expeditiously without the necessity of dropping the curtain, comprises a plurality of assemblages each comprising at least three scene sections, it being possible for each scene-section (a) to be brought to a position where it lies in the same plane as a scene section of another assemblage with the free edges of the two scene sections contiguous and (b) to be moved angularly away from the position mentioned in (a). In Figs 1-3, a stage setting is shown which provides for a succession of scenes each composed generally of a back wall, two side walls and a floor portion. The scene sections which are adapted to form successively the back wall and side walls of a number of scenes are arranged in two complementary assemblages of scene sections numbered 16 to 25 and 16' to 25' pivotally mounted near the centres of rotation of the rotatable platforms 12 and 13. These platforms are ring-shaped and are provided with castors whereby they ride on theatre stage 11. The platforms form part of the floor 10 of the stage setting and lie flush with the remainder of floor 10. The scene sections may consist of a suitable framework of wood, over both sides of which are secured layers of canvas upon which may be depicted any appropriate scene. The scene sections of each assemblage are each rigidly secured along one edge to a longitudinal upright support 26 and these supports are joined to each other by hinges 27, thus permitting the scene sections to be opened and closed similarly to the leaves of a book. Suitable handles 29 project from the back of the supports 26 to enable the operators to move the individual scene sections on the hinges without being seen by the audience. The scene sections are cut away in their lower portions as at 30 to form an opening in the centre of the back wall corresponding in extent to the width of the rotatable platforms 12 and 13 and of sufficient height to enable the selected

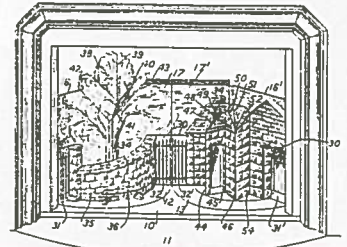


FIG. 2

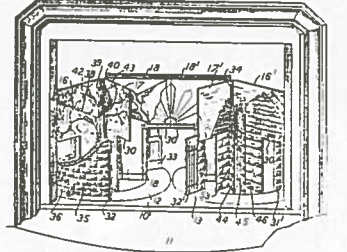
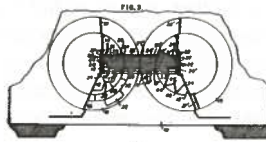


FIG. 3



properties or scene objects such as wall 35 and bench 36 on the platforms 12 and 13 to pass through. A series of closure members such as 31, 31', 32, 32', 33, 33' are mounted on the rotatable platforms, and if desired they may be pivotally mounted. Secured to the opposite faces of the adjacent scene sections are strips 34 of a suitable flexible material such as canvas to cover the open hinged joints to prevent the opening from being visible to the audience. Also secured to the opposite sides of adjacent scene sections are foldable scene elements composed of a plurality of flat members hinged together. In Fig. 1 a scene element, representing the extension of the foliage of a tree, is composed of four flat pieces hinged together along the lines 38, 39, 40 and 41 and hingedly attached to scene sections 16 and 17 along the lines 42 and 43. A scene element representing a projecting portion of a building is composed of eight flat pieces hinged together along the lines 44, 45, 46, 47, 48, 49, 50, 51 and 52 and hingedly attached to scene sections 16' and 17' along the lines 53 and 54.

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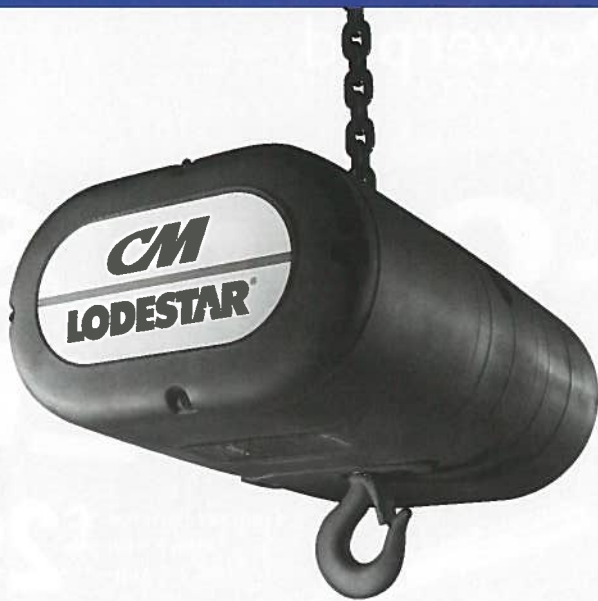
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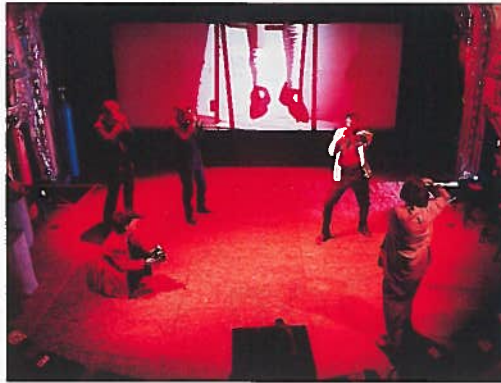
Digital Dimming at Welsh National Opera

After 18 months of negotiations, Stagetec (UK) has been awarded the contract to supply a complete new Compulite touring digital dimmer system with status reporting to the Welsh National Opera in Cardiff. The fully modular system will consist of three high specification racks each incorporating 48 channels of 2.5kW and 12 channels of 5kW plus no-dims, independents and a full Weiland patch panel.

As part of the contract, the existing Compulite Ovation console will be replaced with the latest Applause 4D console, complete with full tracking back-up system, Ethernet node and DMX Merger, plus a selection of Selecon and Strand luminaires.

Stagetec have also been awarded the contract to supply and install 96 channels of fully modular digital dimming with status reporting and an Applause 4D console with tracking back-up system at the Octagon Theatre in Bolton. The dimmers will consist of one rack of 96 channels of 2.5kW and will incorporate a three-phase current monitor system which enables the console to monitor the maximum amount of current being used. The desk can then be programmed to react in a variety of different ways if the available current is exceeded.

Sony Project at The Royal Court Theatre



A Sony VPL-W400QM projector featured recently in the experimental play *Attempt On Her Life* at the Royal Court Theatre. The play uses a striking combination of lighting, sound, projectors and television monitors with the Sony LCD projector used to project video images onto a screen at the back of the stage. "The Royal Court theatre is well known as the theatre for experimental writing," Maris Sharp of the Royal Court Theatre told L+SI: "By projecting video onto the stage using a Sony LCD projector we were able to add an extra, multi-media, dimension to the play."

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New products from M&M include two new Rainbow Colour Changers. The 6" Pro has been designed specifically for use with high performance 650W lanterns such as the ETC Source Four and Altman Shakespeare. The 12" Pro is a new colour changer, primarily intended for use on standard 2k theatre lanterns, incorporating the latest software for additional control, offering up to 25 colours. M&M is the sole UK distributor for ETC, who this year introduce the CE Source Four jr, CE Source Four jr Zoom and the Obsession 2 console for both moving light and traditional theatre fixture control. From The Smoke Factory come two new products - DATA and Enterprise TC3 - both state-of-the-art fog machines.

Also on the stand will be Selecon Lighting low voltage and metal halide luminaires.

• M&M - H10

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Natalie Cole's Stardust a Delicate Production

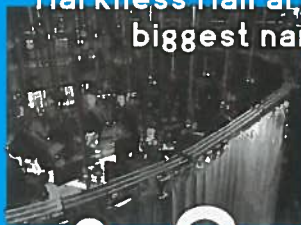


Camarillo, California-based Delicate Productions are supplying the lighting for Natalie Cole's on-going Stardust Tour. The rig includes eight High End Systems Cyberlights, 30 VL5s, four six-bars, four eight-bars 10 Lekos and a Barco projector. Lighting designer Jack Valencia, who has worked in the past for Luther Vandross, Sting, Cher and Diana Ross, says that although the rig seems limited, it allows him great flexibility - a major consideration in a tour that takes in venues ranging from theatres and arenas to crowded hotel ballrooms for occasional corporate performances.

A major focus of his design are the panels of chiffon drapes positioned on a V-truss that angles toward the back of the stage, on which he paints colours and patterns to set the tone with the automated lighting. The design derived from a special two-night show at the LA Greek in 1995, after which Natalie Cole decided to take it on the road. The touring design was trimmed to fit into two trucks and had to conform to the limited time restrictions for set-up. Valencia explains: "On tour we load in at 8am and have to be up and running in show mode by 12.30pm. Then we have four-hour rehearsals with the orchestra we contract in, so we don't have the luxury of time. We needed a system we could get up quickly and keep the look going."

The variation in size of venue that the tour would visit was also an important factor. With capacities ranging from 500 to 3,000 and a wide variety of stage formats, the system had to be able to maintain the look of the show in almost any circumstance. What remains basic to each design, however, is the way Valencia lights up the main performer. "I keep the followspots on her at all times and use the Lekos on the solo performers in the band. I use all the moving lights to illuminate the chiffons and the generics to backlight the orchestra. I'm more concerned with the general look of the show than with doing effects on the chiffon, and I'm not that concerned with lighting the orchestra."

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PLASA

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7-10 SEPTEMBER 1997

Sennheiser's double tiered stand, with over 110sq.m of exhibition space, will be the company's biggest ever presence at PLASA, devoted to its range of microphones.

New product includes System 1081/1083 VHF, a frequency switchable, VHF radio mic system; SKM 3072, a mid-range, handheld transmitter to partner the company's latest system 3000 single and dual channel receiver systems and System 3050, a channel switchable, in-ear radio monitor system.

D.A.S. Audio will also be represented, including the new DS-15 addition to the Dynamic Series, the world's first 15" equipped moulded cabinet. Also being shown is a new range of high quality PA cabs - the Pf Series aimed at the club, install and MI markets.

• Sennheiser - F30

US Army Go Technomad



The US Army have recently acquired a number of portable sound systems featuring Technomad Berlin 15/H loudspeakers powered by QSC PowerLight 2.0HV power amps. The extremely rugged speaker cabinets are themselves based on US Army roadcase technology, meeting Military Specification/ATA III standards, while also incorporating powerful and accurate sound reproduction.

VL Europe Gains ISO 9002

Vari-Lite Europe have recently achieved the BS EN ISO 9002 quality management standard 'without hesitation' from the national Quality Assurance assessment team.

The award is the successful culmination of a two-year project that looked at all areas of the company led by project leader and general manager of Vari-Lite, David March. Vari-Lite will formally receive their certificate on their stand F20 at the PLASA show on September 9th.

Unusual Launch for Dawn Princess

Unusual Services Limited has helped to get the launch celebrations underway for the inaugural cruise of the 77,000 ton Dawn Princess, the newest addition to P&O's luxury fleet.

Unusual built a stage over the swimming pool on the Riviera deck and also provided the ground support system for the lighting and sound. The Dawn Princess is the latest in a \$1.6bn dollar series of new building; the fleet now consists of 14 ships with four ships on order, including the 109,000 ton Grand Princess due to be delivered next year. The Dawn Princess's maiden voyage through the Panama canal precedes a season of Alaskan cruises. In October the ship will return through the canal for a programme of winter Caribbean Sea sailings.

Donald McLean

Lighting Unlimited South Africa, part of the Gearhouse group of companies, has reported the death of one of their crew members, Donald McLean, who fell from the balcony of his sixth-storey hotel room at the Cascades Hotel in Sun City. The tragedy occurred while he was jokingly trying to enter the adjacent room of a colleague, via the window.

Gearhouse have opened a trust account for McLean's nine-year-old daughter, to which donations can be made. For further information, contact Richard Mulholland at Gearhouse South Africa, telephone +27 (11) 624 2904.

Communicate 8



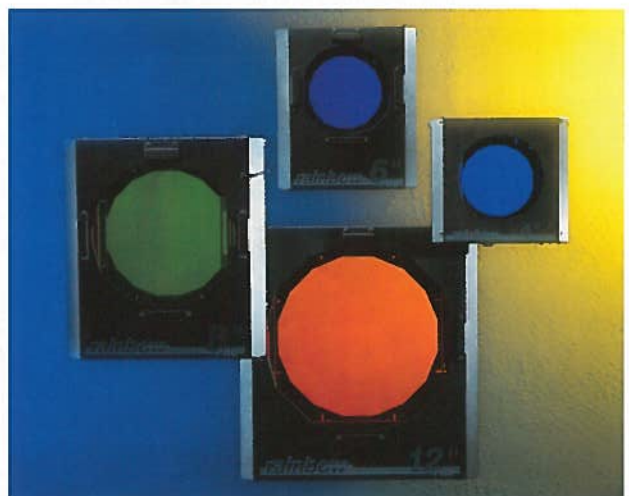
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PLASA

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7-10 SEPTEMBER 1997

Showing for the first time in the UK at PLASA 97, TiMax from Out Board is a new audio matrix system that allows control of level and time delay at every matrix point. It is aimed at sound reproduction in theatre and auditoria with multiple speakers, as a solution to the conflicting requirements of delivering an even sound pressure level across the listening area, as well as producing directional information about the source of a sound. Out Board will also be showing other audio control products such as the Octopus and QP4 Quad Panner. Products on show from the company's power division are the VCM6 hoist controller and the MPD modular power distribution system.

• Out Board - T14

300 Series for National



The Royal National Theatre has taken delivery of 30 channels of Sennheiser EM3032 UHF radio microphone systems to fully equip its three theatres and touring requirements.

The order, for 15 EM 3032-U dual-channel frequency switchable diversity receivers and 30 SK 50 belt-pack transmitters, is configured to operate across the widest number of available frequencies to allow the maximum flexibility in deploying the system throughout the arts complex. Normally there will be 10 systems installed in the Olivier Theatre and eight in the Lyttelton Theatre, with the others floating between the theatres and touring requirements. The 1U rack-format and 32-channel frequency switchability of the receivers makes moving systems around a straightforward operation.

Edge & Company Move into London

Major Canadian scenic company Edge & Company Inc are to establish a base in London. They have negotiated a trading partnership with Terry Murphy Scenery Ltd and are set to commence operations from Terry Murphy's premises in Peckham on the 8th of September. Edge & Company Inc have utilised the services of Boardwalk Production Management Ltd in setting up their UK operation and are confident that they can now offer a high level of performance-based engineering to potential clients across Europe.

The new company will stock and supply the automation system developed by Edge & Company at their base in Oakville, Ontario (near Toronto) which has been used on Broadway, and in many locations worldwide including the West End and on German productions of *Tommy*.

The company can be contacted at Edge & Company (UK) Limited Western Wharf, Livesey Place, Peckham Park Road, London SE15 6SL. Telephone 0171-635 9880.

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The Supertruss range has been extended. This new truss supersedes the old GP Folding truss. This truss combines the most compact dimensions for storage with a typical loading capacity of 2000 kg's uniformly distributed on a 12 metre span.

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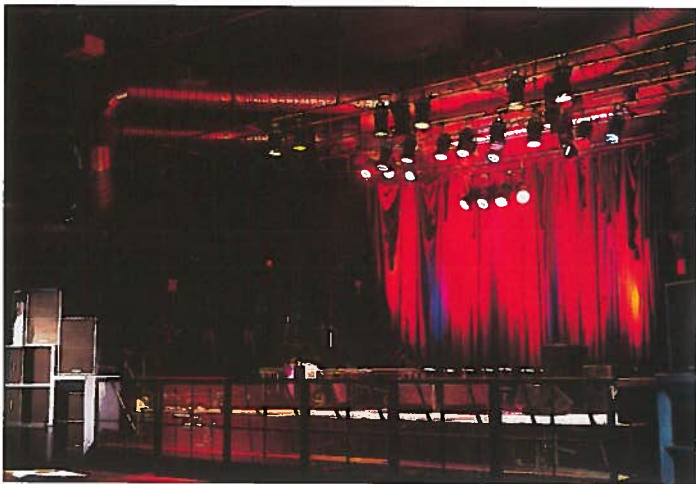
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Floodlight Up the Junction



The Junction in Cambridge is one of the country's most notable venues, promoting a vast programme of events ranging across rock, contemporary dance, pure theatre, comedy, dance nights and live art.

The 850-capacity club is also unique in being a non-profit making registered charity. When their application for a six-figure National Lottery improvement grant proved successful, their requirements for a sound system were very specific. It had to be able to serve the multi-purpose nature of the venue by accurately reinforcing every type of entertainment event.

The first phase of the installation, which centred around a Turbosound Floodlight system, was carried out by AudioLease (now called Electrotec) who will shortly be returning to install a monitor system and effects rack.

A European Perspective: The Pool

Theatre critic Kenneth Tynan once offered the following description of the Common Market: "I do not see the EEC as a great love affair. It is more like nine middle-aged couples with failing marriages meeting at a Brussels hotel for a group grope."

Today, however, with 15 members, the Market is well established. Some of the bureaucracies inherent in the Market system can seem overwhelming, while others, quite frankly, are farcical. But while big corporations agonise over implementation of the Social Chapter, smaller companies, being more dynamic and responsive by the very nature of their size, take full advantage of the new opportunities this presents. Nowhere more so than with some of the entertainment service companies on the mainland. One such company is Westfalen Sound, a company with a bedrock of clients across a wide spectrum, supplying sound equipment to conference, TV and domestic and international concert touring. In 1991 it became a founder member of the Pool, an association of companies all operating in the same markets, or providing service and support to those markets. Currently there are 11 members including The Light Concept GmbH and Trend Event, an engineering consultancy specialising in analysis, planning and construction for events.

The Pool also supports video, audio and lighting engineering, trucking, production management and also less core enterprises like cable make-up and flight-case building. All the companies operate out of a modern industrial park in Emsdetten just north of Dortmund, sharing all the infrastructure and assets of a large organisation. A small one-man operation, such as the cable-making side, can take advantage of the accounting and secretarial services. This means they have more time to devote to growing their core business, rather than expending time and energy on administration.

But it's not just the infrastructure that is perceived as a benefit. The Emsdetten base is home to almost 160 employees from the various Pool companies. They all share the more mundane aspects of the business, such as canteen and toilet facilities. But it is the invisible asset of this arrangement that most excites Cordier. "Whatever the problem, you are surrounded by a pool of talent and experience that can help solve it."

Such conglomerates did appear in the UK back in the seventies: ML Executives, Britannia Row, and Highlife, all went down the multi-disciplinary route, and all gave it up as a bad job. If a big organisation like GEC can seriously propose to re-organise Airbus Industries into a global playing super-company combining the national civil and military aviation industries of France, Germany and Spain into one integrated organisation, then maybe it's time some UK entertainment companies took a closer look at The Pool.

Steve Moles

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PLASA

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Logic Systems' first appearance at PLASA will coincide with the company's introduction of the CSI 290 system. This features a high efficiency mid top cabinet offering excellent directivity control, a bass bin which boasts low harmonic distortion and a highly sensitive sub bass cabinet. While the three cabinets are intended for use as a system for large-scale sound reinforcement applications, they can also be used in conjunction with other products from Logic's LS ranges.

• Logic Systems - J30

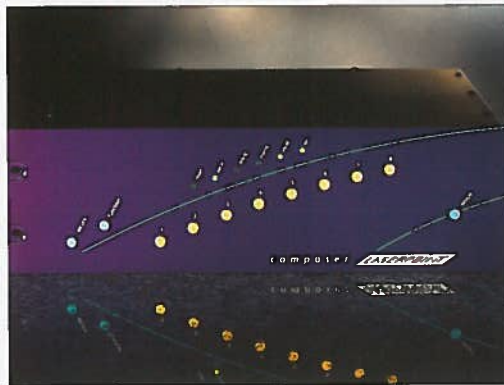
Being seen for the first time in the UK will be Rosco's Horizon, the newest development from Rosco/Entertainment Technology, which transforms any PC into a Broadway-level control board. Horizon enables the user to write cues, assign channels of control, prepare groups, submasters and even parked channels and is available free of charge from the company on a CD Rom.

• Rosco - E18

In its latest format the Canford catalogue has expanded to over 800 pages and includes more than 12,000 audio and video products. Amongst the latest products on display will be Canford's own range of Radio Microphone systems, which include hand-held and backpack versions. There will also be Canford's new Coaxial Cable Stripper, alongside a range of products from K&M.

• Canford - J28

Composer's Purple Patch for Laserpoint



Laserpoint's Composer - pretty in purple.

In late July, Laserpoint hosted a launch party at their new offices in the heart of Soho for Composer - a new image controller, which the company hope will end the price/quality compromise in large screen video display.

Up to now, price has directly affected image resolution and system flexibility. With Composer, Laserpoint have set out to change all that by creating a system that offers high picture quality and the possibility of any configuration of any size videowall up to 256 screens - at prices well below those for multi-channel single board systems. Their timing, of course, could not be better: large screen display is big business, particularly in the retail and leisure markets and demand from all sectors of the industry is on the increase.

At the Soho demonstration, which was attended by over 80 people, Composer was linked with pre-production prototypes of Philips new projection cubes, and the results were impressive close-up. Andy Holmes explained the thinking behind Composer: "The system was designed to match market needs and encompasses a number of innovative internal features for flexible videowall control. These include multiple inputs, digital internal decoding and modular construction for expandable systems up to 16 x 16."

Holmes went on to add that the real interest is in the 2 x 2 system, particularly in retail applications where space is often at a premium, which bodes well for the Philips prototype, a high resolution folded system that will receive its official launch shortly. For the Composer, further upgrades are already on the way, including VGA input, time base correction and Picture in Picture windows-style processing.

Crows Count Decibels

Counting Crows used the Klark Teknik DN6000 Audio Analyser to ensure that noise levels stayed within legal limits on their recent UK tour. The DN6000 can be set to display A, C, or no weighting read-outs, which enables environmental officers acting on behalf of local authorities to check that SPLs aren't infringing noise regulations. Several more racks of KT gear were used for other signal processing requirements.

Xenotech-Strong

Since the merger earlier this year of Xenotech and Strong International, the two companies have worked together to expand their presence in the United States and around the world. The new company, known as Xenotech-Strong International, has drawn on the strengths of Strong's Super Trouper and Xenotech's Britelight series of xenon searchlights and now provides a complete package of xenon lighting units from 1,000-10,000W.

Both product lines are frequently used together, especially in the big-event productions such as the Super Bowl half-time show and the Olympics. Most recently, Xenotech searchlights were used at the Yanni concert spectacular in India and have also for this summer's release of the movie *Batman and Robin*.

British Group Head to NY

APRS (Association of Professional Recording Services) has organised a Joint Venture group of UK Exhibitors at the forthcoming AES convention in New York (September 26th-29th). With financial support from the DTI, the 20 British companies in the group will be exhibiting a broad array of professional audio products and services - some of which are being presented for the first time ever. These range from monitoring systems and mixing consoles to software and design consultancy - important sectors of the music recording, broadcasting and live sound industries.

The group comprises first-time exhibitors, as well as names already established in the US market, including BSS Audio, Deltron, Drawmer, HHB, SCV and XTA Electronics. Collectively, they provide an impressive indication of the strength of UK suppliers in the professional audio field.

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ESTA Review of Draft Standards

The Entertainment Services and Technology Association (ESTA) has announced that two draft American National Standards are available for public review. Anybody who has an interest in the standards is invited to review them and to offer comments.

The two draft standards are 'E1.2: Entertainment Technology - Design, Manufacture and Use of Aluminium Trusses and Towers' and 'E1.4: Entertainment Technology - Manual Counterweight Flying Systems'. The first describes the design, manufacture and use of aluminium trusses and towers in the entertainment industry, while the second describes the construction and proper installation of manually powered counterweight rigging systems, including systems using sand bags for counterweights. Comment is being sought by ESTA so that the draft standards may reflect the consensus of informed opinion in the industry. The formal public review will end on September 30th. Copies of the draft standards may be obtained from ESTA's technical standards manager on Fax: +1 (212) 244 1502.

Gerriets at Japan's National Theatre



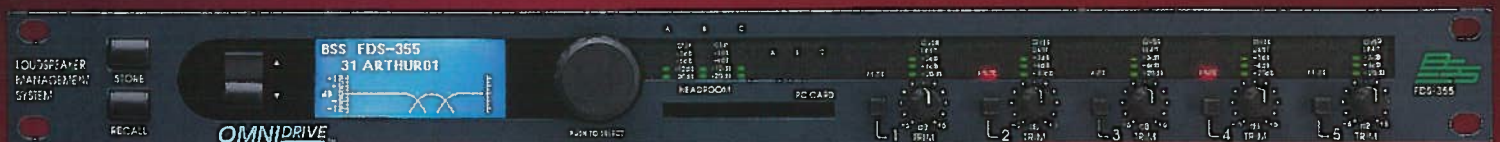
Gerriets Great Britain has supplied and installed all the drapes for The New National Theatre in Japan, which represents the biggest project ever to be undertaken by the UK division.

Scheduled to open on 10th October, The New National Theatre has been in the pipeline for some 31 years, following a parliamentary Bill to establish a full-scale opera house being passed way back in 1966. In 1985, the international competition for the design of the project was announced and the design of Takahiko Yanagisawa emerged the

winner from over 288 applications. The theatre comprises three separate halls, designed to meet the different requirements of productions of all sizes and will primarily be used for opera, ballet, plays and musicals.

The task of supplying all the drapes for the theatre included the provision of the main curtains, the masking drapes and background drapes, as well as the largest projection screen Gerriets has ever been asked to supply at 28m wide and 25m high.

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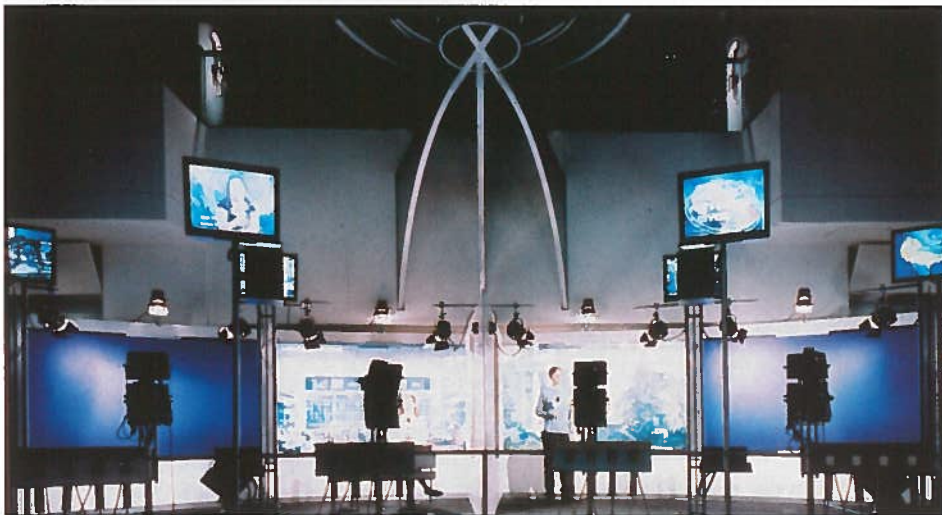
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Electrosonic Bring Video to the Newseum



The Newseum, which opened recently in Washington DC, is the world's only interactive museum of news. Developed at a cost of \$50m, and funded and operated by the Freedom Forum, the 72,000sq.ft feature will take visitors behind the scenes to see and experience how and why news is made.

The Newseum allows visitors to become television newscasters or reporters in the interactive Newsroom, or relive history's most famous news stories through multimedia exhibits, artefacts and news memorabilia. They can also see the day's news as it happens in the News History Gallery on a 126ft long video news wall, supplied by Electrosonic, which uses nine Hughes-JVC projectors, each throwing a high resolution 1600 x 1200 image of 14ft x 10.5ft, butted together to create one long panorama on the wall.

The majority of the images are full motion video, derived from live satellite and broadcast feeds. However, in order to have a properly choreographed show, the system also uses 20 video cassette recorders (Betacam SP), with the material changing on a daily basis. There is also provision for accepting up to nine high resolution graphic images.

The image processing equipment allows any source to appear anywhere on the display, to any required size. Each source appears in a window which can be as little as 1% of its original format up to 1600 x 1200. Windows can be prioritised and can be made to move or 'fly' along the display. The 36 video sources can themselves be derived

from several hundred sources within the Freedom Forum building, because all the inputs are asynchronous and the processing equipment includes timebase correction on each input channel.

The engineering of the Media Wall was handled by Electrosonic Systems Inc and the image processing is by Electrosonic's new Worksurface high-resolution image processing equipment. Nine Worksurface units are all synchronised together and all are operating on an Ethernet LAN. Overall control is by a new programme, Winwall, which operates on a timeline basis. This controls the Worksurface units, the source equipment, a 96:36 BTS broadcast switcher, a graphics switcher, nine computers used as graphics image stores and the DSP-based audio equipment (Peavey MediaMatrix).

Within the Newseum there are four visitor participation exhibits, which is where visitors take part in news, sports or current events programmes. They are introduced by a celebrity announcer and then allowed to say their piece to camera using a prompting system. Each station uses an AMX controller to control the exhibit. Any false starts can be instantly cancelled without any of the delays caused by the use of tape. Once a participant has spoken in front of a blue screen, or for example a blow-up of the White House, they can immediately see the playback - without delay and even while someone else is being recorded.

Electrosonic anticipate a wholesale shift to the use of computer-sourced video in the museum and exhibition environment.

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PLASA

LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

Navigator Systems are offering visitors the chance to win a portable CD player.

To do so, they must visit the Navigator Systems stand and watch a demonstration of the award-winning Hire Track rental management software and then enter their name in the prize draw which will take place on Monday 15th September 1997.

• Navigator Systems - B16

ShowCAD, the PC-based lighting control system, will again be demonstrated on the Cerebrum stand and will also be used on the stands of Lightmasters UK, Given, Coemar/Coe-Tech, Multiform, Sagitter, Apollo, Mad Lighting and Terralec, with the possibility of further demos/ shows being arranged.

• ShowCAD - E20

Battle of the Bands



Granada Studios in Manchester recently hosted the grand finals of the Battle of the Bands competition, organised by Steel City Promoters and sponsored by Peavey Electronics.

In first place were The Magic House from London (pictured above), followed by The Revengers from Manchester in second place, with Dog Tomas from Derbyshire in third place and Elfin from Sheffield in fourth place. The heats were staged at both the Sheffield Round House and Granada Studios, with Peavey providing the backline, drums and PA for both venues. All quarter-finalists received Peavey microphones and the winners received gold-plated, limited-edition CS800X power amplifiers, as well as being given the opportunity to perform live with Paul Weller at Don Valley Stadium in late July.

Steam Powered Sound

When the Thursford Collection, based near Fakenham in Norfolk, were ready to replace their public address system, acoustics consultant Peter Mapp specified the Community Solutions series for reinforcing an unusual concert sound to audiences of up to 1300, who assemble in old barns to hear steam organ and piano recitals.

The contract was carried out by Theatre Direct of Cambridge, whose Paul Curtis explained that the museum fundamentally required higher sound output. The independent consultant was brought in because of problems with reverberation and front row coverage.

Freelance sound engineer Steve Brodie, who works at Thursford, underlined the need for a change: "The shows get quite involved, with 10-piece string sections, woodwind and brass. It was difficult to achieve coverage of the front rows and the old system was inadequate."

Theatre Direct installed four Solutions three-way SLS 920s, with their own system controllers, driven by a pair of Carver PM-1400 power amplifiers - all supplied by The Sound Dept, UK distributors for Community and Carver. The SLS-920s are flown individually and spaced evenly across the front of the wide stage. Theatre Direct were able to re-use part of the existing PA system, redeploying the cabinets into three separate delay groups, using the existing amplification to drive the system.

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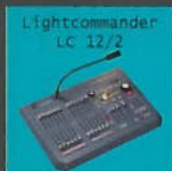
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Flying Pig are launching two new accessories for the popular Wholehog II lighting control console. A show replay unit, known quite simply as the 'Hog Unit', comes in a rackmount package and enables the full playback of any show programmed on a Wholehog II, without the need for the main controller. Once loaded with a show, the Hog Unit lets operators gain access to configuration settings for any on-site adjustments that may be necessary. There is also a plethora of input and output connections on the backpanel.

The second new product is the Overdrive box, and this allows the expansion of the DMX channel capacity of the Wholehog II from 2,048 channels to a maximum of 3,584 channels. These happen in increments of 512 channels, and consequently can cater for many variations of console configuration.

• Flying Pig Systems - G20

Sky Scrapers?



Many weird and wonderful products have been launched over the years, but perhaps none has been quite so bizarre as the two new products just launched by The Searchlight Co - SkyTubes and SkyGuys.

SkyTube Systems use a high pressure fan to inflate a 400mm diameter tube skywards to a height of up to 30 metres in a matter of seconds. The tube, which is open-ended, then expels some of the air causing the upper section of tube to deflate and fold, sealing the tube which then inflates again. SkyGuys, meanwhile, are human figures that stand up to 12 metres high and are themed as clowns, conductors, footballers, etc. They use two fans to keep them inflated and their gyrations keep fascinated onlookers mesmerised and entertained.

For more details contact Searchlight Co on (01954) 718118.

Oasis Finds Solutions

Oasis Lakeland Forest Village, the first of Rank Leisure's new holiday villages, has opened in Penrith, with its functions suite sound reinforcement provided by The Sound Department.

The Green Room benefits from two separate Community systems, distributed in the UK by the Sound Department, and specified and installed by Nu-Light of Warrington. The latter were, in turn, sub-contracted by Granada Business Technology, who masterminded the IT and TV routing.

Having recently heard the Solution Series cabinets installed at the Nynex Arena in Manchester, Nu-Light's Mike Wake opted for six of the SLS 920s, flown above the Green Room stage (via James Thomas Engineering flying harnesses), with two VBS 764s handling the bass. The shape of the room also dictated the use of four delay lines, comprising 15 CSU 8s, whilst in the conservatory bar, a further four SAS CT12s are to be found.

The front-of-house rig is driven by Carver PM1400s, with two PM700s and a PM125 deployed on the remainder of the system. Above the dancefloor, Nu-Light have flown four CS 52s and two CSX 40 bass powered by Carver PM950s, with a PM1400 on the bass.

All the drive and processing equipment is housed in a single 42u rack, plugged largely with Ashly processing modules. Included in the stage control is a DPM-28 distribution amplifier, a PQX-571 parametric EQ, two MQX-2150 graphic equalisers, with an SC 21E system controller running the Solution boxes. Digital delay is provided by four Biamp DDL11s, whilst manipulating the dance signal is an Ashly CL-52E compressor/limiter, an MQX-2310 (2 x 31-band) graphic equaliser and an Ashly XR-1001 electronic crossover.

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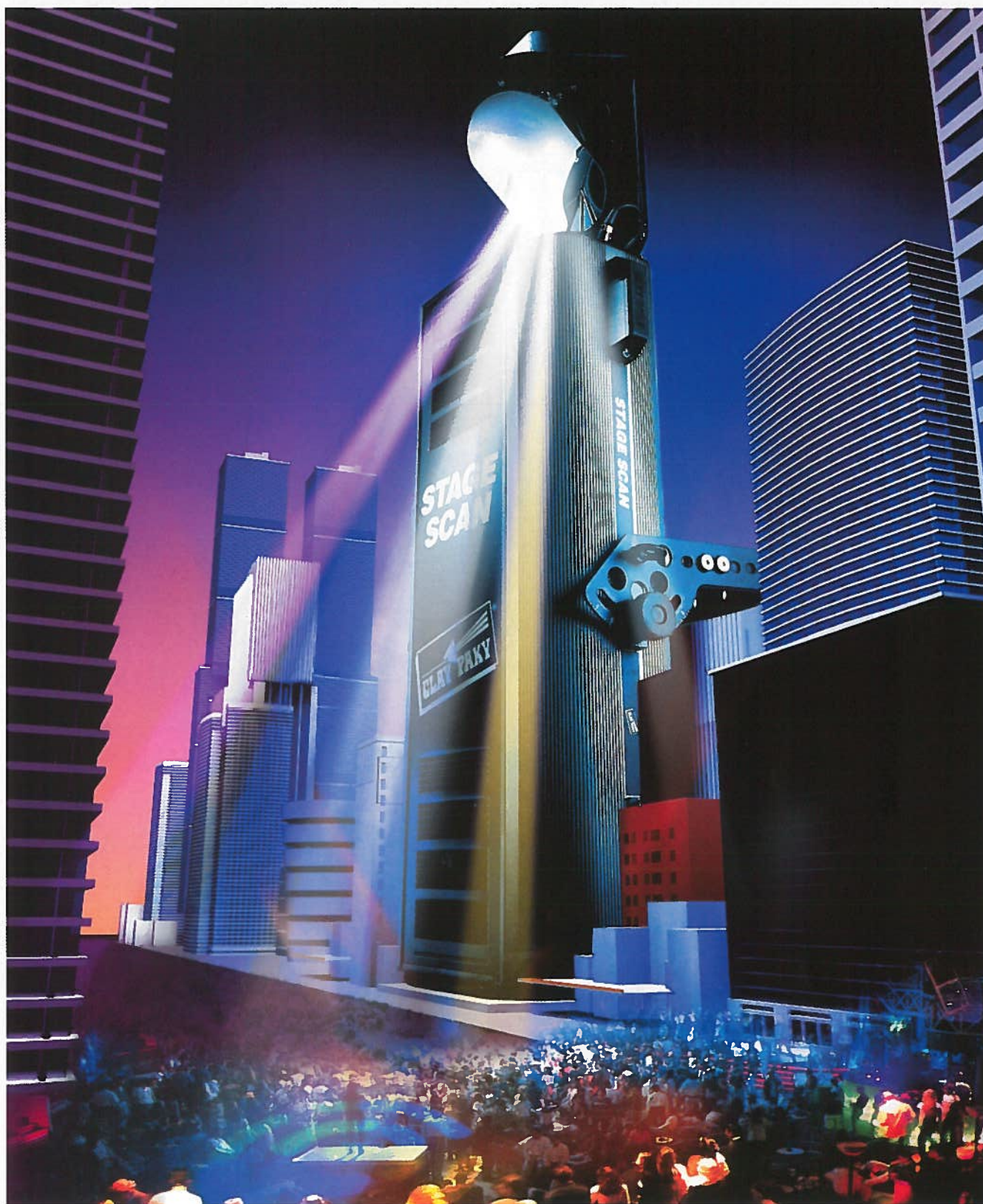
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Ushio continues its development of the HPL-lamp characteristics and improved the 230/240 Volt lamp performance even further by increasing the number of axial segments from 4 - to 6. The 6 segmented filament creates a more even light distribution, than the previous 4 filament lamp. The major advantages for the users are: The HPL- lamp consumes 45 % less electricity. In combination with ETC's major advance in ellipsoidal reflector technology and highly efficient optical system up to 40 % more light is produced

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LIGHTING-EDGE TECHNOLOGIES

USHIO

Explosive Technology at Dooco Land in Korea

Visitors entering Dooco Land in Suwon, Korea are captivated by the breathtaking sight of a volcanic explosion - the brainchild of the creative team at Thomas Gregor Associates of El Segundo, California. Three times a night, the 35ft high Grand Entrance Volcano erupts in a spectacular blast of light, sound, steam, water and fire.

TGA brought together major themed entertainment companies VJ Ltd, Living Waters and Themed Environments to create the one-of-a-kind volcano. In addition to their overall

responsibilities as show producer for the project, TGA also provided design, audio, lighting and show control to bring the volcano to life.

Few visitors would guess that inside the man-made rockwork mountain, is a control room equipped with the latest hydraulic, pneumatic and digital equipment needed to simulate the massive eruptions - each a creative combination of water, steam, fire and sound. Seven large pumps supply the water that is piped to pressurised fountains located throughout the rockwork structure. Strategically placed theatrical lighting transforms the fountains into 'flowing lava' which plummets down the side of the volcano. A 185hp steam



plant turns hundreds of gallons of water into columns of dense steam. Liquid natural gas, pressurised to 35psi, is stored in a 15,000 gallon accumulator tank. On cue, the gas is released into the air and ignited, producing towering explosions of flame shooting 30ft into the air. Digital sound effects combined with an original music score complete the dramatic event.

Other Thomas Gregor Associates projects include *Odyssey*, a spectacular circus musical production for Princess Cruises, *Hollywood Live On Ice* for Busch Gardens, *Sunset Stampede* at Sam's Town Hotel & Gambling Hall in Las Vegas, Nevada, and the main entertainment systems on board the *Grand Princess*.

PLASA LIVE AT EARLS COURT 7-10 SEPTEMBER 1997

Martin Professional will have two extensive sites at PLASA 97. Located at the front of Earls Court will be the Martin Touring Stand. Dominating this will be a six metre high curved wall featuring Martin MAC 600s and the brand new MAC 500 moving head luminaires. The Martin PAL 1200 will be illuminating the unique moving display of JEM smoke machines.

All Martin lighting and control products will be displayed on the main stand in a 'hands-on' area, where the new Martin Show Designer and Lighting Director systems will be demonstrated.

Other new products launched at PLASA include the Martin Pro 1000 smoke machine, the RoboZap 2, the Show Designer software system and high-power club versions of the successful Destroyer, Punisher and Wheeler effects.

• Martin Professional - E54/E56



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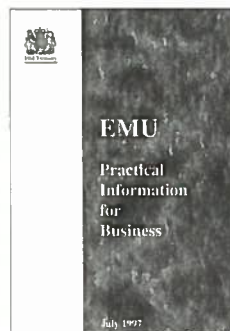
EMU: Practical Guide For Business

A new guide has been published by Her Majesty's Treasury to advise small businesses on the effects of the European Single Currency, which will have far-reaching effects on the economy, whether or not the United Kingdom joins. The guide is the first step in informing businesses how they can expect to be affected by EMU.

The guide describes how the single currency will affect financial systems and accounts, computer systems and cash-handling procedures and warns businesses to think about the effects on their strategies for pricing, marketing, relations with other firms and raising finance.

In a statement issued with the new guide, Chancellor Gordon Brown said: "The Government's position on EMU has not changed. While nothing has been ruled out, there are formidable obstacles to the United Kingdom joining on January 1st, 1999. Our aim is to help British companies make the most of opportunities in Europe. This means being ready for the single currency whether or not we join."

The guide is available from libraries, Business Links (England), Business Shops (Scotland), Business Connect (Wales), the Northern Ireland Office, Training and Enterprise Councils (England and Wales), Local Enterprise Councils (Scotland), Trade Associations (including PLASA), and the Treasury Website, at www.hm-treasury.gov.uk/



Exhibition Opportunities in India and Poland

PLASA will be taking a stand at the Broadcast Cable & Satellite show in New Delhi, India, from 9th-11th December. PLASA Members are invited to take a small section of the PLASA stand or have their brochures displayed on the PLASA stand for a fee. Alternatively, they can take their own stand with DTI support, as part of the Federation of the Electronics Industry/DTI Group.

India, the world's largest democracy, is a booming market, with large numbers of the country's middle-income population regularly frequenting discos, bars, cinemas, concerts and fashion shows throughout India's 53 major cities.

PLASA are also offering members the opportunity to exhibit at the Intermedia exhibition in Wroclaw, Poland, from 16th-19th October, with a 20% discount on the cost of stand space. As with Broadcast Cable & Satellite, brochures can also be displayed on the PLASA stand at Intermedia for a fee.

Wroclaw is positioned near the Czech and German borders, providing an ideal gateway into Eastern Europe from the West. It is estimated that Intermedia, which was originally a music show but has now expanded to include a substantial lighting and sound hall, will attract over 20,000 visitors.

For further information about either of the above opportunities, contact Anna Pillow at PLASA, telephone (01323) 410335.

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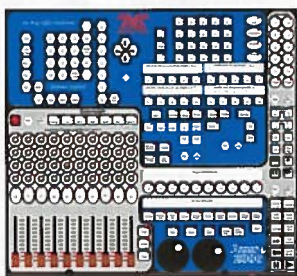
PLASA

LIVE AT EARLS COURT

7-10 SEPTEMBER 1997

Avolites are making a major new launch at PLASA 97 with the latest addition to their line of lighting control consoles - the Azure 2000.

This new console is primarily targeted at nightclubs and time-coded industrial shows, but its features will also make it suitable for environmental and architectural applications, theatre and television and any events requiring control of moving and generic lighting.



Features include 50 direct access memories and chases per page with 10 labelled pages. Chases may be run from multi-frequency sound-to-light triggers and timed over-rides, programmed times or the 'Learn Tempo' function. This allows synchronisation of chases to the current beat by tapping the tempo button.

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• Avolites - C4

Word And The Web



When Drinkray Ltd asked the Irish Pub Company to design an innovative interior for their latest project, the latter set to work transforming the long thin 'train carriage-like' premises into different themed areas suggesting past eras from man's earliest writings to modern day communications with a videowall as the special feature.

For this, they approached ProQuip and a 3x3 Pioneer cube wall was subsequently specified. The use of the very different themed areas creates three subtly different moods with the lowest 'megalithic' area being the most relaxed and quiet and the level of excitement and mood rising in the future area, which is overlooked by the videowall and will no doubt be a lively place to be when Scotland are playing live. When not showing live sports, the videowall will relay music videos.

Essential Ventura

Conference and corporate event specialists, Essential Systems, are the latest company to specify Celco's Ventura 1000 lighting control console.

The London company plan to set the desk to work on corporate shows and will press it straight into service on a Volkswagen car launch in Germany next month, where the lighting has been designed by Jim La Roche. He first saw the board at the dj Culture show in Manchester earlier this summer, where he was stage manager.

Mach of the Day

Leicester Sound & Light have carried out a major sound reinforcement installation at Leicester City Football Club's Filbert Street stadium. This upgrade is based around a combination of Martin Professional's full-range Mach Systems M156, M154 and M123 speakers.

The bulk of the M156 boxes have been assigned to the new stand, where they are mounted in pairs, using custom flying hardware - and processed with the BSS DPR-901 II dynamic equaliser. The desired system response was achieved using the BSS Varicurve remote control equalisation system.

Technical support was given by Martin Professional's project manager, Jerry Denning, assisted by audio technician Graham Gosden. "The specification demanded that we were not allowed to use sub-bass, and while we had reasonable SPL, we needed to be able to control it, not only to achieve good intelligibility but also to create some kind of atmosphere," Jerry Denning explained. The BSS 901 was also used to perform frequency-conscious compression and expansion. "It has enabled us to control excessive frequency dynamics without degrading the signal integrity."

PSL: Food of Champions

The Concert Division of Presentation Services Ltd (PSL) has provided video reinforcement for a remarkable in-the-round production at Wembley Stadium. Some 40,000 people from all over Europe attended the Christian revivalist event, Champions Of The World.

The video shoot was directed for PSL by Blue Leach who used a seven-camera (Ikegami) crew, working with a standard PSL PPU. The event was recorded onto Sony BVW 75s for later duplication. "It was a difficult event to cover as we had to shoot four sides of the stage and the rotation of bands throughout the day meant that each side was constantly being used for changeover," PSL's Chris Mounsor told L+SI.

PSL also provided a 48sq.m screen for the Gay Pride Festival this summer. With an audience of around 250,000 thronging Clapham Common, the concert division of PSL commandeered an Astravision daylight screen to beam the action, recorded via a seven-camera live shoot. The show was directed by Dick Carruthers, assisted by Des Fallon, and engineered by Stuart Hall, with PSL fielding a crew of 25.



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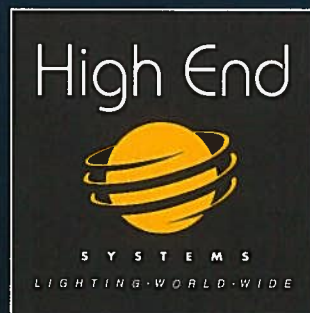
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PLASA

LIVE AT EARLS COURT
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Lamba plc are pushing KAM into the spotlight with a major DJ promotion at this year's show, joining forces with Dance 2 Records and Choice FM to offer a package of career incentives to the person adjudged to have delivered the best DAT track to the Lamba stand. Anyone is eligible to enter, as long as the track features original music.

The winning piece will then be released by Dance 2 and guaranteed airplay on Choice FM. In conjunction with Dance 2, Lamba will underwrite the costs of mastering, pressing and printing the 12" dancemix and also ensure its distribution to every nightclub in the UK. Remember, you only have until September 7th.

Dance 2 are supplying DJs for the Lamba stand every day, commencing with KISS 100FM DJ Graham Gold on the Sunday.

• Lamba - F54

Restoration Theatre

The Bradford Playhouse Theatre is beginning a programme of restoration following a disastrous fire last summer (pictured right) that completely wrecked the stage area and damaged the auditoria of the famous art deco-style theatre which was established in the 1930s, ironically after a fire destroyed the building previously occupying the site. One of the north's premiere venues, the Playhouse Theatre saw J B Priestley as its first president and later staged many of the great playwright's productions.

Though the specification details are yet to be confirmed, Wigwam and White Light North have picked up the audio and lighting contracts respectively. Wigwam, for their part, have been asked to spec a complete new audio system, centred around d&b speakers, whilst the team from White Light North, led by Julia Pollitt, have been given the brief to replace like for like and so the lighting installation will be primarily Strand-led. White Light North also sub-contracted in Harkness Hall for the design, manufacture and installation of a completely new counterweight system consisting of 20 single purchase counterweight sets. The second element of the Harkness Hall contract is the manufacture and installation of a 7m x 4m matt white projection screen to be installed as a flying frame system and controlled by counterweights.

Work on the contract is well underway and the re-opening of the theatre, which will be re-named the Priestley Centre for the Arts, is scheduled to take place during October.



Above: the gutted remains of the Bradford Playhouse Theatre following last year's fire. When the venue reopens after restoration, it will be called the Priestley Centre for the Arts. L+SI plans to run a feature on the restoration project in a future issue.

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Adam Hall are introducing the new Crescendo range of loudspeakers from Fane at PLASA. The range evolves from the Studio range, incorporating drivers more closely optimised to modern sound reinforcement requirements. It consists of three mid-bass drivers, two mid-range drivers and two dedicated bass drivers.

The mid-bass drivers are intended for use in two-way ported enclosures such as the classic bass driver plus horn tweeter or compression driver format. All feature die-cast chassis with long-throw motor systems and high linearity suspensions, allowing solid bass reproduction at high power levels. The drivers exhibit smooth frequency responses to give a balanced tonal characteristic when properly matched to appropriate high frequency drivers.

• Adam Hall - E32

Making the Internet Work for Business

Practical business solutions via the Internet is the theme of The Internet 97 Show (i 97), September 23rd-25th, which is relocating to Birmingham's NEC for its third year.

Featuring major names such as BT, U-NET, Digital and Mercury Communications and supported by the DTI's 'Information Society Initiative', i 97 is the largest independent internet exhibition in the UK, showcasing a wide range of different technologies.

The exhibition is designed to appeal to any business that will benefit from utilising Internet technology, from major multi-nationals to small companies. Features include all aspects of the medium, from corporate Intranets to electronic commerce, as well as the latest cutting-edge web design and applications.

New feature areas at this year's show include a Business Information Village - an area specifically designed to highlight the real business applications of the internet, showcasing solutions for professionals who require regular access to data, reports, research material, industry news and market analysis. A Remote and Mobile Communications Arena featuring the latest innovations for mobile workers including cellular, radio and satellite transmission, remote servers, PDAs, access software and integrated LAN applications. Intranet in Action - leading industry players will be recreating a typical office environment and demonstrating the benefits of communicating over an Intranet.

A comprehensive seminar programme on all aspects of the internet, hosted by both exhibitors and special guests, will run alongside the show.

Central Court TV



Central Broadcasting's new 'Central Court' facility is now on air. Believed to be the largest fully integrated digital television facility, the new £15m purpose-built 60,000sq.ft Television Centre was designed by broadcast systems specialist Tektronix, Inc. It houses some 300 staff, responsible for the commissioning, production and transmission of 700 hours of news and sport and 200 hours of regional programming, and also includes a special 3,000sq.ft regional production studio.

3G For Sale

With Ivor Ponting of Ponting Engineering, owner of 3G Ltd, scaling down his business activities in preparation for retirement, he has decided to put 3G up for sale.

3G have an established worldwide market and a number of new projects about to reach fruition, including three new audio consoles which will be making their debut at the PLASA show. Interested parties should contact Mark Ray at 3G, 3G House, 18/19 Laurence Industrial Estate, Eastwoodbury Lane, Southend-on-Sea, Essex SS2 6RH in writing.

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Entec's Karaoke Challenge Tours the UK

This summer has seen Entec touring the country with a new-style karaoke challenge, along similar lines to the European concept of karaoke toured town to town. The idea, the brainchild of Entec's Paul Weber, was spawned during the cold winter months when the company were looking for new opportunities on which to apply their touring expertise.

The natural reticence of the great British public was clearly going to be a problem and Weber realised that he could strengthen the appeal of the event by arranging for it to be televised, thus ensuring that the budding Spicettes across the country's seaside resorts could have their crack at 15 minutes of fame. He therefore, in partnership with production company Transmedia, approached Challenge TV, a new satellite channel station on the hunt for fresh programming ideas to add to the schedules, who readily agreed to fund the whole venture. If the lure of media notoriety didn't prove enough, then the singing talents of Sonja, Jonathan Morris and Ross King might provide the bait to get members of the public up on stage.

For their part, Entec, led by crew chief Simon Tibble, supplied the complete touring system, similar in many ways to that used on the Reading festival, though on a much smaller scale - a standard two ton ground-support tower with a Steeldeck stage, stocked with a d&b sound



system featuring a combination of the 702 and 402 Series operated by Eric Evans on a DDA desk, and a rig of Clay Paky Stagescans, Martin MAC 600s, a bundle of Parcans and an Avolites Sapphire under the direction of lighting operator Miec Hegget. As they couldn't find one that suited their purpose, they also custom-built their own roof and took with them catering, fencing, whole dressing rooms and some fairly substantial generators.

The challenge, which kicked off on the west piazza of London's Covent Garden and passed through Southsea, Brighton, Gloucester, Portcawl, Blackpool, Morecambe, Wakefield and Southshield on its 10-day run, was then recorded live ready for transmission by Challenge TV in the not-too-distant future.

PLASA

LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

Allen & Heath are staging four world premieres. Making their global debuts are the MixWizard WZ14:4:2 reinforcement and recording console and the MixWizard WZ20:8:2 dedicated eight track recording mixer.

Like all MixWizard and GL Series consoles, WZ14:4:2 and WZ20:8:2 have four band EQ, 100mm faders, vertical PCB construction, nitted pots and QCC connectors for fast reconfiguration in desk or rack format. WZ14:4:2 has 10 mic/line inputs, two fully featured stereo inputs with dual inputs on separate controls and four stereo FX returns, with six balanced auxes on individual controls.

Also appearing for the first time are two brand new additions to the A&H Contractor Series, the DR66 digital mix processor and the GR05 zone mixer.

• Allen & Heath - H30

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Rock Goes to College

The live entertainment industry has been working hard to push up safety standards at rock and pop concerts. In a pivotal statement last week, the first ever nationally recognised vocational training scheme for workers, technicians and management in concert production was announced.

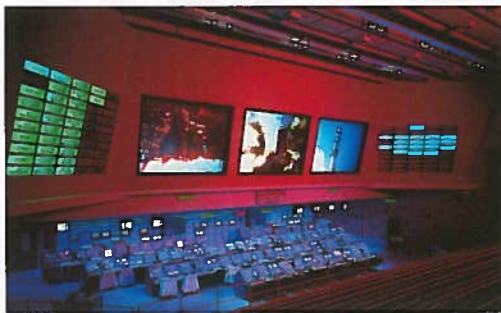
The Production Services Association (PSA) and the Entertainment Laser Association (ELA) have teamed up with Loughborough College to design a series of courses that will cover every area of event production. The move has been actively supported by Access All Areas magazine and the Institute of Lighting Engineers (ILE). The courses offer training in all areas, such as sound and lighting, rigging and laser displays. There will be courses for workers at every level of expertise in the industry, be they apprentices, senior management, roadies, safety experts or industrial trainers.

The first courses available under the programme are in the entertainment laser sector. They have been put together by ELA and PSA member Keith Flunder BSc Hons MBA MPhil, of the laser supply company Laser Hire Ltd, in collaboration with Dr. Daniel Clark, manager of the Laser and Electro-optics Technology Centre at Loughborough College.

The courses are awaiting BTEC approval and should come on-stream in October. Qualifications in 11 other sectors of the concert production industry are currently being designed and will be sent for accreditation in the next 12 months.

Seminars on training for careers in both audio and lighting will form a part of the conference programme at the PLASA Show at Earls Court in September. For further details see page 107.

Saturn V Rocket Show



Themed attraction specialist BRC Imagination Arts were the company approached by NASA to house the last remaining Saturn V rocket - the type used to propel the Apollo missions to the moon - in a permanent, indoor exhibition at the new Apollo/Saturn V Centre at the Kennedy Space Centre.

The \$37m centre, complete with computer-controlled shows incorporating audio, video and special effects, is part museum, part theatre and part temple. Eleven Apollo Astronauts, now in their sixties, were on hand for the opening ceremonies. A highlight of the centre is the Firing Room Theatre, a re-creation of KSC's firing control room on the day in December 1968 when Apollo 8 was launched. To make the exhibit as accurate as possible, 180 of the Kennedy Space Centre's actual launch control consoles were restored to their original turquoise and chrome finish, then re-wired by Electrosonic, who supplied the show control systems, to allow the console lights to be programmed and controlled by show control, while Barco 8100 video projectors show film of the launch on three large glass screens.

PLASA LIVE AT EARLS COURT 7-10 SEPTEMBER 1997

Court Acoustics will be showing the LX Club and Contractor series, centred around the LX3 3-way trapezoid with slot VHF driver, with a choice of bass bins: the LXBB 2x15 4ohms reflex for maximum punch or the LXB 1x18 8ohms back scoop bin for maximum air movement in dance music. Also on show will be the Club 8000 - 5-way 4kW stack and Sound Check 2 test and demo CD.

- Court Acoustics - J58

FAL will launch the FAL 2500 XL which incorporates a new mirror system. This fully-featured scanner has all the functions that one would expect from a professional unit at this level; three remotely selectable beam angles, indexable rotating dichroic gobos and prisms and a continuously variable aperture iris system.

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Cerwin Vega! at Club Mirage



The new DJ booth and examples of the colourful UV designs that feature throughout the club on the walls and ceilings.

With drive units blowing at the rate of at least three a week, Leamington Spa-based club owner Tom Alexander decided the time had come to invest in entirely new speakers for his club system. Rob Morris of Excel Music, Rugby, who had tried to maintain the original system, helped him in his quest. The final decision, at the recommendation of Morris, rested on the Cerwin Vega! Intense series for the quality of sound it was capable of producing.

More traditionally specified for live applications, the system, supplied through Lamba plc, is increasingly being adopted by the club circuit. The Intense series is currently set up as a temporary installation in Adrenalin Village, South London, making the Leamington Spa club the second large, fixed installation in the country. The speakers were well suited to the club which, though a mainstream disco on Saturday nights, is dedicated to all genres of dance music during the week. The installation consisted of four T250 mid-top cabinets and four T36 bass bins. Tom Alexander also purchased a C Audio RA3001 to complement the C Audio SR707 that remained from the original sound system. Other processors re-used were a pair of Rane crossovers and a Citronic SM550 mixer, while a Pioneer CDJ-500 CD player and Technics SL1210 record decks provided the source.

With the previous sound system, the club had encountered noise problems and promoters would often bring in 10K speaker rigs to enhance the set-up. The Cerwin Vega! Intense system, its specifications refined over two years, offered a much improved sound quality and the system limiters allow the club to stay well within legal noise levels. An added factor in the reduction of these has been that all the bass speakers were installed to face away from the club's entrance, which overlooks a row of houses. Thus, the club could create the sound it wanted and contain the levels within its own walls.

Whilst revamping the sound system, Alexander felt the timing right to renovate the whole club. Structural changes were made by moving the DJ booth from above the crowd to a lower, more in-line level and security cameras were installed. He wanted an original design concept for the club and having seen the artistic creations of ex-nuclear power engineer, Jimmy Harper, knew instinctively what he was after.

Harper has been painting murals in clubs and bars, mainly in Spain and Malta, for three years and has been commissioned to brighten up the interior of the P&O cruise ship Oriana. His technique is to use UV-sensitive paint, which includes experimental colours direct from New York laboratories. With the appropriate lighting, designs then emerge from the walls which have not been visible previously. A new name for the club followed quite naturally, and so Club Mirage was born. The unrivalled centrepiece has to be the beach landscape which covers an entire wall and owes much to the styles of both Dali and Jules Verne. This weird and wonderful mix works well throughout the venue, where scenes which would not normally be seen together exist harmoniously.

To produce the mirage effect the lighting capacity was doubled. UV lighting and strobes were reconfigured, again by Rob Morris, into the existing rig. The enhancing additions comprised TAS Synchros, Coemar Versatiles, Spartans and Wavers, Martin Pro Rainbows and Miniscans, all of which are run through a Lightsystem1.

However, the most amazing feature must be the fact that during all the installation, renovations and painting, the club never once closed for business!

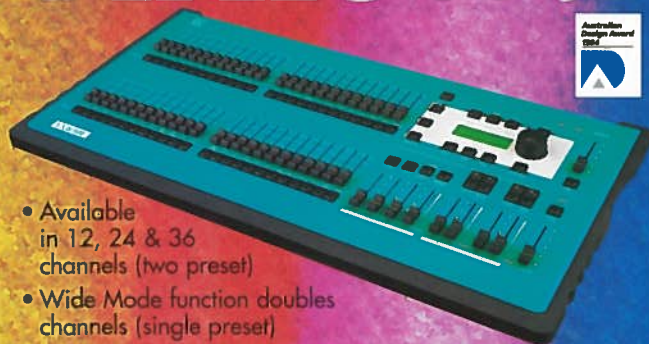
Jo Boyd

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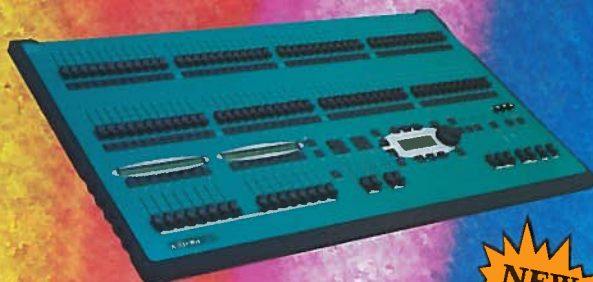


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Nikken at Ally Pally



London's Alexandra Palace was the setting recently for a double-headed corporate event for pyramid-sales company Nikken.

The day-long activities, which featured two separate conferences, followed in the evening by a banquet in the Great Hall, were production managed by Samuelson Communications. Chris Watts came in as lighting designer with a rig consisting primarily of Vari-Lite VL6s, CCT Starlettes, ETC Source Fours and an army of Par 64s, run through a combination of Avolites and Celco desks. Richard Rogers, meanwhile, designed the audio, concentrating on a combination of d&b 602 and EV Deltamax speakers, with a Yamaha PM3500 at the helm and BSS processing with dedicated d&b and Amcron amplification.

Unusual Rigging handled the rigging elements of the production with Light & Sound Design supplying the event lighting and Canegreen providing the sound system. The staging featured a myriad of technologies, including projection screens, star cloths and a 5m diameter globe, occupying centre-stage and naturally, the ubiquitous mirror-balls.



Top, the opening presentation in the West Hall and above, lighting operator Patrick Marks, well known for his work with Status Quo.

JBL Saves the Day

JBL Professional recently came to the rescue of a Chelsea cinema, when it was decided to augment the cinema's sound reinforcement system with two JBL 4645Bs for the premiere of the new Mr Bean movie, due to take place the next day. Harman Audio rushed the speakers across London in time for the premiere, which was attended by Angus Deayton and Harry Enfield.

JBL's long association with cinema sound reinforcement products began over 50 years ago at the company's inception and today over 85% of UK cinemas use JBL loudspeakers. (L+S takes a closer look at Cinema Sound in a major feature, starting on page 131.)

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ISOPORTS - a system of isolated DMX512 wall mount inlet and outlet boxes providing up to a maximum of 1536 channels. Available in 3 models, the ISOPORT provide venues total integrity of their distributed DMX512 system.



ISONODE - an intelligent wall mount DMX512 inlet that can detect activity on its DMX512 input and automatically switch the downstream DMX512 to its input and isolate the upstream data.

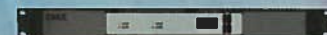


ISOPOWER - a 19" rack mount power source for the ISOPORT and ISONODE network modules. Providing three isolated and buffered DMX512 inputs and outputs with a 24VDC output, the ISOPOWER is short circuit proof and can be linked to another ISOPOWER to provide full redundancy.



DMXchange

allows the crosspatching of a large number of DMX512 outputs to a smaller number of DMX512 inputs. Master unit has integral LCD and function buttons to setup crosspatch and electronically label each input and output. Additional slave units each providing an additional 6 inputs and 12 outputs can be connected to the Master providing up to a maximum of 24 inputs and 48 outputs.



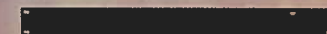
DMiX

- a DMX512 merge unit providing 2 inputs to 1 output. Fully isolated and buffered, the DMiX allows the second inputs DMX start address to be offset against the first.



Multisplit

- a splitter/amplifier giving maximum isolation of a single DMX512 input to a choice of 5, 10, 15 or 20 DMX512 outputs.



Linklight

- a 19" rack mount bidirectional multiplexer converting DMX512 inputs or outputs to +10V or -10V analog signals.



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PLASA LIVE AT EARLS COURT 7-10 SEPTEMBER 1997

Eastern Acoustic Works (EAW) will be introducing a number of new products. Topping the list is the new MK Series of loudspeakers. These have been engineered to eliminate the uneven coverage associated with typical two-way loudspeakers. The key is careful matching of the coverage patterns of high- and low-frequency subsystems at the crossover point.

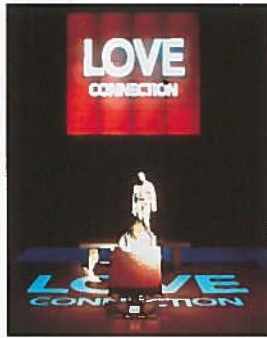
The new AS Series will also be introduced. These high-output, three-way loudspeakers are aimed at a wide range of fixed installation needs. Also new is the LA212, a two-way, full-range loudspeaker in a compact, flexible enclosure.

EAW will also introduce the Application Support Group (ASG) program designed to provide system consultants and contractors with comprehensive information at every level of sound reinforcement.

• EAW - J7/J8

AV in God's Heart

Videowalls are now becoming regular cast members in theatrical productions. At New York's Lincoln Center Theater, a production of God's Heart featured a specially-designed switcher system from Electrosonic to maximise the flexibility of the videowall in a play which draws AV technology into the context of the show, rather than simply using it as a backdrop. Images are sourced from five laser discs and two cameras, and fed via a processor to the 4 x 5 cube videowall.



Owl Flies the Pond

Uckfield, East Sussex-based Owl Video Systems Ltd, one of the UK's leading suppliers of large screen presentation systems to the professional and leisure markets, has expanded its distribution to include the US market and now has new offices in Miramar, Miami.

Owl Video Systems Inc will offer the complete range of Seleco products, including video and data projectors, videowalls, monitors and video cubes. The company has established the Seleco name in the UK market and expects to accomplish the same in this new, much larger territory. Having established a firm base in the USA, further new products will be added to Owl's range.

Tales from the Tours

The man who never sleeps, Dave Keighley (managing director at LSD) was recently spotted at the gala match to celebrate the opening of Sunderland AFC's new Stadium of Light: "I'm the production manager for tonight's event, would you believe?" he said.

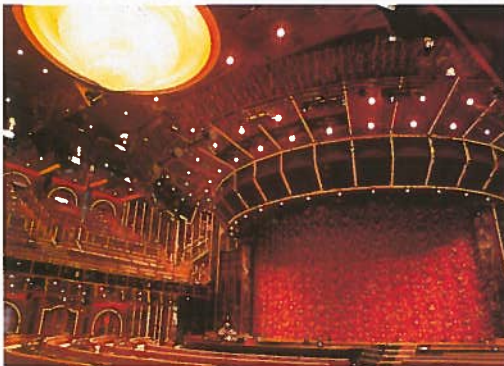
"Surely the pay at LSD's not that bad? I quipped. Keighley treated my comment with the scorn it deserved: "It's rather a curious story actually. A couple of years ago I got roped into to doing the closing ceremony for the Rugby League World Cup. [Readers might remember the travesty of the opening sequence.] One thing led to another and since then I've ended up doing the Premier League play-offs each year. Hence when this Sunderland project came up, football networking being what it is, I was called."

And what did Keighley think to the pride of Sunderland? "Well, when they first asked me to do it back in March they flew me up here and - well, there was a big hole in the ground." And now? "As I left the stadium last night after the show I commented to the club's director, 'It'll be nice when it's finished'."

I should also note that the Adlib Audio PA system (as featured in the July On Tour review of the Bootleg Beatles) is not a completely sealed system, as stated. The speaker components are replaceable without destroying the cabinet.

And finally, the most sought-after job in the lighting world has gone to Pete Barnes who will be casting light over Scary, Sporty, Posh, Baby and Ginger and a very confident Chris Hill believes Wigwam will be the supplier of choice for the Spice Girls' sound.

Steve Moles

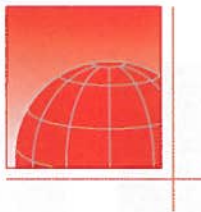


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PLASA

LIVE AT EARLS COURT**7-10 SEPTEMBER 1997**

Fuzion's star attraction at PLASA is the K2 power amplifier from Crown which can be heard running Nexo PS-10s and PS-15s in the air-conditioned comfort of the Fuzion Surround Sound room. Crown's MA series will also be on show.

Nexo's Alpha system, designed for touring, high-power fixed installations and sound reinforcement will be flown in array, using Nexo's unique CrossBow Flying System. For the contractor market, the new Sabine Power-Q ADF-4000 workstation will be on show, plus a range of Symetrix signal processors, Radio Design Labs' range of widgets, as well as product from a contractor market line, Biamp. Also new, dB Technologies' wireless mic systems for the MI and pro audio markets will be on show.

- Fuzion - E53

Ushio will introduce their new 1,500 hour long-life high performance lamp (HPL). Working in conjunction with ETC's research and development department, Ushio's engineers have developed the 230V and 240V long-life HPL, which has a colour temperature of 3050 K. This six-segment filament HPL, when combined with the Source Four fixture, gives a similar performance with less heat and a 45% energy saving when compared with common 100W reflector types.

- Ushio - H8/H9

Futurist Refit the Dragon Conference Suite



When Paramount Hotels wanted to refit the conference facilities at the Angel Hotel in Cardiff, they called in LD Benny Ball to consult on the lighting specification and contracted Futurist to oversee the installation. The upgrade was part of a total package of refurbishment across the hotel and The Dragon Conference Suite, the main public area within the hotel, was to receive a major face-lift. As ever, time was tight, and Ball and the team from Futurist had just two weeks to complete the project.

Paramount's interior designer Trudi Purtill came up with a design to transform the look of the suite without changing its structure and, in consultation with Ball, opted to 'contrast' the fittings, which were to be either black, or black and chrome. Futurist, in conjunction with Light Projects, then set about the process of custom-manufacturing the lights, modifying them further once on site.



A 24-way Strand EC90 dimming system was installed, running the system wide control protocol managed by 16-preset push-button stations which provided the various room lighting states for different functions. Once the installation was complete, the team began work on preparations for the launch of the new facilities, which was to involve a full cabaret and feature Anita Harris and her award-winning one woman show.

Benny Ball wanted to create a dramatic feel to the evening and so, working again in conjunction with Futurist, specified a sophisticated rig of six Clay Paky Golden Scans IIIs and eight High End Systems Studio Colors, together with over 70 conventionals, controlled through a Strand 520 desk, with 76 ways of Avolites dimming. The results were stunning as the pictures above illustrate and Paramount are well pleased with their new conference facility.

SEE US AT
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HÖREN

Come on, lights on!

People on the Move

Theatre Projects has appointed **Paul Kutchera** as head of design and production. Having first achieved a 2:1 honours degree in accounting and finance at the West of England University, Bristol, Kutchera started work as a freelance production manager, lighting designer and sound operator, and has worked on a range of events including business conferences, West End theatre productions, corporate and private entertainment and large outdoor shows.



Paul Kutchera.



Helen Coleman.

London-based Lighting Unlimited (UK) has recently appointed a number of new staff. **Alex Johnston**, who previously worked at White Light before moving on to Mushroom Lighting, is now general manager, while **Tony Skinner**, formerly of Theatre Projects, is now the new hire manager with **Dominic Main** complementing the team as freelance technician.

In line with plans to expand into the retail market, OEM specialist Logic System Pro Audio has recruited **Helen Coleman** to the position of export marketing administrator. Coleman, who recently graduated from Loughborough University, will be responsible for the marketing of Logic System products as the company develops.

FX Buoyant

FX Rentals Ltd, the pro-audio rentals specialist, reported an all-time record month in July. "Turnover in July has exceeded even our busiest months of last year when the business went crazy," marketing director Nick Dimes told L+S. "This year we've been focusing our energies on providing an even more comprehensive service and the result has been a record month far exceeding our previous best. We are confident that the current buoyancy of the British Music Scene will continue."

No Gain Without Pains

Pains Fireworks is enjoying a record-breaking summer with the number of shows in its firing calendar up by more than 20% compared to the same time last year, when Pains enjoyed its best summer season ever.

During the last five years, the company has seen demand for firework displays outside the traditional November 5th season escalate to the extent that this market now represents more than 50% of their total business. Growth has come from all sectors, with outdoor summer musical events, social and corporate markets particularly strong in the wake of the recession.

The River Thames has recently provided the setting for three major displays - two synchronised shows for the opening of The Globe Theatre by Her Majesty the Queen, and the 125th birthday celebrations for Cable and Wireless at London Bridge. Nearby in Docklands, Pains fired the show for the celebratory party for The Lotus Floating Restaurant to mark the Hong Kong handover. Other high profile events include displays for the Exeter Festival, the Isle of Man TT Races, the naming ceremony for Royal Caribbean Cruise Line's newest vessel - Enchantment of the Seas, three Cambridge College balls and an extravaganza for music publisher BMG on the Greek island of Crete.

Trantec VHF's Debut on West Side Story

In the run of sales that followed Trantec's recent launch of the VHF radio microphone technology, London-based theatre and conference specialist Orbital have been fastest off the mark and already have eight of the 21 new S3500 systems out on the year-long West Side Story theatre tour. They have been joined by 16 of the award-winning S5000 UHF systems, taken from the company's existing dry hire rental stock. The audio production for this 12 month long 40th anniversary tour has been designed by Rick Clarke.

This month will see more Trantec radio mics in the West End when the musical Maddie opens at the Lyric Theatre in Shaftesbury Avenue - again with Orbital taking care of the audio end of the production.

PLASA LIVE AT EARLS COURT 7-10 SEPTEMBER 1997

Tannoy Professional are using PLASA to launch several new professional products, including the new i8 loudspeaker which features an 8" Dual Concentric driver in a similarly styled cabinet to the i12.

This high powered loudspeaker uses a point source driver bridging the gap between the successful CPA5 and T12/i12. Also on show will be the T12, i12, and i15 Dual Concentric loudspeakers, together with their T40 sub-bass companion, and the Tannoy SuperDual Series.

• **Tannoy - D30**

New products from Griven debuting on the Multiform stand include the Jump and the Colorway.

Jump, available in HMI 575 or HMI 1200 versions, has a combination of motorised dichroic glass reflectors and clear mirrors, with eight pre-programmed sequences which can be individually accessed, along with black-out, from 0-10volt control, or sequence through automatically to sound.

Colorway is a DMX-controlled full spectrum CYM colour changer aimed at the live performance market, with halogen and discharge lamped versions offering different facilities. All have a wide range zoom fresnel lens and frost filter and the option of 36 pre-programmed colour mixes available from a single DMX channel.

• **Multiform - F58**

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PLASA

LIVE AT EARLS COURT
7-10 SEPTEMBER 1997

Acoustic Sound Systems (ASS) is launching Spektra - a new economy range designed with semi-professional musicians, contractors and installers and musical instrument dealers in mind. The range consists of 10 cabinets, five of which are full range cabinets; the remaining five are bass cabs to be used in conjunction with the full range cabs. Also on stand will be the company's flagship Reflekta range.

• ASS - B30

Italian manufacturer Genius Professional Lighting will be launching their new moving head projector - the Micro Omega - via their UK distributor Batmink Ltd. Modelled on its larger brothers the Omega and Omega II, the Micro Omega features seven colours plus white, seven gobos, variable strobing, DMX512 control and built-in pre-programs.

• Batmink - E72

Frozen North: Polaria



Sarner International has won the contract for a new and highly unusual attraction - Polaria - situated in Tromso, deep inside the Arctic Circle. Polaria is being built as part of what is understood to be the largest Polar research establishment in the world, where over 300 personnel will be based. It will be housed in a large sea-shore building, designed to resemble a glacier sliding into the sea. The intention is that the facility should be both educational and entertaining and, as such, it features several zones. These include an exhibition area with hands-on interactivity, a 150 degree super-video theatre, a walk-through visitor experience and several other display areas, including a recreation of an Arctic research station with real-time monitoring from remote sensors. Visitors will have the opportunity to walk on a floating ice pack and to experience a simulation of the Northern Lights. Sarner has developed a method of projecting the moving images onto a specially layered screen, which produces a realistic 3D effect.

Lighting Workshops

Following the success of their three-day lighting workshop 'Lighting for Television', and to meet the strong demand for more advanced training, the Short Course Unit at Ravensbourne College are planning an additional workshop, also a three-day module on 'Lighting for Single and Multiple Camera Drama'.

The college now offers a progressive television lighting training schedule, starting with the two single-day workshops 'An Introduction to Lighting for Studios' and 'An Introduction to Location Lighting'. These are intended for people unfamiliar with lighting for television cameras. The present three-day workshop offers a more detailed general understanding of television and lighting systems, whilst the new module involves the specialisation of drama lighting. All of the units are firmly based upon practical training, essentially a hands-on approach. Ravensbourne are also building on previous training and development with such companies as Strand, Avolites and Optex, where they organise training workshops to individual company's requirements in product use for film and television either using the company's own units exclusively, or using general lighting equipment. In the pipeline are the products of ADB and Sachtler and, following the successful investigation into the new Thomson 12-bit Digital Camera, the students will be assisting in a proposed demo tape demonstrating its capabilities. Bill Lee will continue to run the popular current modules and Dave Lock will also be available to pass on his vast experience gained whilst at the BBC.

Further information can be obtained from Bill Curtis, special projects manager at the College, telephone 0181-295 8131.

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PLASA

LIVE AT EARLS COURT

7-10 SEPTEMBER 1997

The Pioneer CDJ-500 professional CD turntable has become one of the most popular CD mixing tools for DJs. This year at PLASA 97, Pioneer is launching its most radical DJ product yet - the CDJ-500S.



With the help of top DJs, the CDJ-500S has been designed for professional club performers. The new model retains its square appearance, but comes in at under half the size of the CDJ-500II, being light and portable for the mobile DJ. As usual, Pioneer will have some of the world's top DJs on stand.

• **Pioneer - J42**

A busy summer schedule for Ryger has forced them to cut back their presence at PLASA this year, not least because of the work they are undertaking behind the scenes on a whole host of other exhibitors' stands. Ryger are working with a number of companies and have utilised their much-improved product range to add a professional lighting effect to each of these stands, with customised colours and gobos. Exhibitors benefiting from Ryger lighting are Adam Hall, Fuzion, Autopia, Owl, Celestion, Cloud, Compulite, Ohm, Tannoy and Terralec.

• **Ryger - A6**

Strand's new Brio 600W zoom 'coolbeam' will make its debut. The Brio 600W is a compact, lightweight spotlight which provides a wide range of beam angles in one unit, as well as all the advantages of a glass dichroic optical system. Also being launched is the Quartet Mk2 range of 650W spotlights, including a new addition to the range, the Quartet 15/25.

• **Strand Lighting - G8**

Technotronics have a raft of new products for PLASA, including the Octilight, a four-channel flood lighting effect with four dichroic colours; Storm, a multi-beam effect and its dedicated controller, the TRI and the DP2-R and DP2 dimmer pack and remote. All the company's lighting effects are now low voltage and not mains bulbs. Technotronics also manufacture a number of products in the Electrovision range and new at PLASA will be the Dicroflash 250, rotating dichroic flower effect and the PIC 16c54, 16 programme, four channel microprocessor controller.

• **Technotronics - J56**

New Technology Tours with the Stones

Lighting designer Patrick Woodroffe and operator David Hill are leading a hectic life this autumn. After the Garth Brooks monster extravaganza in New York's Central Park, they moved straight to the US in late August for the Rolling Stones rehearsals. The Stones has Jake Berry in the production chair once again with Ethan Webber back as crew chief and Mark 'Sparkie' Risk running the light show. The main contractor is CPL/Vari-Lite, although the primary moving light is the ISD Icon and indeed, all lighting is run from an Icon Show Controller.

The audio for the tour is being handled by US company db Audio and sound engineer Robbie McGrath has willingly agreed to take out a brand new Electro-Voice system. The control will be provided by two Cadac 44-way M-Type Monitor Boards. The contract represents a major coup for manufacturers Clive Green & Co as this is Cadac's first foray into the field of monitor mixing. The tour opens on 21st September in Chicago and will tour the US for the rest of the year.



Patrick Woodroffe.

Bandit Lites on the Road

Lighting hire specialist Bandit Lites are currently supplying equipment to a wide variety of live shows in the States. Among the acts the company is working with are Garth Brooks (Cyberlights: LD Dave Butzler), the Moody Blues (Cyberlights/Studio Colors: LD Joe Androff), Crosby Stills and Nash (PALs: LD Willie Twork) and Jethro Tull (LD Martin Bremner), as well as theatrical tours such as Lord of the Dance (Cyberlights: LD Patrick Woodroffe).

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No, we're not referring to a 'Naturist' publication but to two benefits enjoyed by d&b Series 02 users.

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For the bare naked truth on Series 02 systems contact your local d&b dealer.

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High End On Course

Automated lighting manufacturer High End Systems has announced their educational curriculum for 1998, including classes for their range of LCD controllers and Beginner and Advanced Status Cue programming seminars.

All seminars offer the attending programmer 'hands-on experience' with the company's controllers, as well as tips on programming with Lightwave Research fixtures such as studio Colors and Cyberlights.

For more information on the 1998 training schedule, contact Melissa Garbell at High End Systems, telephone +1 (512) 836 2242.

Oporto Theatre

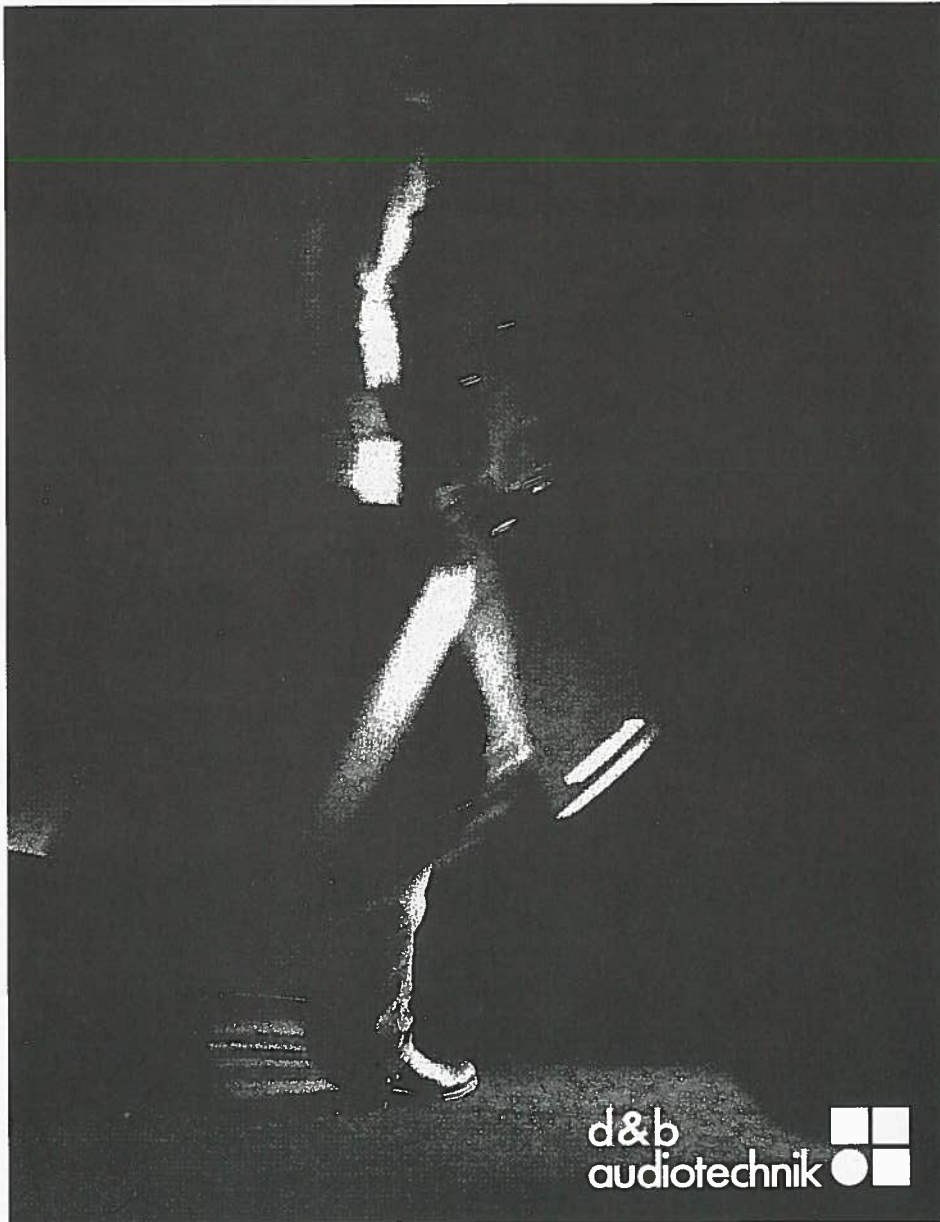
The restoration of an old theatre in Oporto will be undertaken with help from C Audio amplification and Turbosound loudspeakers.

According to Sandra Serrano of Caius Technologies, exclusive Portuguese-distributors for the two Harman brands, the Rivoli Theatre will be inaugurated in October. The installation has been carried out by Philips, an important trading partner of Caius, who chose a combination of the new STi Series and GB402 amplifiers which will be used to power a sound reinforcement system that incorporates the Turbosound TCS System, with TMW-210 monitors and Impact 80s and 120s.

Harman Group Buys Amek Systems

Harman Pro Group have purchased all remaining shares in Amek Systems and Controls Limited. Amek, based in Salford, designs and manufactures a range of professional mixing consoles for commercial recording, post-production, broadcast and live sound. Recent products include the 9098 analogue recording console and the DMS digital mixing system.

President of the Harman Pro Group, Philip Hart, told S+CSI: "Amek has a strong reputation and will complement the ranges of Soundcraft, Studer and Allen & Heath."



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A new product to be launched at this year's PLASA Show is the 'Shoplite' aluminium trussing system with integrated mains circuit from LiteStructures, designed specifically with the retail display market in mind. The mains track carries the power for lighting other equipment to wherever it is required easily and safely. It is complemented by a range of attractive light fittings and luminaires from the Concord Tubetrack I range. The 'Shoplite' system is versatile, quick to install, cost-effective and an important addition to the LiteStructures range of products, allowing a multitude of different lighting applications to be exploited both quickly and easily.

The successful launch of the LiteDeck system at PLASA last year demonstrated a need for an integrated design, rental and build service for the new products. As a result, LiteStructures will also be launching the company's new Rental Division at PLASA 97.

• LiteStructures - F10

Le Maitre are launching a new smoke machine, the S.T.A.R. Hazer, at PLASA 97. The company have recently patented a new way of producing haze, significantly reducing the end user price, whilst at the same time allowing the new S.T.A.R. Hazer to be used for over 40 hours continuously without re-filling the 2.5 litre container.

Le Maitre's range of pyrotechnics, used with great success for Garth Brooks' show in Ireland earlier this year, will also be on show. Brooks was so impressed that he has asked Le Maitre to fly to New York to repeat the show in Madison Square Gardens!

• Le Maitre - F18

Maltbury, who earlier in the year provided the staging for the Labour when they took on the mantle of government, will be showing the recently developed Steeldeck 7.5 - an upgraded version of Steeldeck. In the past, old-style decks, able to support 5kN/sq.m, have always been acceptable, but stringent safety rules now mean that 7.5kN/m² has to be achieved. Maltbury's new Steeldeck 7.5 system is the only one to meet these specifications.

• Maltbury - D14

Klotz, the Munich-based cable manufacturer, has expanded its range of cables and plugs for video cameras to include two new 75 ohm video camera cables - Klotz Triax II and Klotz Triflex II, plus top-quality Triax connectors. Both camera cable types are designed for professional use in broadcasting and television. Klotz Triflex II, with its additional high flexibility, is especially suited for mobile use. Both transmit energy and multiple image, sound and control signals simultaneously between the camera head and control unit.

• Klotz - R14

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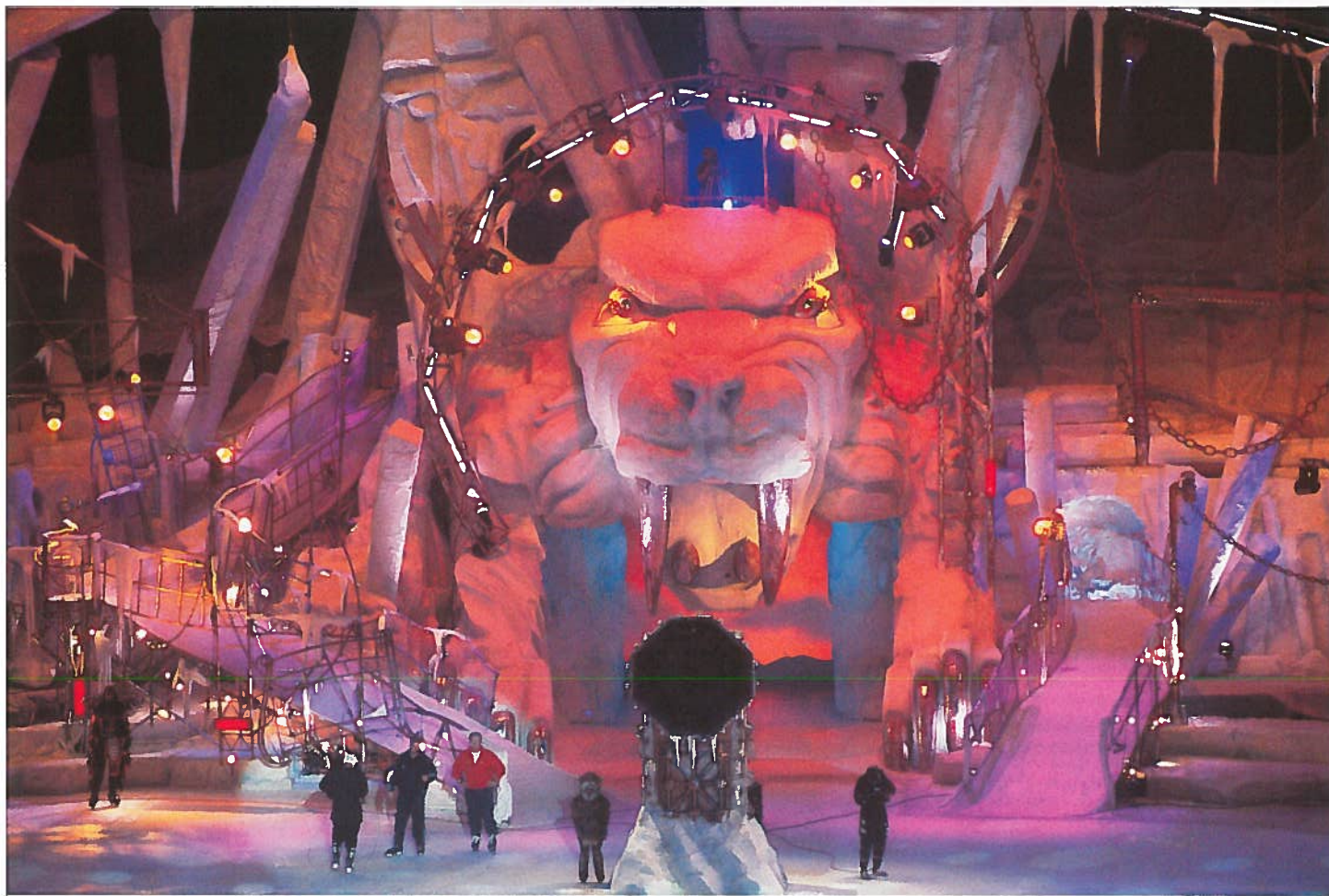
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ICE WARRIORS

Steve Moles reports from Manchester's Nynex Arena, where filming of LWT's new ice-bound version of *Gladiators* was in full swing



While Britain finally heated up and went on its summer hols, LWT were secretly scheming to seduce us with an ice cool confection bubbling away in the bowels of the Nynex Arena in Manchester. *Ice Warriors* is a Machiavellian conceit, the bastard spawn of *Mad Max*, *Conan the Barbarian* and a few hapless game show wenchies. Yes folks, this is good clean family fun - on ice.

Although not scheduled to hit UK screens until Jan/Feb of '98, the first nine episodes were recorded in a frenzy of spending during the appropriately surreal days of the August silly season. Action game shows like this one, and the now ageing *Gladiators* before it, are rather dull in the live arena. Like *Water-World* on Mandrax, *Warriors* tended not just to the wooden, but to the positively frozen stiff when viewed in the flesh. It was an impression backed up by a random half dozen of the 4,000 or so invited fans who were there to witness the recording and provide that all important whoopin' an' hollerin'.

But we are talking the most highly critical and perceptive audience here: average age seven - lower if you exclude the mums and dads - and they want their pound of flesh for the four hours they have to sit here and endure the tedium. It says much about the novelty of the presentation that a social group with such a

notoriously short attention span could be sustained by the action for so long. I'm chagrined to admit I even found myself smiling at the cod theatrics. But be assured, these kids know this is all so much hoo-ha, just as my generation did when we watched the antics of Jackie Pallow and Mick McManus. Despite the blood-drenched iconography of *Warriors* this is thrills, spills and laughter - not a strand of gore in sight.

The impact visually is stunning. When you walk into Britain's largest Ice Arena, a fair sight itself, you are overwhelmed by the sheer scale of *Warriors*. Whether the grandeur will translate to the small screen remains to be seen, but Andy Walmsley's set is monumental. Dominated by the mask of a sci-fi fantasy ice tiger four metres tall, one entire end of the Nynex - including right up the bleachers - has been taken over by a giant wall of ice. Built by Kimpton Walker, with rigging assistance from Unusual Rigging, the structure spans 40m and is 12m tall, a catastrophe of smashed and heaving icebergs interlaced with the trashed remains - twisted metal, rusted trussing - of a collapsed society. The scenario, and I'm quoting directly from the programme here, 'only three quid to you sire', is this: "In the early 21st century a cosmic disaster saw the destruction of the Sun. Darkness and cold

descended upon the Earth. Vast waves of ice, several miles thick settled upon the dying planet . . ."

Yep, you get the picture: that rather hackneyed post-apocalyptic scenario where only telephone sanitizers and hairdressers survive. It's the kind of set Anthrax would give their eye teeth for, but sadly it's only a backdrop. This is what's most worrying about the show - the action is a series of 10 games, essentially chases, played out on the ice rink in front of the set, the majesty of which barely registers in the essentially close-up world of the camera.

The games, or 'Challenges', as The Ice Master (Darth Vader in desperate need of a Locket) would have them, are a contest between two national ice hockey teams - on the occasion of my visit, Nottingham Venom and Sheffield Forgers - who pit themselves against the Ice Warriors. There are thrills and spills aplenty, but real physical damage is rare. Ice being what it is, Newton's first law always intervenes; if you've ever watched a fight in an ice hockey match you'll know that when someone lands a punch half the force of the blow is soaked up by the receiver sliding off in the opposite direction. Talking to the resident in-house doctor, Dr Sherman, he confirmed this: "We've been here a week now and at first



I thought there'd be the odd fracture, but I've had nothing to do really, just the occasional cut. The fact is even Zero Degrees, the spinning pole game, is so well padded they are unlikely to injure themselves. Winding is about the most serious problem."

Injuries aside as a production this is colossal. Although minimalist on the sound side (just the house system is used for what is simple communication with the audience, and nothing more is really warranted), LWT have really pushed the boat out with lighting. Alex Gurdon is the designer, he of *Saturday Live* and *TFI* fame, and he's been given a budget that must make his contemporaries green with envy, or at least that's what I first thought. "A nightmare," he cried and then quickly mellowed - after all, he was in the midst of lighting a Challenge he'd not seen before. "I must admit there's been no scrimping on the budget," he allowed.

The new and unseen aspect of the show is not unusual for a designer of Gurdon's experience, but the scale gives added pressures. "I was first approached about three months ago. I'd done stuff with Andy (Walmsley) before, so that was OK, but the set was so big and took such a long time to put up that we only had two or three days of programming before the show started."

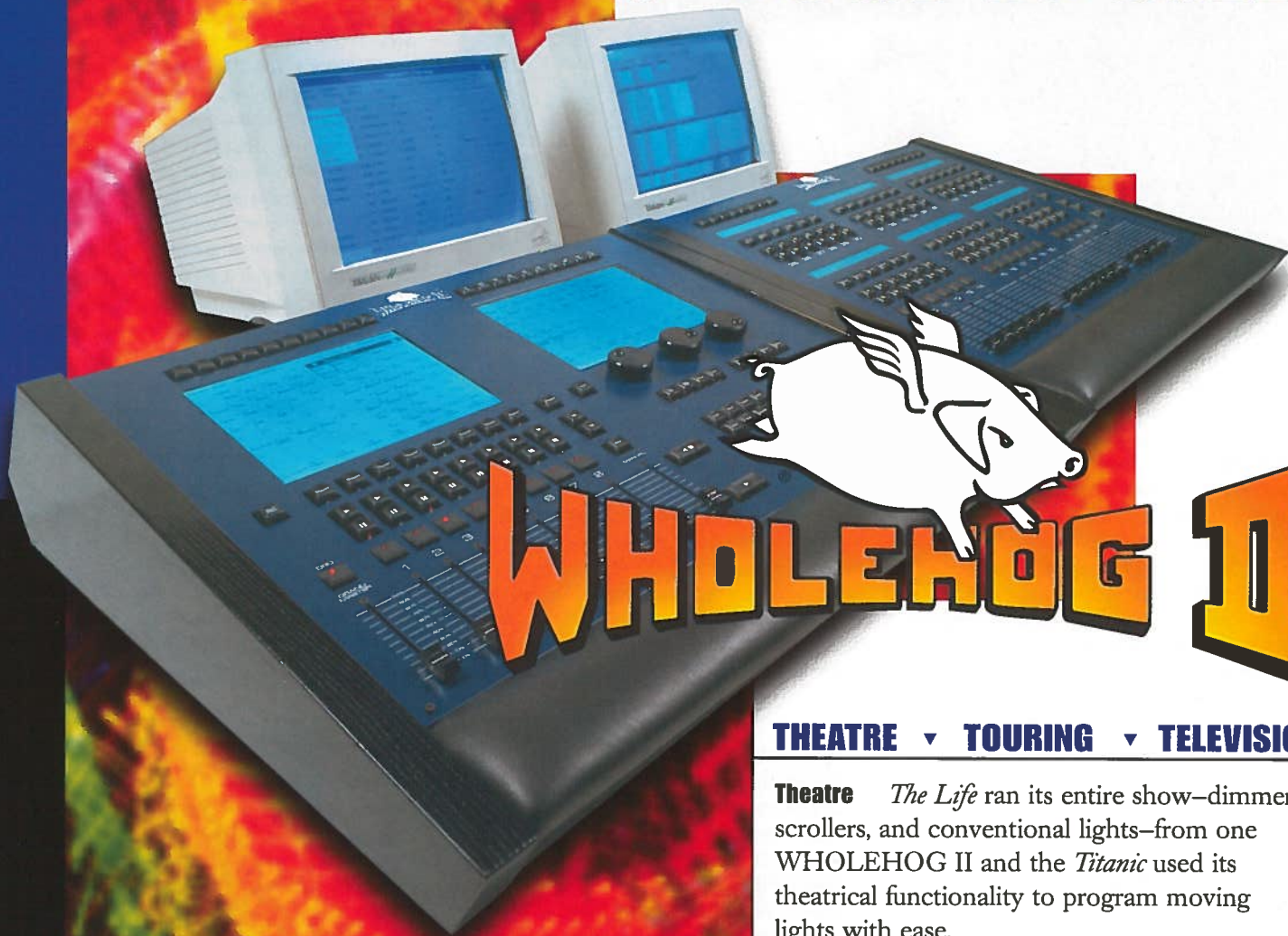
Load-in actually commenced on July 19th, with shooting following on the 1st August. If you cast your eye over the equipment list at the end of this piece, and then try and imagine 25% of it being integrated into such a giant set, you can well imagine the time problems this presents. It was a factor drawn attention to by both Nick Collier (Gurdon's TV gaffer), and Ian Twells (crew chief for LSD the main contractor), both of who looked suitably baggy-eyed from an intense period of lengthy fit-up days. As Gurdon said: "The biggest problem was the army of people who turned up each day with buckets of plaster and started building parts of the set in situ. The games are straightforward to light," continued Gurdon, "but anything open white on key people blows the effects."

And casting an eye over his shoulder at the monitor screen revealed the other challenge such an enormous lighting rig creates - shadows. Watching Gurdon feverishly at work throughout a four-hour afternoon shoot, not only was he creating on the hoof big looks for previously unseen games, but also constantly fighting with the close-ups for the between-game links where a shadow cast on presenter Dani Behr's face could come from any one of 100 light sources in a 1,000 different positions.

There were some blessings to managing this monster, something that Gurdon quickly and generously attributed to the team around him. "Oz (Mike Owen, Icon Show Controller operator and programmer) had this idea of having special gobos made for the Icons, of curves and straights, placed in the rotating gobo wheel. There are three different configurations of the rink for various games and Oz is able to paint them all directly onto the ice."

A simple device that has a secondary benefit to the production, the game change-overs are greatly speeded up as the scenery shifters now have a clearly defined boundary line on an

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otherwise featureless ice surface to work from when setting the new props. "It's also marvellous because it helps define a whole look for a particular challenge," enthused Gurdon.

The other great asset to lighting is also one of simplification. From the mighty list of equipment only two singular elements, the Lightning Strike and the Sky Art, are not controlled from the Icon board: dowsers, strobes, fluorescents, colour changers and everything else is. Although it has been possible for some time, this is without doubt the biggest collection of LSD's own Colormag system ever run from an Icon board: "We've got the whole Colormag family plus Chroma-Qs here," said Twells, "and they are all behaving themselves perfectly."

Oz himself described this aspect as: "Very, very good. Mark Hunt developed it and he's done an excellent job. Unified control is essential here because of the way we are doing the show. With the board the way I've set it up I can have all the different elements separate when I want to, but all acting together when I need to."

Gurdon picked up the thread: "There's 20 cameras on this and I can access just 12 of them on my monitor here. Not having to co-ordinate between a group of lighting operators makes life so much simpler. Having said that, every time a fanfare blows (to herald a new challenge) Oz and I lose a year off our lives." A casual quip that belies the pressure inherent in having to

look in 20 places at once, eight of which you can't see and have to imagine.

Apart from a fair chunk of gear focused on the audience, the lighting demands fall into four main areas: the set look, the rink look, the effect look and the close-up and, quite frankly, with sh*t everywhere, as they say, who'd envy Gurdon his job? Just as an example, let me cite the hockey dashers: at ice level there's a ring of MR16 Birdies, one every two feet, at head height shooting horizontally across the ice in close packed formation, there are 42 six-lamp bars of Par 64s. Directly beneath them is a full rink's length of Flexiflash (or 'sexy Arcline' as

Twells described it), whilst on three metre masts every 10ft around the dasher there is a collection of VL5s, eight-foot fluorescents, Par 16s and egg strobes - and this is just effect stuff to provide eye candy for the camera. "Where's that light on her face coming from?" did I hear you say?

Naturally, with such a large system it would be easy to lose sight of the big picture, or simply over-do it. Some of Gurdon's more subtle observations are what endorse his qualifications for the job. "With so much happening on the ice at high speed, I decided not to have any of the gobo patterns down on the rink rotating. That part of the view is busy enough." Simple enough, but with such a compelling environment for razz, jazz and matazz, easily overlooked. This may not be sophisticated entertainment, but that doesn't mean it can't exhibit a bit of light and shade.

Ultimately, Ice Warriors is schlock - good schlock, but schlock nonetheless. Curiously, it hails from Britain, not the US, the product of the imaginations of Julian Grant (Alpine Challenge, Superchamps) and Roy Scammell (stunts in the Bond movies and Rollerball). This may explain the slightly tongue-in-cheek Ice Master character, a steal from the ogres of pantomime. Don't misunderstand me, this is a professional show, but thankfully it doesn't take itself too seriously. Whether it finds success depends upon the fickle favours of five year olds, though if presenter Dani Behr can acquire the cachet of Ulrika Johnsson, that will no doubt help.

EQUIPMENT

9 x 72 channel Avolites Dimmers
 2 x 48 channel Avolites TV Dimmers
 90 x Icons
 40 x VL5Bs
 200 x Par 16 Birdies
 650 x feet of black truss
 720 x feet of silver truss
 1 x 14 metre silver truss circle
 70 x 1 ton Verlinde chain hoists
 320 x black Par 64s
 128 x silver Par 64s
 1 x 18 lamp (P64) Megapod
 20 x ETC Source 4 26 degrees
 21 x 5kW Baby fresnels
 86 x Par 36 Molefay

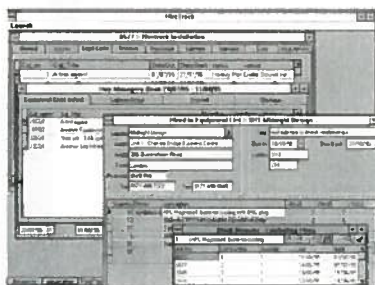
42 x Kino Flo tubes
 52 x four-cell ground row
 70 x Chroma Q colourchanger
 59 x Molemag colourchanger
 27 x Mini-Molemag colourchanger
 1 x Megamag colour changer
 16 x 12k Mags
 4 x G300 Smoke machines
 4 x DF 50 Smoke machines
 40 x 8ft Fluorescents
 12 x Diversitronics strobes
 200 x metres of Flexiflash (red, blue & clear)
 16 x 12kW HMI
 2 x Minulette 650W
 5 x Redhead 800W
 200 x Egg strobes



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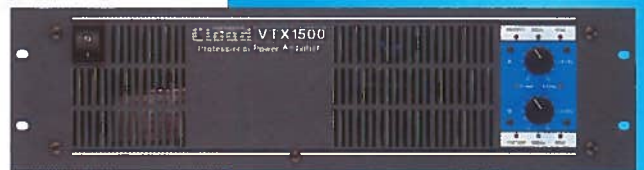
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GOING CLASSIC

Belgian superstar Helmut Lotti's third 'Classic' event was to be a far more spectacular production than his first two outings. Lee Baldock travelled to the Belgian town of Aartselaar to see how the job was done



In August, near the small Belgian town of Aartselaar, just outside Antwerp, Helmut Lotti went Classic. To our Dutch and Belgian readers, this news will come as no surprise, as the hugely popular young singer has already gone Classic, very successfully, on two previous occasions, but the remainder may need a little more explanation. Helmut Lotti is one of those home-grown phenomena that seem to spring up from time to time in Europe, enjoying superstar status in their own land, while creating hardly a murmur outside its borders. Beginning his career as an Elvis Presley impersonator, and a very good one by all accounts, Helmut, with his wily manager Piet Roelen, has proceeded to capitalise on the rapt attention of the Belgian and Dutch audiences with an unusual but very lucrative idea - Helmut Lotti Goes Classic.

What this means is that a number of famous old tunes are taken and adapted with modern lyrics. There are a few exceptions, notably his excellent rendition of Amazing Grace that appears in Classic III, but that's the general formula. The albums are recorded live and released along with videos and television specials. The story goes that the record company were so unconvinced by this idea that the terms negotiated were very much in the artist's favour. When the first album, Helmut Lotti Goes Classic, became an instant hit, a second album (Helmut Lotti Goes Classic II) was released and proceeded to go Platinum 10 times, with the result that Helmut Lotti and his manager are laughing all the way to the bank and, not surprisingly, going Classic again.

The difference with this, the third Classic outing is that, for the first time, the production



was to be given a spectacular lighting set. BRTN, the government-run Belgian television station that covers the concerts, had presented the first two Classics as simple, one-colour-set productions, with lighting restricted to that needed for visibility. So when the decision was made to enhance the visuals with some light and colour, BRTN called on the expertise of Flashlight Belgium. The new branch of the Dutch lighting rental company was officially opened as recently as June, and this was their first major production.

The setting for Helmut Lotti Goes Classic III is in itself spectacular: an ornate, mid-seventeenth century castle rising from a lake ringed with Weeping Willows serving as a picturesque backdrop to the floating pontoon stage where Mr Lotti and the 74-piece Golden Symphonic Orchestra were to perform. Lighting designer Michiel Milbou was asked to create a fitting atmosphere for the audience of 3,500 that would attend the concert on each of

three nights and, far more importantly, for the cameras that would record the show for the television and video coverage.

Milbou's task was to prove a frustrating one. The original site for the concerts was another castle entirely, where not only the stage, but the audience stands too, were to be positioned above the water. Milbou's plots were completed and the stands were being built before a safety inspector decided that things had gone far enough and he would rather see the audience seated further back above dry land: new audience position, new lighting plot. Helmut Lotti then decided that he didn't want to sing across 20m of water, and the stage was moved: new lighting plot. Then, with two weeks to showtime, the site itself was changed to Aartselaar so another new lighting plot was called for. After a frantic fortnight and three complete re-designs, Milbou and the Flashlight crew were set up and ready to go.

Milbou's initial idea had been that the concert would be performed as night fell, so that the atmosphere would develop from the half-light of dusk to the full spectacle of the lighting rig in the darkness. BRTN, however, had other ideas, as any differences in the daylight level would interfere with the editing of the show for television and video. The show was to begin and end after dark.

The floating stage which, along with the stand was built in one week by AllStage, is positioned a couple of metres from the castle wall, with four or five metres between the stage front and the audience at the water's edge. The castle is relatively small, and basically square in shape, so there were inevitably sections of the side walls and of the water's edge around the lake that were visible from certain camera

angles and to parts of the audience. Apart from the job of lighting the stage and the castle, Milbou's main objective was to provide the whole area with some depth and context for the audience and the cameras. "It's impossible to get good television pictures without backlight," Milbou says. "The cameras need to pick up the depth of the stage and the surroundings. When you light only the front of the castle, it appears as it would in a television studio. To bring out the depth I've used Arena Visions around the lake, with Wybron Coloram scrollers and dowsers, to light the castle walls. There are also floodlights on the trees around the water's edge, with some four-bars of Pars low over the water to give some reflection. On television, it is very easy for the water to appear black. The only way to bring it out is to have plenty of reflection, so this is what we have done.

Also, as the rear wall of the castle rises above the line of the front wall, Milbou has positioned four more Arenas inside the central courtyard,



LD Michiel Milbou is joined by the assembled Flashlight team. Standing, left to right: Ludo Vanstreels, Jimmy Stas, Michiel Milbou, Tammo Van Brakel of Flashlight Holland (crew chief), Dimitri Theuwissen, Shirley Arisiaman (followspot operator). Kneeling, left to right, Koen Thielemans and Philippe George (followspot operators).

to wash the walls, roof and the sides of the turrets. A number of 1kW and 2kW Fresnels were put inside the towers to give some light inside the tiny windows, although the Flashlight crew were not allowed to put them there. The castle, part of an extremely exclusive golf club, is apparently far too plush to allow just anybody to walk about in it, so the lights had to be given to the caretaker with instructions of where and how to position and connect them!

The main feature of the lighting rig was the 40 High End Systems Studio Colors, which were used as both backlight for the stage and to light the water and the castle walls behind it. Milbou used a row of 20 Studio Colors positioned along the rear level of the stage, just above the heads of the choir and musicians occupying the back row. These were used predominantly on the castle walls and the water, while four vertical bars along the back of stage held another five Studio Colors each, used over the stage area. Milbou explains: "I couldn't put a horizontal truss across the rear of the stage, because it would block the view of the castle. At the original venue, we would have been able to place lights on the building itself, but here, the structure is too unsafe. So I decided to do something with verticals. I found someone who could supply these narrow 10m high poles and we did it that way."

The uppermost four Studio Colors on each of the uprights are High End's new, improved 'S' version, with a higher colour temperature and output than the original Studio Colors. These

are a great improvement to a light with an already superior output, according to Milbou.

The front of the castle is lit with eight Molefay eight-lights with Colorams, with the horizontal row of 20 Studio Colors adding the extra colour washes and gentle dappling effects or pointing directly down at the water to the rear of the stage to create a strong, rippling reflection on the castle walls. There are three followspot towers behind the audience, left, right and centre. Again for the benefit of the cameras, the audience area had to be well lit, so Milbou positioned several Par 64 six-bars on each tower to cover the stand. Further six-bars and eight quite tightly-barndoorred Arenas with Coloram scrollers and dowsers were used as keylights for the orchestra, with eight ACLs as filler on the left and right towers.

At the top of each of the verticals, a Cyberlight was positioned to cover the stage area. The presence of these fixtures is also the result of the restrictions of the venue, as Milbou explains: "Helmut Lotti is the centre of attention and I needed to have a quite hard-edged backlight on him. There was

nowhere to put followspots at the rear, so we've decided to use the Cyberlights as followspots. We have a separate operator who controls their movement with a tracking ball. We rehearsed the idea and it worked very well - kind of like a manual Autopilot."

So why not the Autopilot itself? "We looked at the idea - we would have liked to use it, but the Autopilot system didn't really fall within our budget. Besides, our solution works perfectly well for this show. The stage is not particularly deep, and the music is all slow, so Helmut Lotti certainly won't be running anywhere and won't be moving up and down stage very far - just to the left and right."

The idea behind the whole look was that it complemented the 'Classic' theme of the show, says Milbou: "I didn't want to use any gobos or do anything flashy. This is classical music and it would be easy to make the lighting look too busy with movement and projections. I just wanted to create some atmospheres, and keep things easy and smooth, with an accent here and there - nothing hard or aggressive."

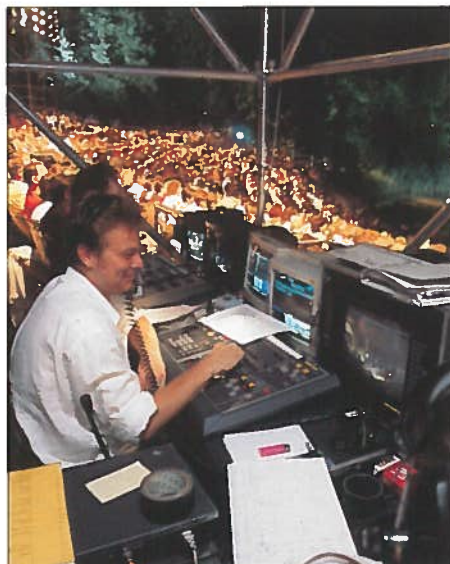
The show was due to run on the Friday, Saturday and Sunday nights, with the three following nights provisionally booked in case any of the performances were stopped by bad weather. The Thursday night, therefore, was to be the full rehearsal, but this also turned out to be a frustrating process for lighting designer and crew, as the organisers saw fit to sell 3,500 tickets for the rehearsal. The next day Milbou told me: "In a rehearsal I like to get on the stage and test the levels and see for myself how things are looking. That's what the rehearsal is for. But you just can't do that in front of 3,500 people."

Consequently, Thursday was a late night for Milbou and the crew, who spent the entire night doing what they had wanted to do during the rehearsal: "BRTN brought in a camera the night before last to show us how the levels were looking on screen. It showed that the castle was too bright, so on the basis of that we brought everything down a bit. But last night, it all looked dimmer than it had the night before, so we've stepped it all up again. I also thought that the lights on the trees looked too low on screen, so to bring these out a bit I've slightly reduced the followspot and keylight levels."

Another adjustment that Milbou was keen to implement was to change some of the colour wheel positions in the Studio Colors. He explains: "Some of the changes were too sudden. The quick change was being used largely as an effect, but it looked too jumpy for this show, so we've re-programmed to achieve the same colour, but using wheels the long way around rather than the short way. It makes for



The mixing position behind the stage in the castle courtyard, under the gabled roof.



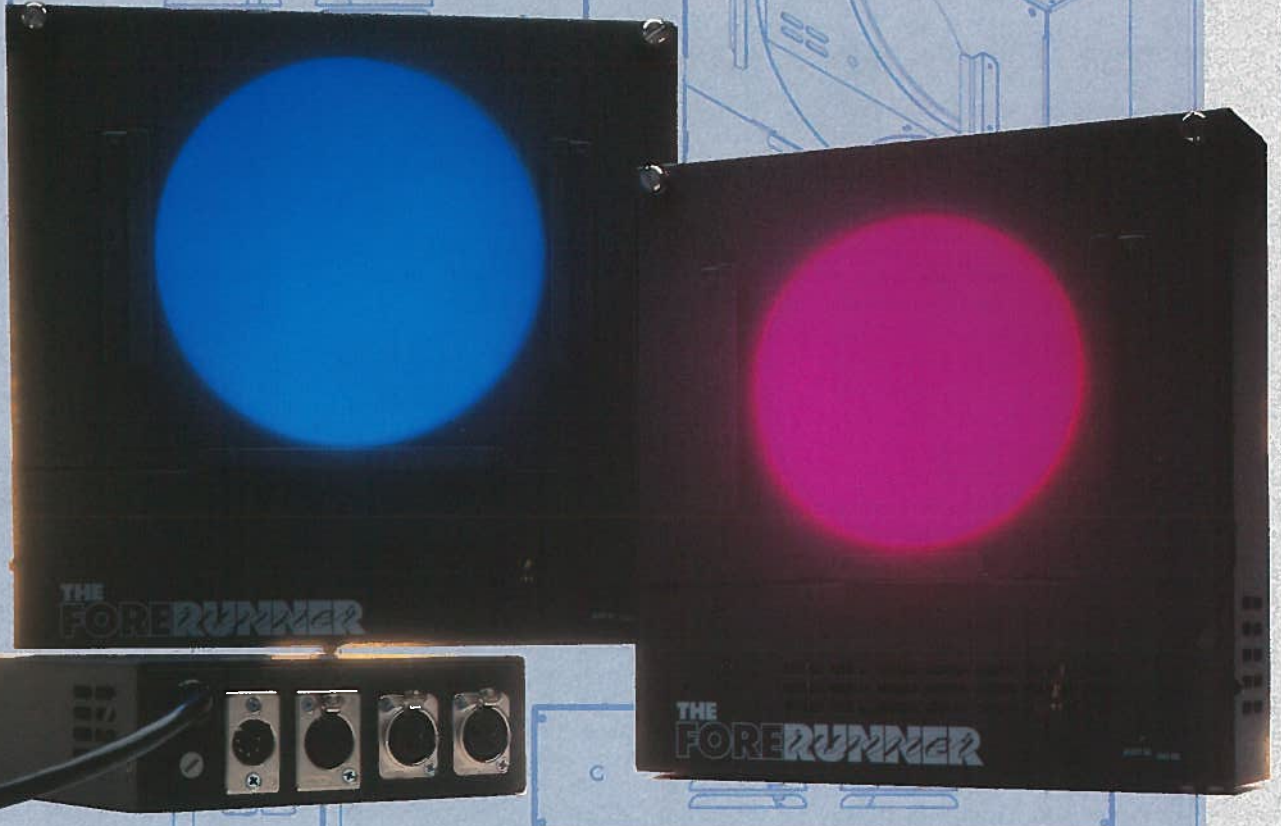
Lighting designer Michiel Milbou prepares for the start of the opening show.



An Arena Vision with Wybron Coloram scroller inside the castle courtyard.

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The long night paid off, and Milbou was much happier before the opening night's show. The Studio Colors were altogether more smooth and graceful in their movement between numbers, and the huge gasp and genuine applause of 3,500 people when they first opened up in blue above the assembled orchestra must have been a moment of great satisfaction for Milbou and the crew.

Control for this show is all Compulite: an Animator 72 version for the Studio Colors and the Arenas with scrollers and dowsers, with operator Dimitri Theuwissen at the controls, a Micron operated by Milbou himself running the audience lights and Par and ACL keylights, and a Compact for the four Cyberlight followspots, controlled by operator Jimmy Stas.

Whereas the lighting control was situated inside the centre tower front-of-house, the sound engineer was not so fortunate. Paul Rispens, whose company R&B were responsible for the sound system, was to be found at his console inside the castle courtyard, sheltered under the gable of the front wall - the only dry place where it was possible to set up the 'front-of-house' position. As Rispens explained, the situation was far from ideal: "Luckily, we've had several days in which to set up and rehearse the system. I've spent three days running backwards and forwards to adjust the delays and EQ of the system."

The sound situation is further aggravated by the television aspect of the production, as there were to be no loudspeakers visible to the cameras. This meant that Rispens was forced to opt for a system which was spread out around the site, with the speakers separated from each other, so every speaker had to be separately adjusted and EQ'd. The system comprised eight self-powered Axys loudspeakers (Mini-Arena T-2112s) and eight of Rispens' own custom-made 2 x 15" cabinets, utilising drivers from Precision Devices, which are positioned on the towers. Four Axys units are positioned at the extreme left of the stage, out of camera shot, with 16 Axys B-89 subwoofer cabinets hidden under the audience seating. Rispens continues: "The orchestra basses are miked with dynamic microphones, so it's difficult to amplify. If we have the bass under the audience rather than hidden on the stage, we can get far more gain. It's crossed over at about 80Hz and



time aligned, so the bass is there when the rest of the signal arrives from the PA system."

Rispens is a very highly respected sound engineer in Belgium, and his ability is plain to see. Apart from making his own bass cabinets, he has also devised a home-made in-ear monitoring system, which is here used for the 20-strong choir. He explains: "The in-ear monitoring we made ourselves, using Sony ear moulds, which you can buy with a personal stereo, and Behringer Powerplay headphone amplifiers. The ear-pieces are attached to the AKG headset microphones that the choir use, and the IEM is run through a small Soundcraft Delta desk."

The front-of-house console in use for this show was an unusual one, as Rispens explains: "I'm using a DDA DMR-12 console, which I bought second-hand. It's a studio console, not a PA console, but it's great for classical music because it is very quiet, and sounds very nice. I've built a special flightcase system for it, which is reinforced with steel, because it just isn't meant for life on the road. The only disadvantage with the desk is that it is completely manual: there are no VCAs, no mute groups, so that's a little bit tricky."

But the DDA's days on the road are numbered. R&B have recently purchased a new Yamaha PM3500 which will be assuming front-of-house responsibility from now on, while the DDA console will be restricted to television work, of which R&B undertake a great deal.

Microphones on stage are mainly from Sennheiser (MKH-40s) and Neumann (KM-84s), serving the larger part of the

orchestra, while the main vocals, both of Helmut Lotti and of guest singer Alice Libell, are from Sennheiser (SKM-5000s). A mixture of Electro-Voice and AKG units service the remainder of the instruments, while the aforementioned AKG headsets are used for the choir. The monitor speakers are from RCF - 18 of them are positioned at the front of the stage in small, unobtrusive raised blocks, run through a Soundcraft SM12. Monitor amplification is from Citronic PPX-1200 and QSC EX-1600 amplifiers.

On the day of the rehearsal, when it came to estimating the degree to which the audience would absorb the sound once the empty plastic seats were filled, Rispens employed some very educated guesswork. "It's difficult to know the degree to which the sound will change. It's a little harsh at the moment, because the plastic chairs are reflecting it all, but I have taken this into account and when the audience are in place, I anticipate that it will be much smoother," he said. As it turned out - true to his reputation - he was absolutely spot on.


To get the full effect of this production, you'd have to watch it on the television or on video. The repeated halts and re-starts throughout a show which is being recorded both for television and for a CD release were to be expected, but it was nevertheless frustrating to watch. The rather intimate setting of the castle and the stage and its proximity to the audience is, as ever, transformed by the camera to appear as a far bigger, grander show than met the eye, and Milbou's graceful use of the Studio Colors will only be fully appreciated when the show is seamlessly edited together, without the abandoned starts, fluffed lines of introduction and frequent halts for directors, technicians and make-up girls to nip onto the stage.

Whatever you may think about this type of artist, Helmut Lotti does have an undeniably good voice and, despite the fact that it is virtually impossible to pin down anyone who will personally admit to liking his style, on the night, the audience were besotted with him. And they loved the lights, which received, if not the rapturous welcome given to Helmut, then at least half that.

All the signs were that the first of his Classical outings to employ the services of a lighting designer and a dynamic lighting rig was the best to date.

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ALL THAT JAZZ

Rob Halliday catches up with award-winning musical Chicago on Broadway

Premiered on Broadway in 1975, the musical *Chicago* never really became a smash. The reasons are hard to pin down because certainly the ingredients were right: the show was written by John Kander and Fred Ebb, of *Cabaret* fame and directed and choreographed by the legendary Bob Fosse in his distinctive, unique style. Perhaps the stresses in its creation were too great: Fosse suffered a heart attack early in rehearsals and the production had to be put on hold until he recovered - an incident he later turned into the basis of his autobiographical movie, *All That Jazz*. Perhaps the timing was wrong and a post-Watergate America wanted a more optimistic show than *Chicago's* dark story of murderesses trying to play the system to win their freedom.

Whatever the reason, it was the more up-beat *A Chorus Line*, launched at around the same time, which won all of the plaudits and most of the Tony Awards that year, and then set off on a record-breaking 13-year run - an achievement only beaten this year by *Cats*. *Chicago* vanished from Broadway after a respectable 900 performances - yet somehow without ever having the aura of a hit. And then as the British musicals wandered into town, its life as showbiz story told using dance style - Fosse's technique of creating a show in his style rather than being subservient to the show - went out of fashion.

In 1994, the City Center, a not-for-profit theatre in New York, started a series called Encores! The series was created to present rarely-heard American musicals in concert versions with the cast carrying scripts, minimal staging and some lighting for a few performances each. The series has been meeting with great acclaim, partly because of the excellent quality of performers they attract - since they are committing to a rehearsal and performance period of just two weeks, and are even paid for their work! Inevitably, the series eventually turned its attention to *Chicago*.

To bring the production to life, director Walter Bobbie and choreographer Ann Reinking (who also performed in the concert, and was in the cast of the original production) turned to set designer John Lee Beatty, costume designer William Ivey Long and lighting designer Ken Billington. Their intention was to keep their work simple: Beatty designed, essentially, a black box with the band on a tiered seating block that occupies most of the stage and a performing area just 12 feet deep downstage of them. Long designed outfits in the established Fosse style - predominantly in black and completely provocative - whilst Billington set to work trying to tie the whole show together with light.

The main problem he faced in the concert version was the limited time available. The schedule established by earlier concerts called for the scenery and lighting fit-ups to happen in eight hours on the Thursday before the concert, with focusing on Friday and then the lighting of the show on the following Tuesday. "*Chicago*



was a little different in that they had to do a sound check on Saturday, so we brought in one more person to run the board and got a jump on the show," Ken Billington recalls. That extra time was fortunate; to help him get light to areas quickly, he designed three Vari*Lite VL6s and one VL5 into the overhead rig with five Intellabeams on the circle front.

To control them he brought in a new addition to his favourite Obsession console: ETC's prototype 'ML' moving light software, though without the associated ML control surface. That meant a new learning curve: "When we started I didn't know the new software and neither did the programmer. We started the opening number at about 9.30 and by 10.30 when we were about 12 cues in and the show was going to be about 140 cues, I thought the two of us were going to kill each other, fighting over which button to press! But at the end of that number we both figured it out at the same moment and then we sailed through the show."

The lighting designer then had Sunday off, Monday to watch the company rehearse without lighting, Tuesday to work as the company rehearsed with the orchestra, a dress rehearsal to an audience on the Wednesday, and then the show proper. All concerned remember the result as being incredible: "at the dress rehearsal nobody knew what to do because of all the cheering at the end of numbers that play on - so they would start the dialogue and nobody would hear it. It was phenomenal." So phenomenal that the decision was quickly made to transfer the production to Broadway.

This presented the creative team with a dilemma - to hope that the 'concert' formula would work over a longer run, or to scale the show up into a full-blown production - of the kind that had failed 20 years earlier. Ken Billington now claims that there was never really any thought of putting in large-scale scenery, and the Broadway production of the show is now very much as per the concert - though the cast no longer carry scripts! The lighting is also very similar: "I took the followspot plot from the concert, and that's what we still use. I took the disk from the concert, and 80% of what we do now is probably what we did then - there's an extra boom we didn't have, a few cues have been changed and we've done a lot of tidying up. But that's all."

As it stands now, the rig in New York and on the National Tour currently travelling around America consists of nine overhead lighting bars, three lighting towers hidden in the wings each side, and three on-stage booms per side each carrying very visible Source 4s and with old R40 floodlights half buried in the showdeck at their base, all reinforcing the 'showbiz' feel of the show. There are also around 75 lanterns, predominantly Source 4s, front-of-house. The upstage part of the overhead rig contains Par 56



"Mood changes are brought about by changes in colour - the spectrum running the full gamut from the open white matching those naked Par bulbs to red for the 'murder' moments . . ."

battens giving colour washes to the band area while downstage of that is a bar full of Source 4 Pars. Downstage of that is a collection of Source 4 profiles providing sharp toplights, backlights and gobo washes into what is still a relatively tiny downstage performance area. Many of the lanterns are topped with Wybron ColorRam 4" scrollers, to give extra colour options. And then there's that tiny moving light rig - three VL6s and one VL5 overhead, supplemented by five VL5s on the circle front in New York. "I put the one overhead VL5 in because I didn't know where I was going to need specials," Billington recalls, "so I put it in to be my first pipe special, which is exactly what it is. The VL6s are there for backlight - the idea being that we would be punching up areas, and that's what we do with them."

There are a couple of other tricks built in: a line of hanging open Par lamps that fly in to provide individual toplights to dancers in the Cell Block Tango number (though the visible light sources are actually backed up by overhead 10-degree Source 4s giving tightly controlled light pools), and a motorised light-curtain that drops in late in the show, rotating from horizontal to pointing vertically

up as it does, to give a strip of light that the dancer's play their hands in.

For the tour, relit by Billington and his associate John McKernon, there's the added complication of moving and focusing what is a very precisely set rig on a regular basis - a task masterminded by production electrician Jimmy Fedigan and touring master electrician Kurt Illinger and his team. As is standard in America, the lanterns tour pre-rigged on a mixture of 10', 8' and 4' lengths of Unistrut, with the sidelighting towers also being Unistrut constructions. Power runs through multicores from three 96-way touring dimmer racks, one an ETC Sensor rack and the other two older ETC/LMI racks. These run the whole rig including the front-of-house lanterns, though Illinger notes that many US touring theatres now provide patching systems that allow power to be fed front-of-house without resorting to unsightly multicore runs. Control for the dimmers, moving lights and 70 ColorRam scrollers is once again provided by an Obsession running the ML software, this usually positioned in

one wing for the run of the show in a venue, another standard American practice. To aid relighting in each venue, the show does tour enough Ethernet cable to allow the desk to be positioned front-of-house and connected to the dimmers through the ETCNet network system in each new venue on the tour. The rig was supplied to the tour by Four Star Lighting.

Four Star actually supply one-and-a-bit lighting rigs, since a semi-complete duplicate rig and one dimmer rack get sent to each venue in advance for pre-rigging, this allowing the set and the rest of the electrics to be installed as quickly as possible once the three trailers the show travels in complete their long cross-country journey. The electrics team then just have to complete the focus - the precision required in the downstage area being accomplished with a measuring tape and some tiny reference marks surreptitiously added to the showdeck during the production week - and update the moving light focus (by updating some position groups and then running macros to update the rest of the show) to be ready to go.

In performance, the lighting pulls off a remarkable trick. In the opening moments of the show, it appears that it isn't actually doing that much, simply illuminating the action and using the front followspots, led by Sean Fedigan, to pick out the principals in time-honoured concert manner. But it quickly becomes apparent that, in lieu of scenery, the lighting is doing all the work in defining mood, location and atmosphere. It is helped to do this by being made visible by the fantastic haze that hangs in the air throughout. This is generated by an MDG Hazemaster that is run before the show and in the interval, but then hangs evenly in the air without the swirling or patchiness that

affects some haze effects - though it is supplemented on a couple of occasions by the cigarettes carried on stage by performers!

Mood changes are brought about by changes in colour - the spectrum running the full gamut from the open white matching those naked Par bulbs to red for the 'murder' moments, but the colour washes are always beautifully focused and by using Par battens, all of the atmosphere is lit rather than just stripey patches of it. Further variations are then supplied by the many angles Billington plays with, the low gobo cross-lights and soft-edged sidelights onto the crouching dancers being particularly fascinating. The show even lets rip towards the end, with razzmatazz spectacle supplied simply, but effectively, by a slash curtain and two mirrorballs. But above all there are no flashy tricks included for the sake of flashiness: the lighting is always clean and decisive, never muddled about what it is trying to do and it, like the simple set, lets the performers - "the best dancers in the business," Billington notes - get on with telling the story.

There are obvious homages to the lighting on the original Fosse shows - the light curtain, in particular, being reminiscent of Jules Fisher's creation for the opening of *Pippin*. In some ways that's only fitting, since the production has been deliberately choreographed by Ann Reinking 'in the style of' Bob Fosse. But Ken Billington notes that, just as the dancing is 'in the style of' rather than being a re-creation - "it's been exaggerated as time has gone on. It's what you think Bob Fosse did, but Fosse wasn't as busy, as complex as the memory has him," - so the lighting is also something new. "I did see the original. I liked the original. But, just as has happened when I've had my shows revised by other people, this isn't better or worse, it's just a different version. The hard part is getting past what the original vision was."

The new version has received praise from the creators of the original: "on the opening night Tony Walton (the original set designer) went on for 15 minutes about how brilliant the show was. He cried. Jules Fisher also called me and told me how fabulous he thought it was. It's nice when your colleagues have a good time."



And nicer still when they recognise the quality of the work, as they did when awarding Billington the 1997 Tony lighting award for the show, an area where the original lost out to *A Chorus Line*.

Most importantly, for Billington, it's been fun: the collective work of a group of people honouring someone they respected and loved enormously. Even if their enthusiasm has caused some practical problems - such as the need to build a separate warm-up area beneath the stage so that the dancers arriving an hour early to warm up didn't interfere with the crew carrying out a rig-check on stage!

Their reward is that a classic musical has been returned to an audience who clearly appreciate and enjoy it - and an audience that is rapidly increasing, with the Broadway show established, the National tour booking for the next two years and more companies due to appear soon. Including, later in the year, one in London.

Is Britain ready for all that jazz? I hope so . . .

Photos: Dan Chavkin

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SHOWLIGHT 2001

Following the outstanding success of Showlight 97 in April this year, the organisers are now seeking a venue for Showlight 2001 in Western Europe.

Showlight, a conference for lighting designers and technicians working in any form of entertainment technology, is organised by the British National Illumination Committee and is held every four years at a different venue.

The working language is English so the venue must be in a city organised to welcome such visitors. The essential requirements are a comfortable lecture theatre for 250-300 people; an adjacent exhibition area of about 1,000sq.m; a number of local attractions of interest to theatre, film, concert and TV lighting people; adequate accommodation in hotels and/or university hostels and an enthusiastic local liaison team to work with the British organisers to add the local knowledge, traditionally essential for the success of this event.

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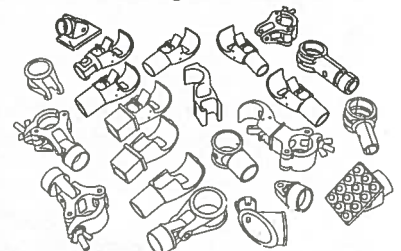
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SEMINAR PROGRAMME: PLASA 97

MAIN SEMINAR STAGE

MONDAY 8TH SEPTEMBER

12.00PM: BECOMING A LIGHTING DESIGNER

The Association of Lighting Designers host an in-the round forum with working lighting designers to discuss the route to becoming a lighting designer. The forum will assess the value of experience as a lighting technician, the options for getting started and what vocational training has to offer. LD Mark Jonathan of the National Theatre will lead the discussion.

15.00PM: SYSTEM INTEGRATION

Systems Integration, for so long the sleeping giant of the pro audio industry, looks set to become one of the most significant new markets of 1997. Audio consultant Dave King of the DKT Group leads a discussion on the potential growth in intelligent and total control of an environment.

TUESDAY 9TH SEPTEMBER

12.00PM: THE LIFE

The new Broadway musical, *The Life*, has a unique claim to fame - it is the test ground for a previously untried combination of lighting control systems where two Wholehog II controls and WYSIWYG software are used to control 37 Vari*Lite VL5B and VL6 moving fixtures, 300 conventional instruments and Wybron colour scrollers. This development grows from experiments in moving light control that LD Richard Pilbrow first demonstrated at the PLASA Show in 1995 - he returns to the Show to talk about his work on *The Life*.

15.00PM: WHAT SCREEN?

A panel of leading manufacturers and installers, chaired by Peter Lloyd, editor of AV magazine, will discuss what display technology can achieve and how it can create new business opportunities. The panel will also examine current technologies and also look to new developments and future applications.

WEDNESDAY 10TH SEPTEMBER

12.00PM: EXISTING AS AN LD

The Association of Lighting Designers continue their discussion, this time considering the 'nuts and bolts' of working as an LD, taking in such issues as the usefulness of agents, contractual matters and whether billing is important. Once again, LD Mark Jonathan of the National Theatre leads the round-table discussion and will be joined by a number of high profile lighting designers.

15.00PM: THE NATIONAL LOTTERY - CATALYST OR CATASTROPHE?

One of the main talking points at the moment is Lottery Funding and Graham Walne will chair a panel including Michael Holden from the Globe Theatre and Jeremy Newton from the Arts Council to assess its impact on the arts today and into the future.

WESTMINSTER ROOM

MONDAY 8TH SEPTEMBER

11.30AM: CDM - THEORY AND PRACTICE

Safety consultant John Revington seeks to shed light on the CDM (Construction: Design and Management 1994) regulations evaluating their implications for the industry.

14.00PM: 15A VS 16A PLUGS AND SOCKETS

Andy Hales from Theatre Projects Consultants and Mark White from the Royal Opera House will lead the ABTT discussion on whether new and refurbished venues should be fitted with 16A socket outlets to BS4343/EN60309-2 for stage use.

TUESDAY 9TH SEPTEMBER

14.00PM: WATER TIGHT SPECIFICATIONS - SCIENCE OR PSYCHOLOGY?

Alan Bond of Audix Communications offers a pragmatic look at the creation and enforcement of specifications: identifying the client's needs, meeting the safety standards with a dual purpose system that pays back every day, the double-edged sword of new technology and the dilemma of the finance chief who views it as a grudge purchase in the first place.

15.00PM: BUILDING VOICE ALARM SYSTEMS

Doug Mason of Planned Equipment Ltd considers the scope of Voice Alarm systems from the viewpoint of installer and the manufacturer. He offers an overview of a typical VA system considering the implications of the need for total integration, costs involved and the need for clarity in system specification.

16.00PM: WHO STOLE MY SPL?

Terry Billau of Electronic Services considers the factors involved in predicting SPL and demonstrates that there are many pitfalls for the unwary. He examines the signal path from talker to listener and identifies the reasons why results may not always meet our expectations.

WEDNESDAY 10TH SEPTEMBER

12.00PM: AUDIO TRAINING

Few colleges and universities offer training for audio engineers. Lecturers from some of the key courses across the country offer their perspective of the role of training, its usefulness in securing work and the opportunities now presenting themselves for those who wish to pursue a career in sound. Jon Thornton from Liverpool Institute of Performing Arts, chairs the discussion.

15.00PM: LIGHTING TRAINING

Nigel Morgan and Nick Hunt, tutors at Rose Bruford College, the first to offer degree courses in Lighting Design, are joined by television lighting director Bill Lee who lectures at Ravensbourne College and Duncan Sones of the Arts & Entertainment Training Council to discuss whether courses for trainee LDs equip them properly for a future in lighting design.

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This column will be a monthly diary piece in the genre of AA Gill, AN Wilson, Nigella Lawson, John Diamond and others but not Samuel Pepys, in that it will simply comment on items which have festered in my brain during the previous month and is therefore not intended to be a chronicle of the last month. Nor is it a gossip column in the mode of Taki, or Nigel Dempster so you can put the writs away.

First up with this new column, is the Mac - the Apple Mac that is. Many creatives in the business will be heaving a huge sigh of relief with the news, that like it or not, Apple is to be baled out by Microsoft and that software continuity is, thus, guaranteed. Among those sighing will be Richard Pilbrow and all those who have been trained as ops by Vari*Lite and many others I am sure.

I have been feeling my age in the past few weeks with the seemingly endless news of my peers changing careers or, at least, moving on to pastures new. The most news worthy of these has been Tony Marshall, late operations director of Rank Entertainment and BEDA founder chair person, and John Conlan, who recently departed from the helm of First Leisure. I go back a long way with both these guys and I remember taking Tony Marshall to Studio 54 in New York which he considered a seminal experience and a defining moment in his career. Now he has become the senior Redcoat in the recent broom-sweeping of the upper echelons of the Rank Group. Out of the frying pan and into the fire, I would have said, though quite an achievement for an ex-DJ. Having cast off the red coat as one of his first moves, I can tell from the press comment and the very public problems which have beset Butlins coincident with Tony's arrival, that the job is proving every bit as challenging as I envisaged.

Still, for a man who will run a marathon at the drop of a Nike, he should prove equal to the task. I hope he still finds time for the running, but not for the running away. I was planning to say 'never write Conlan off', after his forced retirement in the wake of Michael Grade's arrival from Channel 4. Then I read that Nick Tamblin has also taken a hike and I started adding two and two and making five, when I read the news that both were making a bee line for the Trocadero and not to play on the Sega games either. Well won't that coupling be interesting to watch; if any one can sort out what has become a major disappointment right at the heart of London's centre of tourism, it's these two guys.

On other significant personnel changes, and drawing a veil over ones closer to home, High End have scored a major coup grabbing Marcel

Fairburn from Martin USA and with the addition of Dave Wiseman, ex Obies, have considerably beefed up their West Coast operation.

While on America, I find myself increasingly envious of the undertakings of our sibling organisation in the States, ESTA. Their moves on the protocol and safety fronts are to be much applauded, as is the support structure for members. PLASA has graciously been given the opportunity to sit in on these deliberations, which is probably more than we deserve in view of the aeons of hot air which preceded their interjection from this side of the pond. Lori Rubenstein et al deserve our congratulations and sincere thanks for tackling the tasks which we seem unwilling or unable to encounter.

"On the plane, I read Bono's pessimistic comments about the future of stadium gigs which, if correct, would be extremely damaging to our industry."

Another organisation which is also going places is the aforementioned BEDA, which few in the industry took seriously enough at the outset, but which subsequently proved to be very effective indeed, while adding a considerable kudos to Disco Mirror which, otherwise, had been a late arrival at the ball.

A series of very clever moves has made BEDA a highly effective organisation doing substantial work on behalf of its operating members. Its latest fund-raising ploy is a case in point. Realising the difficulties music companies have getting their releases played in the clubs, and the high cost and waste attached to that, BEDA have announced the White Disc. Each month they will release a CD to their members, thus screening out non-club spinners, containing 10 of the latest releases.

A monitoring system will be operated with the DJs so that the producers get some useful feedback, and the fees paid by the record companies go to boost BEDA's finances. A great and very creative idea.

I'm sure PLASA is in a very strong position to capitalise on the current strengths of the industry and would hope to see new initiatives flow from the Association in the months to come. No doubt, there'll be much to talk about at this year's PLASA Show.

For my sins, I was in Gothenburg last week in uncharacteristically sweltering heat which had the Swedes wilting and yours truly bitching about the lack of aircon in the hotel bedroom. (In Miami the week before I was turning it off because it was getting up my nose at night!).

The visit was ill-timed to coincide both with the Goths versus Rangers euro-football tie (3 nil to the Goths) and a Michael Jackson concert at the same stadium two nights later (so nor was it possible to keep the window open!). It struck me that 'Blood on the Dancefloor' was a singularly dodgy title for Twinkletoe's current album, and for the name of the tour for that matter. Having warned all my friends to make sure that they checked that they had all their offspring with them on the way out after the concert, I headed for the airport before the event.

On the plane, I read Bono's pessimistic comments about the future of stadium gigs which, if correct, would be extremely damaging to our industry. I hope that this was just attention-seeking in an effort to sell any vacant seats for U2's Wembley gigs at the end of August. We would all be struggling very hard if we had to survive on nothing but low budget tours from artists nursing damaged egos such as MJ.

Then there was A. Lloyd-Webber predicting the demise of the mega musical. Dear, oh dear, what are we coming to . . . and then The Stones confirmed yet another world tour - argghhh!

It is sad to have to record the demise of The Hacienda in Manchester, which had a major influence on the UK scene for a generation, perhaps as long as any such venue should survive. After all, the greats of Manhattan which started it all have long since gone to the great disco in the sky. Otherwise, you end up having to do things that only the Corporates would entertain, as witness rumours of a hook-up between First Leisure and The Ministry of Sound, and that should not be the role of those whose raison d'etre is to shake us up.

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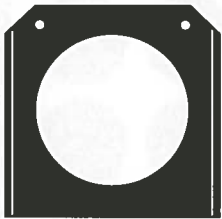


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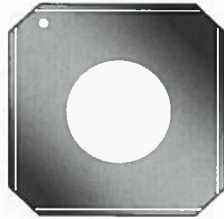
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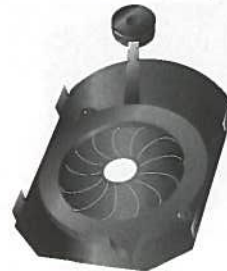
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VIKING INVASION

Ruth Rossington travels to Oslo where some very high tech audio-visual technology is redefining the past

I know only two things about Vikings: that they filled many hours of classroom time during my formative years (though much of what I learnt has since been forgotten) and that they are all called Thor or Odin. Armed with this deep and incisive knowledge, I headed off to Oslo to join with local consultant Ketil Nissen-Lie to discover more about the Viking way of life.

Though flagged as a theme park, VikingLand is nothing like the traditional concept of a themed attraction and couldn't be further removed from the Disney-style approach to family entertainment. What the owners Norges Parken have created here is a living Viking community peopled by actors and local students, who recreate for the visitor life as it must have been lived 1,000 years ago.

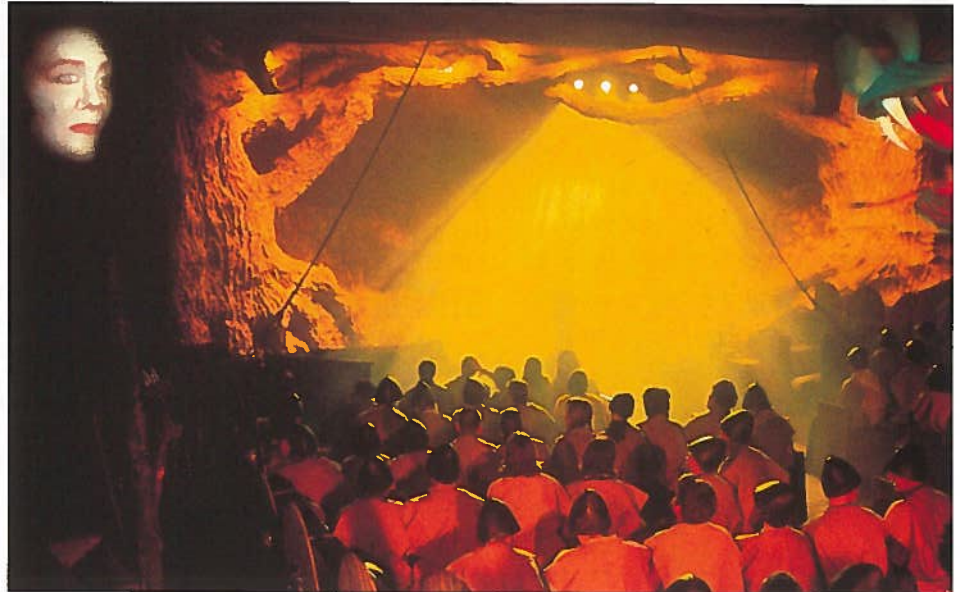
Kitted out in rather fetching hessian sacking tied on with bits of string (I drew the line at the helmet), visitors are free to wander the park, have lunch with the Earl's family (grilled salmon à la Sigurd with bark bread), watch the local blacksmith at work or knuckle down to a bit of axe throwing (it would have been so much easier if the hessian hemline hadn't got in the way). It's a wonderful way to spend an afternoon, leaving one with the sense that the Vikings were a gentle race of people going quietly about their crafts and living in an ordered and happy community.

Not good enough - where was all the raping and pillaging going on? Well, not too far away as it happens, because the final part of the journey brings the visitor to Toktet, a multi-sensory, audio-visual Viking voyage scripted, designed and installed by attraction specialists Sarner International and, in truth, the real reason for my trip to Oslo.

The Voyage is set deep within a vast man-made cavern hewn out of the cliff face that provides a natural border to one side of the park. Before the technical elements of the project could kick in, Sarner actually had to excavate 25,000 tons of rock - a first for the company I believe, and who knows, perhaps Peter Sarner may add a construction division to his London base. Whilst the excavation work was taking place, other members of the Sarner team, led by Ross Magri, were hard at work in the UK, pre-manufacturing part of the system which was then shipped to Oslo for installation.

What they have created deep within the bowels of the cliff is a real jewel - a full-size Viking ship floating on a pool of water in which visitors journey back in time with Leif Ericsson, the man who, according to Viking legend, discovered America (though Mr Columbus's supporters may dispute this). Sarner are, of course, known for the design and build of automated theme and heritage attractions, so their contract included everything from initial concept and design, to theatrical sets and scenic construction, technical systems and audio visual engineering, and creative programme production.

Working with Ketil Nissen-Lie, the company



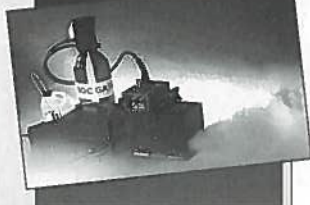
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devised a story that captures the stronger spirit of the Viking people and, in particular, traces their dramatic sea voyages. It reminded me somewhat of the style of presentation that is often to be found in national pavilions at World Expos, though on a much more sophisticated level. Whereas in other instances, budgets have been a restricting factor, Berit Kjöll, MD of Norges Parken and the driving force behind VikingLand, was willing to dig a little deeper into the corporate coffers to fund this unique attraction. It was well worth the investment, for it financed nine-channel surround sound, spectacular lighting arrays, wide screen multi-image projection, motorised scenery, motion engineering and 3D theatrical settings. In addition, there are some truly remarkable special effects which include a dramatic sea storm (complete with wind and water), a giant animated Midgaarde Serpent, and a life-like one-metre high talking head of The Volva - fast becoming a Sarner speciality.

Thousands of hours of conceptual planning and studio work went into devising the scheme and producing the multi-sensory programme, as well as designing the dramatic surroundings in which it all takes place. Sarner carried out considerable research and took great care to ensure historical accuracy and authenticity: the huge ship was based on genuine Viking plans and even the various scenic props have been modelled from authentic originals. Behind the scenes the visitor experience features an impressive battery of high-technology to unfold its story.

Masses of electronics and literally miles of cable have been used to link it all together. As with most Sarner projects, the entire attraction is fully automated so that everything operates consistently and accurately - time after time. Which is just as well considering some of the more complex staging elements; the first is a raiding Viking ship which tracks in from the right and comes within feet of the main boat where the audience are seated; the second is the massive serpent head which emerges to the right of the screen and which had to be carefully positioned also so as not to hover too close. These two elements, and, in fact, every single thing the visitor sees, hears, and feels is centrally controlled by time-locked computers, all perfectly synchronised to split-second accuracy using specially produced software, which are positioned on a central catwalk high above the theatre auditorium. In addition, the entire show operates in five different languages.

The technical equipment itself includes a 16-channel sound replay system, nearly 10kW of amplification (a combination of C-Audio/JBL), 22 slide and video projectors, laser disk players, and more than 200 fully automated theatrical lights run through a ShowCAD system. In addition, the special effects devices include a motion platform, sub-bass sound radiators, hydraulics, motorised scenery, water sprays, smoke machines and wind generators.

Sarner's technical department produced literally hundreds of CAD drawings, and its engineering team constructed the racks of electronic equipment and installed the complex system and cable network on site. The massive 200-seat Viking ship itself is mounted on a custom-built hydraulic motion platform, probably the largest of its type in the world. To prevent the cave from flooding and in so doing grind the whole thing to a halt, there are pumps working round the clock to keep the water levels at exactly the right height.

The amazing thing is that in the two years the show has been running since the park opened in 1995, there has not been a single projection system failure. Not surprisingly, Toktet has also proved to be the main attraction at VikingLand which draws up to 450,000 visitors a year and, in truth, is a much needed part of the equation - without it, it would be hard to justify the entrance price and some of the dynamism of the Viking story would be lost.

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SOUND ENVISAGED

Jo Boyd charts the recent history of Opus Audio and previews the PLASA launch of the company's Integrated Systems

In the sleepy backwaters of Devon, unbeknownst to all but the South West of England, a revolution is being created to change the way the world perceives pro audio. At its helm is the South Brent-based Opus Audio Developments who have risen, literally, phoenix-like from the ashes to create an integrated audio solution which, they claim, offers the very highest quality of sound reproduction.

The company was founded in 1989 by Andy Fox, together with a business partner, but with the recession at its fiercest in the late eighties and early nineties, things began to get slightly out of kilter and Fox's partner torched the factory as a way to 'realise' his investment via an insurance claim. Not surprisingly, he is currently serving a prison term for arson, but the stunt left Fox with no product to trade with and no premises to trade from. Others may well have walked away at this point, but rather than file for bankruptcy, Fox elected to work his way through the problem and single-handedly kept the company trading. By 1995, Opus was back on track and the last of the debts were paid.

In the last two years, the company has gone from strength to strength, bolstered by two grants from the DTI to fund research and development. The first, in 1996, provided the impetus for the development of the current product range, whilst a second one this year has been awarded for the building of the new factory. Further investment has also come from the city, where an injection of cash from a venture capitalist has enabled the company to acquire limited status - hence Opus Audio Developments Ltd. Currently, things could not be better and the company is financially strong, which places them in position to push the innovation of their product design into the larger marketplace.

So what is the quiet revolution that's taking place in audio design? Its start can be traced back nine years and Opus's new Integrated Systems are the result of a single, basic goal: the refinement of the signal path through the complete audio chain. The system consists of amplifiers and speakers as well as pre-wired racks, patch panels and cable runs, not to mention installation by a trained supplier. The configuration of the products as a complete system is the vital design factor that gives Opus the confidence to include in the package a three year warranty.

The inspiration behind the original idea for integration rests with Andy Fox. His entire philosophy revolves around the notion that quality of sound can only be achieved if each part of the system is working in total harmony with the rest: "You have to take a reference and say that's the point we've got to design the product to, otherwise you'll only ever hear quality relative to the lowest common denominator in the system."

As the tour engineer for King Crimson in the



The main stage at Plymouth Soundwaves 97 where Opus PA was used throughout.

late seventies, Fox became increasingly dissatisfied with the PA systems he was using: he knew what Robert Fripp sounded like, yet he couldn't reproduce Fripp's vocal accurately through a PA. Determined to find a way, he began to build his own system and subsequently used it on five consecutive tours, painstakingly refining the system year-on-year.

And yet he still wasn't fully satisfied with the sound quality. Having done all he could on the PA front, he turned his mind to the system amplification, the next obvious link in the chain. His first experiments were with amplifiers already on the market, which he modified until they were compatible with the drive units he was using, in a bid to create less distortion. Improvements soon followed, but being something of a perfectionist, Fox then set about the analysis of every other aspect of the system.

It's clear that some of Fox's lessons have been learned the hard way: whilst on the road with King Crimson in Italy, the locally hired generators were muddying the feed to the amplifiers, which, in turn, merely conducted the interference through the PA to such an extent that King Crimson refused to go on stage. Ever resourceful, Fox saved the day by identifying the problem (a 20v difference between the system earth and the audio earth) and eliminating it. Such experiences only served to confirm his belief in the complete system approach as a means to reduce those tiny inconsistencies that can grow to worrying levels if not resolved.

At Opus, Fox (whose background lies in the aerospace industry) has surrounded himself with others who have charted similarly odd routes to the audio industry: Alan Scott is a specialist in the field of ventilation, mainly for nuclear zones and operating theatres, whilst

Tony Stallon has a background in electronics and Alan Bradford has an MSc in Physics. They each bring to the table a different school of thought, all indirectly, yet nevertheless appropriately, relating to audio system technology.

The range of speakers in the Opus portfolio have been something of a moving feast since Fox's first foray into audio design nine years ago. With his knowledge of force and compression techniques gleaned as a jet engineer, he has managed to create a wide dispersion cabinet with remarkable long-throw characteristics.

By adopting this approach, he feels that the same level of sound quality is maintained consistently and that it also travels an incredible distance, thus the effects of phase cancellation and comb filtering are dealt with in a single blow by the fact that one single source speaker can fill a considerable area.

Yet the speakers are also more than equal to the task of overcoming the problems of mid-range crossing and audio confusion, when stacked in array. This has been achieved by having the actual point source of the projected sound start from a theoretical point behind the speakers themselves. This design feature alone contributes significantly to the efficiency of the system but, in truth, only form the first stage in the Opus quest for total efficiency.

Stage Two ensures the quality of the signal is the highest possible and this departure takes us briefly into the realms of the amplifier. The third element is the enclosure - which the company design as a dead weight (though they recognise the fact that this can affect portability, but maintain that less systems are needed to provide the necessary 'oomph' as a result). If the driver cannot move the speaker enclosure

around the stage, it must convert more of the available power into air pressure, thus being more efficient.

The 'less is more' approach is clearly illustrated by Andy Fox: "We handled the PA for an event at a local football ground in Plymouth and had four boxes a side, which is ridiculous because it looks as if you've just taken your hi-fi out for the day and stuck it on the stage! However, the reaction was brilliant - people were phoning into the local radio station to say how great the sound was."

Opus have produced the High Definition (HD) series of amplifiers which employ advanced cooling technology produced from the thermo-dynamics expertise of both Alan Scott and Andy Fox. With no compromise in the electronic design, this 2U amplifier runs continually at approximately 45 degrees above the ambient temperature, a reduction of about 30% thermal stress over conventional designs, according to Stallon.

Another key facet of the system is modularity, not only of the HD series of amplifiers, but also the XS234 two-, three- and four-way active controllers. The tiny, individually built circuit boards are mounted in the amp and controller cases using clips manufactured in the US. A recent arrival on the market, these clips hold the boards firmly in place so they are largely immune to vibration, yet can be removed quite easily to change filter co-efficients as necessary - it's a style of approach not dissimilar to that which drives the hardware developments of the home computer industry.

There are some novel approaches to system design also: whereas traditionally a limiter is placed in the systems controller, Stallon placed it in the amplifier which, he maintains, is the first and only logical point of limitation. The company also claim to have the solution to an age-old situation - viz, Joe Bloggs, sound engineer, straining from his control position at the back of the auditorium desperately trying to monitor overloading of amplifiers.

On all their active systems, Stallon has included calibrated displays on both the system's controller and the amplifier. This simple modification takes the guess-work out of driving the PA, yet it is only a valid feature on the Opus Integrated System because, as the name suggests, every part of the system, including the system's controller and the amplifier are all correlated. The team at Opus are convinced that through the Opus Integrated System they can offer the most accurate sound quality available. This is an area in which the company certainly excel. They once hired a mobile crane, drove it into the middle of a field and lifted a speaker 30ft into the air to create the ideal testing conditions. While the recorded measurement of 150dB pleased the company immensely, it left a small village dazed and confused. Perhaps they should have known better than to repeat the exercise, especially as an environmental health officer was lurking in a nearby hedge!

The company probably has something of a



Above, the Opus team (from left to right) David King, Andy Fox and Tony Stallon, below, part of the Opus range.



strange reputation locally: in 1995, shortly after Plymouth's Warehouse nightclub installed an Opus system, Andy Fox and Garry Hargreaves managed to bring the ceiling down, literally, proving beyond a shadow of a doubt that the sub-bass really was highly efficient! And this is the real testament to the Opus Integrated Systems. Not only are the company convinced of their achievement, so are most of the South West of England and their attention to detail has brought them a loyal following.

Cast a net from Bristol down to Cornwall and, the company claim, 90% of the clubs caught within it will have an Opus System installed - no mean feat, and one which they illustrate further by citing Plymouth's Union Street, where every one of the clubs has an Opus Integrated System.

Having gleaned a little of the company history and design philosophy, it was time to find out whether the system really did do all that was claimed on its behalf and so our party headed off to the Plymouth Soundwaves festival, organised by Plymouth City Council and production managed by Nic Black of Pyramid Services. Garry Hargreaves of Leicestershire-based Zique Audio Rental, who currently hold the largest hire stock of Opus equipment, were responsible for supplying the main stage audio. The system consisted of six AT1200 high packs, six 4x15" bass bins and six 2x21" sub bass bins powered by four EP780 and eight KA4000 amplifiers, modified by Opus. A third of the rig again was used for delay.

Hargreaves discovered Opus Audio by

chance when he heard Andy Fox demo the system to another PA company. At the time he couldn't afford to buy it, but being a member of a band, he soon became motivated when DJs blew them off stage with their sound systems. He borrowed the money to buy four speakers and two amp racks and has never looked back.

Zique push the Opus PA out on a large number of gigs and over the past eight years have hauled the system long distances, pushing it as far as it will go, although Hargreaves notes it does have one disadvantage: "The major problem with a PA like Opus is that it's so precise it does exactly what you tell it, and if you don't know what you're telling it then you've got a big problem on

your hands!"

The audio spec for the second stage, organised by Cooperage (a local live event pub), was handled by another holder of Opus stock, Nub Sound Audio Services. Like Garry Hargreaves, Clive Barnes and Adrian Sutherland at Nub have also been dedicated customers of Opus for the last eight years. The Cooperage stage consisted of four SB118 bass cabinets, four SB415 bass cabinets and six CS1500 high packs powered through two KG4000s, two MC21275s, two PSL 2030s and two PSL800s all supplied by Opus. Nub Sound are full of praise for the Opus service and don't believe that the core ethos of Opus will be lost as it expands.

Which brings us back to the final link in the chain. Opus have joined forces with Audio Forum, a new company formed by David Shephard and Michael Reeves (who formerly traded as Toursound), who now handle national distribution of the Opus Integrated Systems. Audio Forum's commitment to the Opus cause has given the company the incentive to expand to the rest of the UK and so it is timely that a further link should be added to the chain in the form of David King of David King Technologies. With his significant experience in pro audio marketing and export sales, a large part of it exercised on behalf of Allen & Heath, he has taken it upon himself to communicate the Opus message. And it's not a bad one, for Andy Fox is very particular about the sound reproduction that is created under the Opus banner: it is his all-embracing principle and though it hasn't all been plain sailing, Opus have emerged from an unsettled period to face a very promising future.

One final thing is worthy of mention. So dedicated are Opus to the production of optimum sound quality, and confident in their own ability to achieve it, that they offer a full three year warranty covering every part of the Opus system. This unconventional promise stems wholly from the integrated nature of the audio package.

Through Audio Forum, Opus plan to offer the very highest level of service and believe that they are well placed to do so. The wider industry will have a chance to put the claims to the test at PLASA this month where Opus will be demonstrating their Integrated System.

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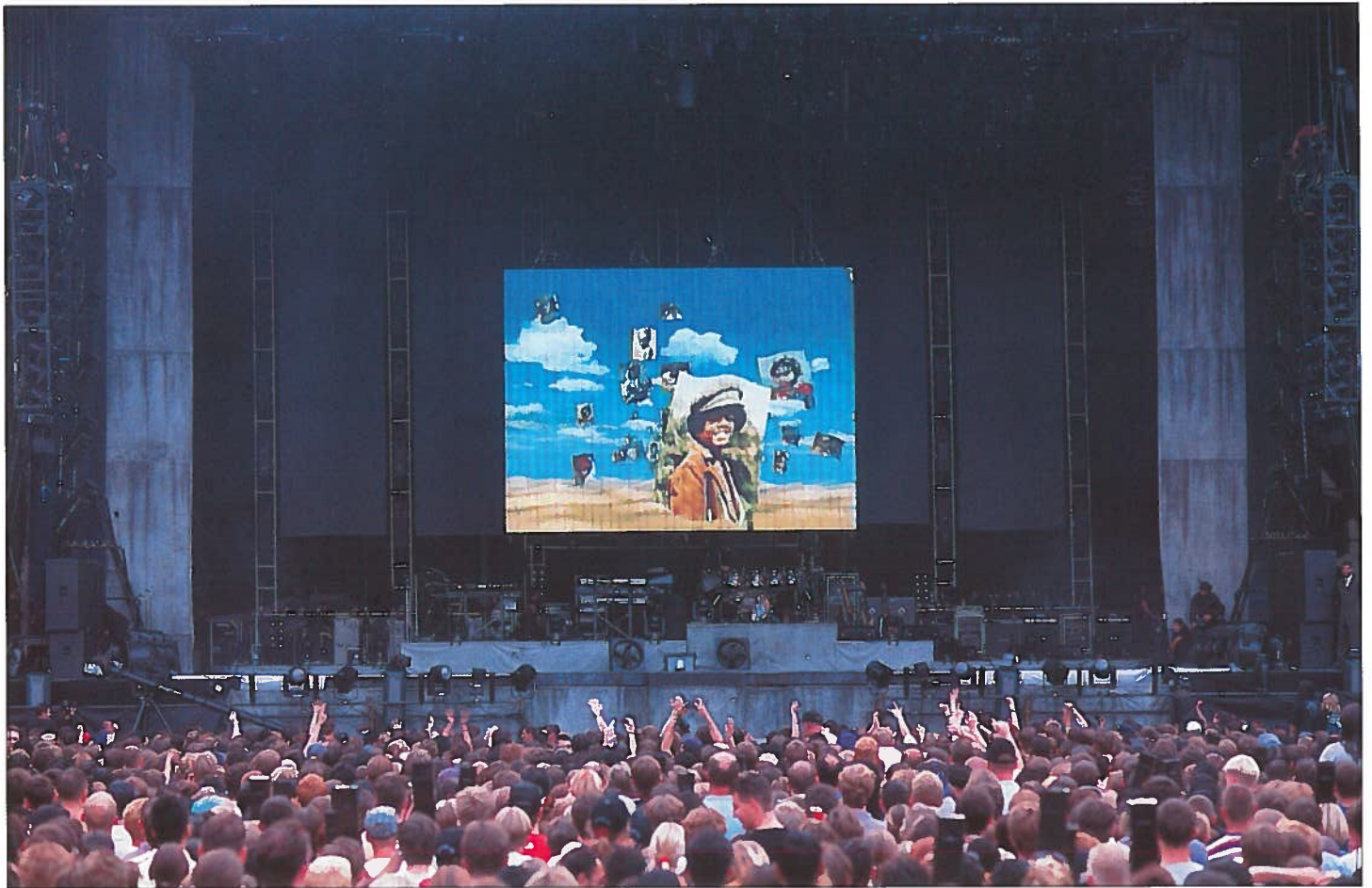
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VIDEO

MICHAEL JACKSON

*The King of Pop recently returned to the UK for three nights at Wembley Stadium.
Ruth Rossington looks at the staging elements of the HIStory tour*



Whatever your feelings about the various controversies surrounding Michael Jackson, it would be churlish not to give him his due as a major performer - he is, after all, the consummate showman. And it seems he feels the need to prove it all over again (not only to himself, but to the fans also), and reclaim some of the ground lost to the media in the less than complimentary coverage of his antics off-stage. Thus, he has hitched up the Jackson band-wagon for the second stream of his HIStory world tour and mid-July found it anchored at Wembley for a run of three performances.

Being Jacko, the tour has received mixed reviews and as an exercise in damage limitation, it may well have backfired. You see, the critics just can't keep to the point. When reviewing the concert, they find themselves side-tracking down all sorts of paths that are essentially the written-word equivalent of Jarvis Cocker's high profile statement at the 1996 Brit Awards when he stormed the stage and entered into an unseemly affray with part of the Jackson entourage.

If truth be known, the 1997 version of Michael Jackson is probably a pale imitation (in more ways than one) of his former self and it seems unlikely that he will ever achieve the dizzy heights of the early to mid eighties when Thriller mania took the world by storm. As an acne-ridden child of school age at the time, I

was probably alone in not finding his music that appealing. Conversely, whilst others now seem to have lost faith with him, I actually find his recent work, and particularly some of the tracks on his current album 'Blood on the Dancefloor' by far the best thing he has ever produced. But then I always did swim against the tide.

Given his reputation for innovation and spectacle, I have to admit that I was disappointed with the Wembley concert. The production, which Jackson designed together with Michael Cotton and Kenny Ortega, and which was engineered by John McGraw, certainly has all the elements in place, but somehow lacks the extra energy and continuity that a live performance should give. Jackson's frequent exits from the stage, leaving a bemused audience to watch lengthy video footage or monitor the slow shuffle of the men who appear between each set to sweep the stage (why, we couldn't fathom), only serve to destroy what little momentum is built up when he is on stage.

Frankly, there is too much reliance on video, which might smack of complacency were it not for the fact that its role is clearly to get the message to the fans that Jackson is a nice chap, who cares about the environment and is a devoted father. Did we fall for it - yes, of course, but Jackson shouldn't forget that punters pay to see the real thing, not a celluloid version which they can get at home for £30 less.

That said, when Jackson is on stage, there are some extremely clever touches and in terms of the technical aspects of the performance, this is a sophisticated tour which relies heavily on complex staging techniques. First amongst these is the opening sequence when Jackson's delayed arrival causes anticipation to almost topple over into frenzy before he emerges from a futuristic pod centre-stage and launches straight into King of Pop mode. Along the way, there are tanks, cranes, choruses of children, a devoted fan who breaks past security (a paid actress actually) and much, much, far too much moonwalking.

For the lighting and special effects, Jackson has once again called on the expertise of Peter Morse who designed the lighting for the 1993 Dangerous Tour. Industry stalwarts Light & Sound Design and Vari-Lite are the main contractors who have fielded a substantial rig of Vari*Lites, High End Cyberlights and Intellabeams and an army of Par 64s, whilst the control end is dominated by Artisan, Diamond and Wholehog desks. The sound system for the tour, supplied by Clair Bros Audio, is primarily their own S4 PA system with Crest amplification, and is operated front-of-house by engineer James Khalaf on a Midas desk, with Yamaha PM4000Ms for monitors.

Providing the large-scale effects was in itself a demanding task, made even more difficult by the very short lead time and the dreaded

syndrome of band rehearsals in Los Angeles with the main contractors, Edwin Shirley Staging, Screenco and Ocean State Rigging based in the UK.

The stage itself, theatrical in look by dint of a proscenium-style framing, sweeps almost the full width of Wembley Stadium and takes three days to construct and two days to put into production. As the crew touring with Jackson actually need six hours to break down the production and one day to dismantle the stage, seven stages are on the move around the world, ahead of the tour.

Two large Sony JumboTron screens, supplied by Screenco, are set within the massive columns either side of stage. With a venue on the scale of Wembley, these are arguably the real stars of the show and it would be fairly desperate for the punters at the back of the 60,000-70,000 strong audience if the pin-prick on the stage wasn't translated into something recognisable by the large screen. To enhance the aforementioned video sequences, these are later joined by an additional 6,400kg moving JumboTron which tracks to centre-stage. Because of all the activity on stage, the tracking system for the split JumboTron screen had to be completely self-contained.

Ocean State could not use a traditional drive method, so they developed a new type of direct drive control. To help deal with the logistics of design and build during the rehearsal period Bob Grenier from Ocean State US ran the rehearsals in Los Angeles, and working on the initial drawings from the UK operation, installed a look-alike screen, comprising truss surrounds and screen fabric on tab tracks. This

allowed full rehearsals to take place including lighting programming and created the time needed to complete engineering designs for the real thing.

Each screen had to be capable of moving the length of the 24m track and to operate either individually or execute sequence moves. Ocean also designed the system to allow timed moves of the screens to coincide with action on the stage. With this much weight in motion during the show there was some concern that the roofing and tracking would flex with every screen move. Steve Colley and the Ocean State team in the UK worked closely with Jeff Burke and the engineers at ESS to overcome this. The answer lay in the introduction of an additional roof truss and 13 specially designed support beams fitted to the main trusses at two metre centres. The track design also had to be altered to allow for this deflection and to transmit the loads directly to the support trusses. The deflection was not great, only 40mm, but compensating for it in the engineering design was the only way to get the screens to match perfectly when they came together.

To a certain extent, the weight of the Jumbos was also dictating the other allowable roof loads, so other elements had to be modified. The three huge roll-drop screens for the 'Smooth Criminal' shadow effects, used on the Dangerous Tour in 1992, were significant built pieces and these had to be replaced and rebuilt. The solution was another new design in the form of an electronic Kabuki Drop. This consists of a 24m x 12m white silk which drops at the front of the dance floor (courtesy of 10 small truss-mounted stage drop units), remains

in place for 30 seconds and then disappears back up into the roof.

The motion control system developed for the JumboTron is also used to control the tracking 4k which follows Jackson during 'Billie Jean'. The problem here is that although his famous 'moonwalk' looks quite slow from front-of-house, Jackson often travels at over three metres per second (strange, but true) and can change direction without warning. This speed of travel for such a large lighting unit required enormous flexibility and responsiveness in the control and drive system so Ocean adapted a 15m section of Camtrak truss and fitted the 4k Xenotech light to a camera carrier. The track control desk was then fitted with a remote proportional joystick control allowing the operator to follow his every move.

There were lots of other quirky set pieces too, and even though the main contractors may not forgive me for saying this, I would lay odds of 10-1 that most of the punters left disappointed - not because the show wasn't slick technically, in fact, it was flawless, simply that it fell short of expectation. Or perhaps it's me and I'm just getting to be a cynic in my old age. The ending sequence certainly didn't help: after much flag-waving and 'we're all one nation' guff, Jackson headed off stage for his customary break, or so we thought, never to return. Instead, the crowd were left with yet more video footage which fizzled to the tour logo and eventually to blackout.

Not quite the sign-off the fans hoped for and presumably symptomatic of why the tour has not been sold out.

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Second Take . . . John Watt's view from beside the camera

It is always heartening to get a bit of feedback from this column: without it, for all I know the only ones reading my stuff are the unfortunates who have to decipher my scribble and stick in the odd punctuation mark where I have rambled on for eight lines without pausing for breath. Paul Johnson, a theatre colleague, wrote to me a month or two back via the e-mail system, with the result that it took some time to get to me from the L+SI office, who translated it into a low-tech system understood by yours truly.

Anyway, he was having a moan about a particular bit of TV lighting he had stumbled across. I quote:

"As a theatre, not TV person, I thought I'd just ask Watty if he saw the BBC's recent outside broadcast from Horseguards for the Queen's Birthday? I may not be up to date on TV procedures, but this must have been the worst lighting and sound broadcast of the year. As the sunlight faded, the lighting that took over seemed to consist of just followspots - and not even well-set-up ones at that! We theatre people know that you can't make a good job of covering three people with two spots as the talent always move too far apart. I counted about eight beams trying to cover the whole parade ground. The soldiers still managed to march out of the beams. They wobbled all over the place. Jim Davidson would have fired the entire crew at his theatre if they did the same job there. I could make out that whatever the things were, they were rather large, but did they have to project such a large image of the light source onto the ground? I would have thought that someone could have come up with a better plan than to just use limes spread around the square."

This letter aroused my curiosity, so with the aid of the John Watt database, i.e. the backs of a few envelopes and a very unreliable memory, I tracked down the guilty party. It is always a dangerous game, criticising the work of others, unless you know the circumstances. Remember, we aren't always the masters of our own destiny in lighting.

After lengthy consultation with those two doyens of BBC OBs, Messrs Dow and Davis (who usually triumph against whatever is thrown at them) we think Paul Johnson is referring to Beating Retreat, not the Queen's Birthday. If we are wrong, read no further. You will note 'Beating Retreat' and not 'The Retreat' - you need to get those things right when working with the military or you'll be thought a complete ignoramus and no doubt a complete bounder to boot. This is a ceremony which raises considerable sums for charity and when the Beeb considered covering it they asked Bernie Davis, wearing

his technical manager's hat, to assess the viability of the job. This combined technical manager/lighting director function is peculiar to the BBC, as far as I know. It breeds an exceptionally skilled and versatile set of blokes who belie the notion of 'Jack of all trades' and seem to be master of several, not least lighting. In this instance, the lighting was the responsibility of others. Bernie Davis reported that technically it looked a bit of a non-starter, but secretly hoped the producers would give it a go as he thought it was a worthwhile event to cover.

Now here is the nub of the matter. The LD was Major Michael Parker who used the equipment available to him, viz some ex-World War Two searchlights converted to Xenon. Yes, we think there were eight, Paul, and these were operated as followspots by members of the territorials! Both Bernie and I rest our case. Major Parker's comment to Bernie as they went on air was 'best of luck'. Although they had two bites at the cherry by recording on two successive nights, Major Parker thought it "unlikely that his spot operator chappies would do the same thing twice" (I would have put them on jankers if they didn't). Nonetheless, what you saw was an edit from the two. Bernie felt they just got away with the job as an OB over which they had little influence, obviously at least one viewer thought otherwise.

It's worth noting that on other military events it is usually possible for more liaison between the different parties and expertise can be combined with the army's effort, as at the Edinburgh tattoo, for instance. I hope this army hierarchy system doesn't catch on generally in lighting, as I will end up amongst the other ranks for sure. The big jobs will go to Major General Pearce, Colonel Sutcliffe and dashing Captain John James. Batman Lingard could see we are all well turned out - 'Do you know the Barber of Seville Corporal Watt?', 'Yes sir' - 'Well get your 'air cut!' - old ones, respected ones.

Since you are reading L+SI it can hardly have escaped your notice that the PLASA Light & Sound Show is upon us and so, if you claim to be anybody in the lighting business, you have got to be there, to see and be seen.

They used to publish my picture alongside this column, one in which I looked strangely haggard and past my prime, and last year this enabled one or two irate readers to accost me amongst the stands. So we've scrapped the picture to give me more chance of evading the people I have libelled as I take a circuitous route to sample Teatro's Parmesan Cheese or Glantre's cool Chardonay. I say

'circuitous' because I avoid, like the plague, those stands purveying fluorescent soft lights and other new developments that can cause the headaches to start up all over again.

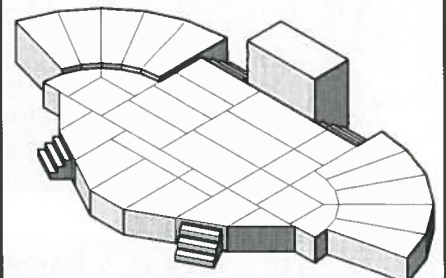
Don't go to PLASA expecting to get work - not unless you are in sales or the manufacturing side of the business. Producers don't go, thinking (probably rightly) that all this hardware is not for them. The good news is that you will meet other lighting designers who obviously are out of work too. They will say they have just finished a 13-part drama series or luckily are having a day out between 16 episodes of The Bill, but actually they are out of work and fair game for production managers who reckon to pay less than the average call out for Dynarod for a day's work on Channel 5.

Don't even think about it: that spotty-faced youth behind camera three wouldn't consider less than £200 a day. Even if he does have a second in Byzantine Studies and a Blue at rugger (whatever that is) he's never faced a blank ground plan in his life. Armed only with a budget that wouldn't feed a family of four for a week at Sainsburys and a buy-out crew whose last production was the second fixings on a Wimpy site, you are worth double. You probably won't get it, but have a go. I wonder if those lighting courses at Evesham now include the art of horse trading? Never mind the key to fill ratio, what is the ratio of the actual rate for the job to that offered? Oh dear, and I was going to be at my quiet conservative best this month too.

See you at Earls Court.

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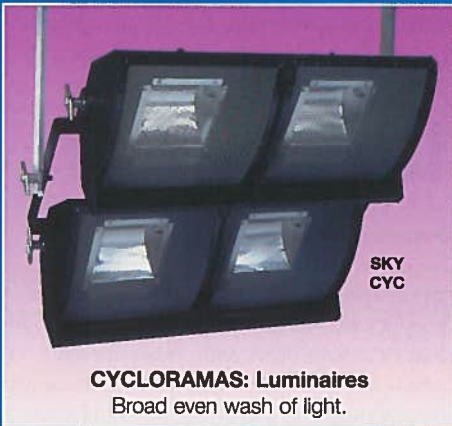
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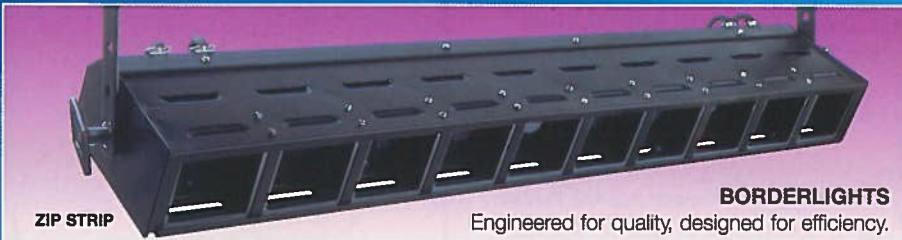
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CINEMA SOUND

When Dolby Stereo came onto the market it added 'depth' to film sound and offered something that television couldn't match. It also started the trend for cinemas to install new technology - Rob Halliday reports



The enormous spacecraft floats slowly into view, its bulk oh so slowly filling the screen, blotting out the background stars one at a time. Laser bolts fly forward from its sides, reaching out, destroying the smaller craft it is pursuing. The sound of the battle is deafeningly... silent.

Inconceivable? Now, yes. Though most of the millions of cinema-goers around the world probably don't analyse the contribution each of their senses is making to the experience of the film, sound plays a vital part, whether providing the background sounds of a familiar city or the strange atmosphere of an alien world. But in its early years, cinema was silent, possibly just accompanied by music sent out in sheet form with the film and performed by a local musician in each cinema.

Things have obviously moved on since those early years, but it is only in comparatively recent times that spectacular changes have been made in cinema sound. The impetus for these improvements seems to have been the falling audiences during the 1970s, attributed to competition from television. Until that time, film sound was most commonly analogue mono sound, encoded on an optical soundtrack running alongside the picture frames on 35mm film. Engineers at Dolby Labs discovered that by using their existing noise-reduction techniques they could encode a stereo signal in the existing optical soundtrack. Unfortunately,

two-channel stereo wasn't felt to be an acceptable solution for cinema sound, since the width of cinema screens means that there has to be a centre-channel to place dialogue firmly 'in' the screen for viewers seating off-centre. In addition, film directors were demanding surround-sound rather than just stereo - but the money-men wanted the film prints to remain compatible with the existing projection equipment in mono-only cinemas.

Dolby's solution, based on earlier work for quadrasonic hi-fi, was to create a system that encoded left, centre, right and surround channels into the two optical channels on the film. The system was christened Dolby Stereo; by adding 'depth' to film sound in appropriately equipped theatres, it offered something that television couldn't match. It also started the trend for cinemas to install new technology - and promote the fact - to attract new viewers. Audience figures for the film industry picked up during the 1980s; the improvement offered by Dolby Stereo should probably take some of the credit for that upswing.

The system still had limitations. The main technical limitation was that the sound remained an analogue signal, at a time when the compact disc was slowly demonstrating to the world the advantages of digital encoding. The artistic limitation was the single surround channel, limiting the control

that film directors and their sound editors had over the ultimate positioning of sounds. In 1992, Dolby launched SR-D to overcome these limitations. A digital system, SR-D allows for six separate channels of sound, divided as left, centre, right, left-surround, right-surround and sub-bass. The system relies heavily on digital data compression, using Dolby AC-3 coding to squeeze the six channels into the space of one standard CD channel. The soundtrack is stored as an optical track added between the sprocket holes on the soundtrack side of the film, so allowing a standard Dolby Stereo track to be included to maintain compatibility with older equipment.

Dolby weren't alone in the market for long. Sony launched SDDS (Sony Dynamic Digital Sound), claiming the space on the very edge of the sprockets on both sides of the film for their optical digital data. Digital Theater Systems (DTS), who launched their system in 1993, took a different approach. Having to cram an optical soundtrack onto an increasingly crowded film was always going to be a compromise involving a great deal of care and probably also some data compression. Dolby's AC-3 coding uses 'perceptual coding' techniques, filtering out sound information that would effectively be masked by other sounds, to give a data compression ratio of typically 12:1.

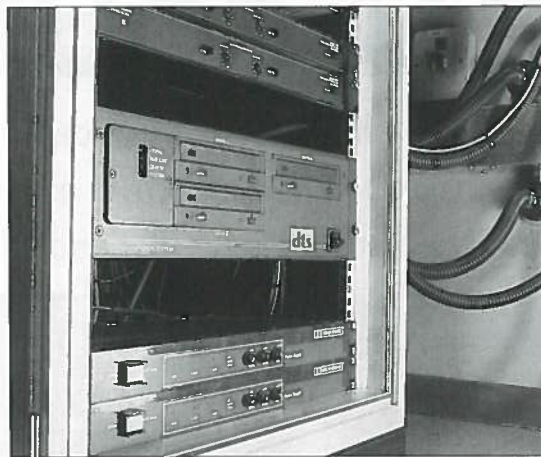
DTS's goal was to create a system that could support six channels of transparent, master-recording standard audio, of better than audio-CD quality. To achieve this, they made the decision to move the soundtrack off the film and on to CD-ROM, the extra space allowing a data reduction ratio of just 3:1 and encoding of 20bit audio data at 48kHz, giving a frequency response of 20Hz to 20kHz for the five main channels - higher than the 16bit/44.1kHz rates of audio CDs. The sub-bass channel has a frequency range of 20Hz to 80Hz.

To tie the soundtrack to the film, they claimed the space to the left of the optical soundtrack and used it to encode an optical timecode signal. When a DTS film is loaded into a projector equipped with DTS's time-code reader head, the system detects the timecode and sends it to the DTS-6D triple-CD player, which locates the appropriate moment of the soundtrack and starts playing along in sync. The timecode signal and CD-ROMs also include a film serial number, to ensure that the correct soundtrack has been loaded for a particular film! If there should be any failure in the system then it simply drops back to using the standard optical soundtrack on the film.

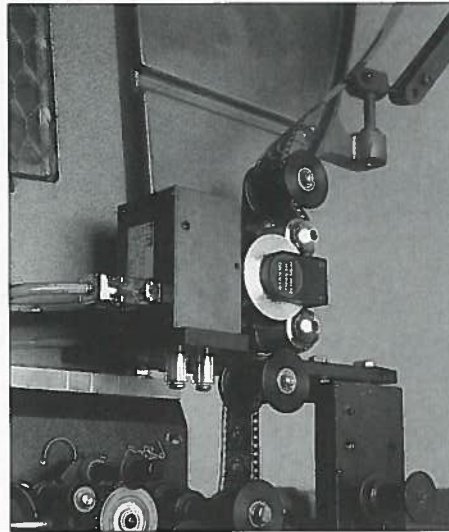
DTS's first public outing was on the original Jurassic Park after Spielberg was won over by a DTS demonstration; both Spielberg and MCA/Universal immediately invested in the system, which has grown steadily in popularity since then - at launch around 800 cinemas were DTS-equipped, and by September 1996 there were 7251 DTS-equipped theatres worldwide against 3088 Dolby SR-D and 2813 Sony SDDS venues. By May 1997, the total for DTS had reached 10,045 cinemas, the growth spurred by the release of the Jurassic Park sequel, Lost World, with DTS as the only digital soundtrack. Trailers for this film have found an extra use for DTS: the timecode has been used to trigger strobe and lighting effects hidden in the auditorium, to surprise the audience by making the action appear to jump out of the screen.

The digital replay systems mean that the people creating the complex sound mix for films can now be sure that the full dynamic range of their mix will reach cinemas, rather than a compressed analogue version of it squeezed into the optical track of a film. But they still can't be sure that cinema audiences will hear what they are meant to hear because of the differences between the acoustics of the mixing room and cinema auditoria around the world. As standards of sound design and replay were raised through the 1970s, so directors became more frustrated that they didn't have control over this final, delivery stage.

One such director did more than just complain about the problem. George Lucas, the creator of the record-breaking Star Wars trilogy had already made it clear that he preferred to use his money to advance the art of film-making rather than just to retire wealthy. Industrial Light and Magic, his special effects company, have established new milestones in visual effects. But as Ben Burt's Oscar-winning work on the Star Wars soundtracks clearly showed, Lucas was equally aware of the importance of



Close-ups of the DTS film reading head (below) and equipment rack (above).



sound. His sound-equivalent to ILM, Skywalker Sound, thus hired Tomlinson Holman to investigate how soundtracks could be improved; Holman quickly came to realise that the weak link was actually the replay system in cinemas.

In 1982, Skywalker tackled this problem by launching the THX Sound System, named after THX1138, Lucas' first feature film. Unlike DTS, SDDS or SR-D, THX is not a replay system. Instead it is a specification of how both a cinema auditorium and the sound system it contains should sound: the company's explanation of the difference is that a digital replay system "is like having a compact disc, whereas having a THX Sound System is like having a quiet room and a really great stereo on which to play the compact disc." For a given size of auditorium, THX specifies a minimum screen size as well as limitations on the viewing angle to the most distant auditorium seats and a minimum brightness for the projected image. The auditorium must be isolated from external noise sources, including leakage from other auditoriums, and have a very low overall background noise level (both criteria that theatre directors and sound designers would give anything for as a passing police car or underground train distract an audience from a Shakespearean tragedy!). Limits are also set on the auditorium's reverb time, with no audible direct reflections permissible. And the specification then describes the type of sound equipment required (offering options for different products from a list of approved

manufacturers) and how it has to be installed.

Design work for a new THX installation is carried out by the THX Design Office in conjunction with the cinema and, once the installation is completed, the system is tested by THX engineers. If it meets the performance criteria, the cinema is licensed as a THX auditorium and given permission to advertise itself as such - a continuation of the 'technology sells' technique established by Dolby back in the 1970s. THX works so well and has been promoted so successfully (with the THX film trailer sticking in the minds of many who have seen it) that THX cinemas regularly report revenues around 25% higher than their competitors. Lucas' determination to preserve the quality of their product is such that installations have to be re-tested annually, to ensure that standards haven't slipped. The main advantage of THX, as well as allowing better sound reproduction, is that it provides a known acoustic and sound reproduction standard. Film mixing rooms can be created to the same standard, which means that a sound engineer can create a soundtrack knowing that whatever they can hear, the audience will also be able to hear (Skywalker Sound's mixing theatre's can even simulate noisy air conditioning and similar background noises, so that engineers can check how their work will stand up in less-than-perfect cinemas!).

Of course, theory isn't always matched by practice. To check out the practice we visited the Empire Leicester Square cinema in the heart of London. Being in an empty cinema first thing in the morning is a strange experience, somehow odder than being in an empty theatre just because you don't think of cinemas, with their morning-to-night schedules, as ever being quiet. And because even before the audience arrives in a theatre there will be the bustle of the technicians preparing for the show. In the Empire's foyer there was just one security guard and a man fixing a neon 'ice cream' sign.

The huge Empire One auditorium was even more deserted since, of course, it doesn't take many technicians to run a film performance. Fred Fullerton, technical director for the Empire, remembers that it used to take one, to watch for the four cue dots that signalled the imminent end of a reel and then manually switch over to the projector containing the next reel, but in these days of platter-loading projectors even that person isn't always necessary - though Empire One justifies its prominent position in the cinema industry by always having someone in the control room in case problems do occur.

Fullerton has been working as a cinema projectionist for 31 years from age 15, and has been at the Empire for the last eight. He talks about his work with the carefree confidence of someone who really loves what he is doing - and, though the cinema and theatres are different industries, the approach of the top projectionists in London is clearly similar to that of people working in the West End theatres; they all drink together and help each other out if problems occur. To say nothing of working long hours: the Empire's four projection staff often work from 7am to 2am, joining the 20 minute reels (this is how the films arrive) into continuous lengths, running scheduled shows and private presentations, maintaining the

projectors and then breaking films up into manageable sections again as their runs end.

Fullerton's charge is a showcase for the current generation of cinema equipment: the Empire One is a THX auditorium with three 4kW Xenon projectors capable of showing 70mm film and 35mm film with sound in mono, A-type, SR-D, Dolby Digital, SDDS Digital or DTS Digital formats fed through JBL amplifiers to the comprehensive surround-sound speaker system. Fullerton wasn't prepared to be drawn on the 'best' digital format, conceding simply that any digital system was a huge improvement over analogue and explaining that the choice of digital system is more often influenced by politics than technicalities: Universal have a stake in DTS and so release their films in DTS format, Sony-owned Columbia tend to work with SDDS and so on. He also points out that the quality of the mix is more important than the quality of the replay system, since even the best replay system can do nothing to improve a bad mix.

However, the systems can be tweaked to bring out the best in a soundtrack. Fullerton rehearses every new film to arrive at the Empire, often with the film's director or producer present if the film is to be premiered there. He recalls: "A few years ago, James Cameron was here for the opening of *True Lies*. At one point, he said he couldn't hear an oboe he'd recorded. The DTS engineers altered the EQ slightly, and he got his oboe. Nobody else would know, but he knew. With all of these people, you have to remember that it's their



The Empire, Leicester Square.

film, and they know how it should be."

Having worked in cinema for so long, Fullerton has followed the fall-and-rise of cinema audiences and also the changes in the style of cinemas. It is the latter which he feels will change most in the next few years. "Cinema is booming, and more multiplexes are appearing. The next style is the megaplex, which has 20-plus screens. In the States they're starting to replace multiplexes with megaplexes, because sometimes it's considered cheaper to build a new complex instead of refurbishing an old one." He is saddened that the presentation aspects of cinema are being lost in the new complexes:

"Here, we have presentation, two sets of tabs, masking, lots of different colours, we really put a show on and take pride in what we're doing. In the new multiplexes they don't have anything. Just a screen, then they start the motor and off it goes," but realises that this is just down to changing times.

Eventually, though, he feels that a demand for even greater quality may lead to a greater revival of 70mm film. This has been complicated by the fact that 70mm traditionally carried its sound on a magnetic stripe on the film, and the oxide for making that stripe hasn't been available for some time. Now, however, DTS have added their optical timecode to 70mm film allowing the sound to be run from CD-ROM, the combination giving what Fullerton describes as "good picture quality and excellent sound."

Sound replay, though, is currently at a peak: thanks to the efforts of everyone working in cinema sound, film is now as much an aural as visual experience. And the improvements are spreading beyond cinema - people who have heard the best of cinema sound are now demanding similar quality at home, leading to a huge market for Dolby and DTS encoded video material, and Dolby, DTS and THX decoding and replay equipment - to the delight of speaker manufacturers, who will happily sell six-speaker surround systems in place of two-speaker stereo set-ups! But since few people can afford a THX consultant to remodel their living room, the best of cinema sound seems likely to remain the best of reproduced sound for some time to come.

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ON TOUR

by STEVE MOLES

AND PRODUCTION NEWS

V97

Eighty-six degrees and not a cloud in sight. Thankfully a breeze, 5-10 mph from the south-west stayed with us all day, cantering across the rolling hills of Temple Newsham. This was a long hot day for the 45,000 people reputed to be there. This was not so much a pilgrimage of adulation at the feet of their heroes, more a test of endurance. Still, it didn't stop them having an almighty thrash as the Saturday evening approached its crescendo. By the time The Prodigy hit the stage, I'd swear there were easily 60,000 in the audience and there were still a fair number immune to Prodigy's brash 'come hithers' who populated the Dance Tent and the NME stage.

It must be said, Temple Newsham is the most wonderful setting for a festival event. On the outskirts of Leeds, just a few miles to the east of the city ring road, it's a big rolling estate of lightly wooded, hilly pasture land that is quintessentially England. But with three major arteries (A1, M1 and M62) within a few miles of the place, the traffic jams are restricted to just the immediate environs. The only people involved in the production who might have a justifiable grouch about the site would be the coach and truck drivers. Despite trackway laid everywhere, this was the kind of undulating terrain that gave a hard time to the underside of low slung crew busses, whilst the driver of any single-axle tractor pulling a heavy 45ft load got bucked to bits. But that aside, the site was idyllic, and not just for its setting. I was approached again and again by prominent industry figures - John Penn (SSE), Chris Mounsor (PSL) and even Mike Lethby (Live magazine) who to a man voted this festival the best one of the summer.

Much of that impression is due to Tony Wheeler of Aztec Productions, overall production manager for V97 (both Temple Newsham and Hylands Park, Chelmsford) and the production team he has assembled behind him. Little things like the caterers Popcorn having a well-proportioned kitchen area make all the difference. It's no cliché to say an army marches on its stomach - this one was no exception and happy caterers are the first link in the chain to contented troops.

The event had three main focuses of attention: the Dance Tent (stage managed by the inimitable Julian Lavender) was a slight misnomer. Although the live acts were of that ilk, the dancing stopped on an 11.00pm curfew, exactly the same time as the Main Stage - a time when we might imagine at least a fair portion of the crowd, revved up by the Prodigy, might be ready for an all-nighter.

A big-top rather than a tent, it could comfortably accommodate 6-7,000, though without any air conditioning 'comfortably' is probably the wrong word. I saw Olive perform around 3.00pm with a PA system of Martin F2 from Capital Sound and Paul 'Paddy' Addison driving the Yamaha PM4000 front-of-house. Great sound in a foggy atmosphere - tents are such a good soak for amplified music, even if they do lack a bit of life. Behind 'Paddy', Steve Hall was struggling manfully to keep his Avolites Sapphire alive, a combination of condensation and sheer bloody-mindedness on



Full on - The Prodigy at V97 in Leeds.

the part of the desk conspiring to keep him in a lather all afternoon. The Neg Earth lighting system was the most used of the festival and indeed Hall had drawn the shortest straw for any lampie on site: not only did the darkened environs of the tent mean lighting all day, but most bands neglected to bring their own LDs, so he handled the lot.

The NME-sponsored Second Stage (stage manager Chris Hay, working with his usual ruthless efficiency) was a classic small outdoor show using an Orbit Roof from Serious Structures. Enough's been said about these roofs - they've been with us for years - they are a pain for lighting but for a small, secure enclosure you can't beat them. Sound was SSE (Nexo Alpha), lighting again Neg Earth. The nicest feature of the stage was its setting. Barely five minutes walk from the Main Stage, it might have been in another world. Through careful positioning it was a discrete, self-contained entity: "It's great for sight lines. And for any of those new bands not used to playing in front of huge audiences, the slope of the field keeps it intimate," said a very relaxed Richard Jones, the man with the production manager's hat on for the whole site (on the day, Tony Wheeler managed the simultaneous event in Chelmsford).

I went to see Feeder play the NME stage around 1.30pm. A guitar-heavy band they reminded me a bit of Stiltskin (remember the Levis ad' with the hillbilly Adonis swimming naked in the lake and the girls finding his duds?). What I noticed most acutely was that you could hear nothing of the Main Stage back up over the brow of the hill, and as I approached from that direction you could barely hear anything of Feeder until you were right into the crucible of the stage. Perfect separation.

The Main Stage (stage manager, the chipper Pip Betteridge) sits almost square to the Georgian Manor of Temple Newsham, facing it uphill into an almost perfect spoon-shaped dish. Though I might argue there were 60,000 people there by the time The Prodigy appeared, I wouldn't doubt

that all but the shortest of them would have been able to see the stage perfectly. The stage and roof were supplied by Edwin Shirley Stages, as were the goal post supports for the two Jumbotrons from Screenco. I should also mention the excellent Mojo crowd control barriers which came in for a fairly massive surge of pressure at the finale, again supplied by ESS. A Lite Tower system (ESS roof meister Clayton Irwin), the roof was 24m by 16m but with 'sheds' on either side (Irwin's words, not mine) and a huge lean-to at the rear. This was a big full production space. Despite the stage proper still being constructed from the familiar GKN Kwikform (as with both the other stages) what was immediately apparent was the complete lack of it above the deck surface. The sheds and rear lean-to were all part of a single, open space, integrated into the roof structure, with not a ledger in sight - a blessing both lighting and sound crews remarked upon. The roof had two metre cantilevers off each side at the front edge, from which were hung 36 boxes (six wide) of SSE's Nexo Alpha. Whether this came up to the four tons per side they could hold, I doubt. The PA looked remarkably modest for the arena it was to fill, but it proved more than adequate for the task, even when Nick Warren asked it to do the impossible for The Prodigy. The PA wings, really just narrow strips, were dressed off with V97 Virgin Cola banners rigged from vertical aluminium extrusions attached to the same PA cantilevers.

Hanging directly beneath the roof, the lighting, again by Neg Earth, was a system of small truss triangles packed with lights - a compromise rig between the designers for the two headline bands, Dave Byars with Blur (we've seen your lighting plot Dave and Phil Freeman would like to see you in his study after school) and Ian MacEwan for The Prodigy. Not a Vari*Lite to be seen (I think Patrick Woodroffe must have had them all down at Wembley) the main lighting elements were Studio Colors (20), Cyberlights (4), Stage Scans (16),

Martin 400s (20) and Pars (186). The Prodigy's influence could be seen in the additional 18 Death Star strobes (they turned up with another 40 of their own!) and three of the big Lightning Strikes.

A freshly shorn and lightly bearded Carl Burnett looked after front-of-house, with the system running from a WholeHog II and an Avolites Diamond II. The only people to really get anything from the system on the day being Susanne Sasic for Beck and MacEwan for Prodigy. The sun was still setting when Beck came on, but by the time they finished it was dim enough to see Sasic was painting bright colourful pictures on the band and their chequered backdrop. But darkness only truly came with The Prodigy. In terms of lighting, sound and performance, it leapt out at you like a laughing monster. A glorious display of outrageous power that just teetered on the edge, but never quite fell over. MacEwan let slip that the band will be doing an arena tour of the UK just before Christmas. I feel inclined to go to every show, which is saying something for a middle-aged podge like me.

Pete Russell took the sound honours out front, assisted by Charles Bradley, the two of them flip-flopping with the visiting engineers for each band. It's a sometimes thankless task and a very, very long day for all the PA crew. It was a simple set up out front, but not cheap featuring two Midas XL4s and two racks full of Behringer Composers and Drawmer gates, plus a small rack of effects - the usual suspects - SPX 990 etc. What you got was what you heard. I camped out front-of-house from around 5.30pm for Placebo and Foo Fighters (loud guitars, screaming vocals), Beck (a lively-up yourself version of black gospel, funk and hip-hop, along the lines of Sly and the Family Stone meets Parliament and the Fugees) and then The Prodigy. Just to add to the day-long travails of a sound man working a festival, the Prodigy added 5kW of sound on stage just for keyboards, plus another three stacks of MT2 for side-fills to augment the three stacks already there. Loud? Well, let's just say the environmental health monitoring was conspicuous by its absence.

What really helped this performance was the video. The two Jumbotrons were fed by a four camera system from PSL, a rostrum out front and three in the pit, one of which was hand-held. Part of The Prodigy's energy is the crazed cavortings of lead singer Keith - it's such a big visual element that it simply has to be seen, and director Blue Leech, working from the PSL PPU, did an excellent job mixing solarisation, distortion and all sorts of tele-visual trickery to enhance the chaos.

Songs and Visions

Meanwhile that same night, down in London, a very different event was unfolding. Whereas in Leeds the money was spent on the essentials of a live performance, at Wembley the centre of gravity was what TV would make of it. The total absence of set or scenery in Leeds was in complete contrast to the full-scale visual feast at 'Songs and Visions'. Producer Tony Hollingsworth has made a career out of these TV rock show contrivances, drawing together groups of unlikely performance artists and welding them into a whole. Although I obviously couldn't be there, I caught the whole thing on video (the sacrifices I make for this magazine) and the crowd, it was plain to see, were having a whale of a time.

Hollingsworth used his tried and trusted team for the show: Robbie Williams was production



4i-designed montage for Songs and Visions.

manager, Mark Fisher designed the set and Patrick Woodroffe provided the lighting design. CPL were the lighting company of choice (a sterling effort by Mick Healy of CPL and Steve Nolan of Chromatic Productions) with, naturally enough, a fair battery of Vari*Lites: VL6s (20), VL5s (69) and VL5 Arcs (40) on the audience, although 90 Icons muscled in as the dominant stage light.

Britannia Row, under the steady hand of Mike 'Bunny' Warren, put in a system of Turbosound Flashlight and Floodlight with Jock Bain as system engineer and Simon Honeywell running the show front-of-house from two Midas XL4s. The show bears some comparison with Leeds, as Fisher said: "These one-off shows never have very big budgets and most of it is spent on the artists," but where the Leeds priority was making it work for the crowd, at Wembley it had to work for the camera.

"The basic idea was to make something big, colourful and cheap," explained Fisher. "That's a necessary aspect of it. It's a challenge. In essence, the public expect to see touring show standards of production, but this is a one-off event without the touring opportunity for pay-back."

What Fisher produced was a huge stadium-filling image, 250ft wide, reaching right up to the underside of the Wembley canopy. Drawing on pop-art, some rock and roll clichés, and a wry nod to Elvis and Gracelands, the huge visualisation was largely realised through use of soft goods - a joint effort between Brilliant Stages and Blackout.

On stage you couldn't escape the watchful eye of a Jumbotron (again from Screenco): five of them overlooked the performance area, one peeking cheekily from the fey Warhol Sticky Fingers open zip that was the centre-stage motif. The screens

were used not only to produce larger than life close-ups of the artists, but also a fair assortment of imagery and news media from across the 40 year perspective of rock and roll the show chose for its theme. Design company 4i were responsible for these video sequences, an amalgam of newspaper headlines, archive film and old newsreel footage (they also put together much of the branding for the event.) From the TV cameraman's perspective this meant the view-finder was always full and interesting. And a good thing too, as some of the performers were decidedly lacklustre - one US female and one Japanese male we'd never heard of - but such are the needs of selling such a package worldwide.

Fortunately, the show maintained its pace thanks to the star quality performances of Rod Stewart and Stevie Winwood, though my personal vote for performer of the night goes to Chaka Khan. In robust good health, beautiful and like some impossible pneumatic fantasy, she has a voice and a presence that can fill Wembley unaided by technology. Not bad going for someone who succumbed to the terrors of heroin 15 years ago.

Not having attended, I can't comment on the sound, but it was noticeable that the obscure female vocalist referred to above had radio mic problems twice during the show. However, from what I could discern during the broadcast, you could still hear her vocals coming through the PA via the ambience mic, so presumably a splitter problem to the broadcast truck. As was intended, the lighting on stage was entirely devoted to the camera. It was bright and well lit, but you'd be hard pushed to see a moving light sweep. Still, the predominant close-ups did catch the odd rotating gobo or movement effect. The big shots, however, were spectacular. When the long shots came from the crane-mounted camera at the opposite end of the stadium you didn't just see a huge stage, you were treated to some of the most effective audience lighting ever seen. Woodroffe had taken particular care in painting quite elaborate patterns across the crowd that from the big wide-angle shots made Wembley Stadium look like one huge party area. However contrived the general premise of the show, there was no denying the enthusiasm of the audience.

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Audible in the Stalls . . .

Ian Herbert

I'd like to recommend a book to you that, on the face of it, isn't for techies at all. It's by Patsy Rodenburg, the NT's voice coach, is published by Methuen, and is called *The Actor Speaks*. Some of you may think that's something they do too much and too often, but Ms Rodenburg is more sympathetic.

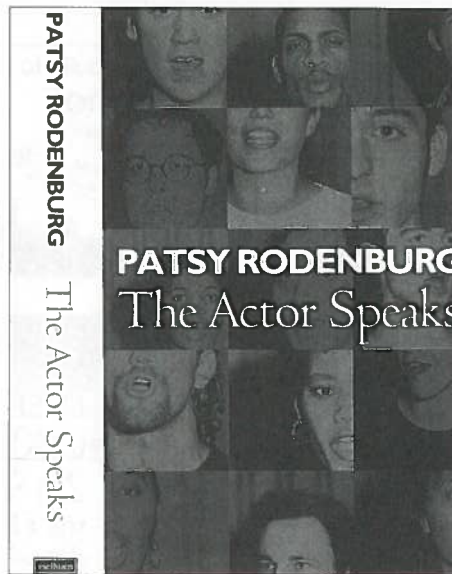
Her close-up experience of actors - at drama school, in rehearsal, in performance, at parties - is enormous, and in her advice to actors on how to handle their voice at every step of their career, she gives us outsiders a wonderful insight into what makes these strange creatures tick. She also lets slip something of what actors think about directors and designers, lighting and sound people, and, of course, critics. It's a practical book, full of voice exercises, which you can skip - although you might find the warm-up and warm-down ones useful before and after a particularly long get-in.

It's also a very firm reminder that acting isn't just a matter of standing on a stage and being wonderful. It's the result of years of intensive training and depends on a huge battery of skills, vocal, physical and psychological. It takes such skills to appear at ease on a raked stage in stiletto heels, or to give the impression of one-to-one intimacy on a stage ten metres wide in front of an audience of two thousand people.

Some of Patsy Rodenburg's most interesting strictures are for theatre builders: she's a great admirer of old-fashioned proscenium theatres, not out of sentimentality, but because they work more easily for the actor than newer ones. They are likely to have more sympathetic surfaces, which reflect sound and make voice projection easier. On stage this means wooden box sets or reflective hangings in the wings. In the auditorium, it means wood or plaster. Carpets on stage, hangings on walls, even plush seats without bums on them, are deadly for the voice.

A good theatre, like a good set, will focus the voice and let all the audience in on what is being said. It's sad to learn that some of our most prestigious newer theatres, in which the author has done a lot of work, are hell for the actor in many different ways. At the Royal National Theatre, for instance, the rehearsal rooms are acoustically live and the theatres dead. To explain the acoustics of good and bad theatre design, she describes the actor's relationship to the space he or she occupies - it's a question of being able to breathe the space, which means being able to reach the outer edge of the envelope in which actor and audience are contained.

When an actor is not breathing the full space, the audience can feel cut off from their process. In beautifully designed theatres this breath perspective is built into the design. If you were to stand in a Greek theatre like the



"Stop sniggering, you lighting people - actors can sometimes feel that the lighting effect is more important than they are."

one at Epidaurus, you could not but take in breath and breathe the space.

Most Victorian theatres, like London's Old Vic, also encourage this breath connection. Most modern theatres don't. In fact, most are so boxy and widely horizontal that they can often defeat the actor from taking in the space. For instance, London's Barbican, Olivier and Lyttelton theatres pull the actor's connection down to the back of the stalls. However, larger theatres are often easier to breathe because the space acts as a breath liberator. A small studio space can often cramp the breath.

Stage designers don't always think first of the actors needs, either, though Ms Rodenburg says that she has never heard an actor complain publicly about being asked to work on a totally unhelpful set. At the risk of sounding harsh, it seems that many designers are not only ignorant about sets in relation to the acoustics of a theatre, but also as to how a set will affect the actor's performance.

Some don't even seem to care about these essential details. Stop sniggering, you lighting people - how about this? Who doesn't admire the extraordinary skill and art it takes to light a show well (fine so far, eh?) but actors can sometimes feel that the lighting effect is more important than they are.

The old clichés about not being able to hear what you can't see are, unfortunately, true, and while actors can adjust their performance to take account of dim lighting states, there are times when a performance simply won't work as well - for instance,

comedy axiomatically needs more light than drama. A new problem with today's more advanced lighting is that actors who are used to finding their light by reaching its heat are going to be thrown by lanterns that don't emit any heat! And, of course, today's tighter focus means that finding that light to the nearest inch can be crucial.

As if actors don't have enough trouble finding their light, pity the poor soul who has to project over the sound of a few dozen fans, plus a hydraulic hum, an over-active air-conditioning system and maybe a grumbling drum revolve for luck. Throw in some smoke - designers always do - and by now you're probably beginning to feel a little hoarse yourself.

Of course you can fall back on the mic. Ms Rodenburg is again very helpful here, this time to the sound man, by reminding actors that having a mic doesn't mean you can rely on someone with a slider to do all your work for you. Microphones boost the voice, they don't enhance a technique or cover your shortcomings. In fact, they expose them.

She wisely warns actors not just to mark (soft-pedal) the voice at a technical if they are going to be miked, since the sound man is likely to assume, quite reasonably, that these conversational levels are those for the show and will set his levels accordingly. Nor will the unwary actor always notice if this has happened, since once miked it is very difficult to hear one's own levels. It needs a readjustment of the actor's usual in-built monitoring devices - you will have to feel, not hear, whether you are filling a space.

The real fascination of the book, though, is not its sideswipes at those who surround the actor (if you think the author's tough on technical folk, you should hear some of her remarks about directors and some of the actor's remarks about critics). It's the very clear picture which emerges, almost subliminally, of what it's like to be an actor, good or bad, beginner or star. These are skilled and special people, however spoilt or temperamental they may seem to us, and it is our job - critics as much as techies - to give them an environment in which their unique talent can grow and flourish. The civilised world gains as a result.

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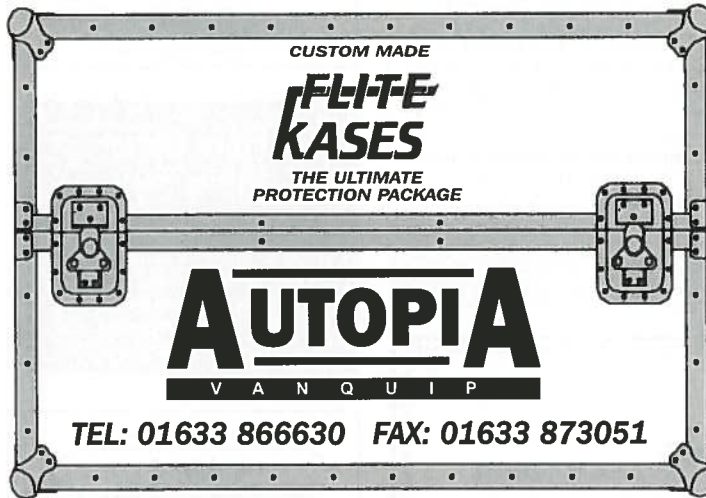
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Steve Moles talks to lighting designer **Simon Tutchener**

Being the son of actress Shelagh Tutchener may be thought of as a back door into the theatre world or a helping hand into television, but hardly a ticket to the rock show. Although many who earn their crust in the music industry have family connections within entertainment, most have been obliged to earn their dues.

Tutchener entered the Royal Scottish Academy of Music and Drama in 1973 to do a two year course in stage management. He was, in his own modest words, "... bloody lucky. They only admitted nine people each year. Why on earth they chose me I've no idea."

He went on to cut his teeth with the Borderline Theatre Company in Scotland for three-and-a-half years, moving through the disciplines of stage management and sound engineering with an eye to his future, lighting design. In the first major milestone of his working life, Tutchener met Marshall Bissett whilst working on a Billy Connolly play at the Edinburgh Festival in 1977. (Marshall Bissett is credited with being one of the progenitors of the rock and roll touring industry, having co-founded what was in its time one of the biggest sound and lighting hire companies in the world, T.F.A. ElectroSound.) In 1978, Tutchener joined the ranks of TFA ElectroSound and was promptly sent straight out on his first tour with Queen as a member of the lighting crew. "It was an influential time for me, the lighting crew was full of figures like Bob Birch and Dick Ollet, people who've gone on to become prominent individuals in the business."

It was to be another three years before he got his first design job, for Madness, a commission he was given largely through the relationship he had forged with a member of the TFA management team, Brian Croft. The music industry is nothing if not a people industry and this relationship proved no exception. Much of Tutchener's work over the last 15 years has been done through the lighting company Theatre Projects, the company Brian Croft went on to join following the break-up of TFA, before his appointment as managing director of Vari*Lite Europe.



LD Simon Tutchener.

For the next five years Tutchener honed his tour lighting craft with Madness. As their star ascended, he was obliged to conceive ever bigger and more elaborate shows to reflect the status of their success. As this situation evolved, a technological revolution was taking place in the lighting industry with the arrival of fully automated lighting systems. Tutchener wisely chose to be trained up on the new Vari*Lite systems in 1984 and went straight on to use them for the next Madness tour in 1985.

It was a return to Queen in 1986 that catapulted his career forward. John McGraw, the famous Los Angeles-based set designer, had created a complex motorised mechanical grid system to support the lighting for the tour. This was basically a system of counter-balanced lighting frames suspended on electric winches that could be choreographed to dance the 15 tons of lights above the stage. To add to the spectacle, another US-based designer, LeRoy Bennett (who at the time was carving a reputation for himself as a new and innovative force in rock and roll lighting), was contracted to design a show around this system. Queen were heavyweights in their own field and would only countenance the best when it came to design and presentation.

Tutchener's role was to operate the show but, in one of those quirks of fate where history always seems to throw up the right person at the right time, he was thrust into a position of

immense responsibility. Bennett had forged his reputation by designing for the emerging superstar Prince, who plucked him back to the US before Queen rehearsals had even started, leaving Tutchener in command of a huge 800 lamp rig.

Freddie Mercury was an exacting task master and he cared passionately about how their show looked: "I don't want the lighting rig to look like a box of bloody Smarties, darling," were his opening words to Tutchener. "Big blocks of colour dear, I want big blocks of colour." But Tutchener was not easily intimidated and, with the occasional word of encouragement from Brian Croft and the full support of Theatre Projects behind him - pulled off the spectacle of the year with remarkable aplomb and, in so doing, brought his talents to the attention of many. "It also gave me great confidence," he adds. "After that, I felt I could deal with anything that was thrown at me."

Almost 10 years later, he was to be found regularly stretching the resources of both Theatre Projects and Vari-Lite with his grandiose designs for Take That in their glorious heyday. However, he also kept himself in check with more modest designs from time to time. Following Lulu's successful collaboration on the Take That 94 UK tour, he designed for her follow-up club tour. After that he returned to designing for Madness, who staged a comeback after a lengthy period of inactivity. More recently, he has been kept busy with lighting for Neneh Cherry and Eternal, and has made a rare but thoroughly enjoyable excursion into theatre, designing for the musical *Oh What a Night*, a follow-on from *Summer Holiday* which has enjoyed a successful summer season in Blackpool. September this year sees him heading back to touring, designing for 911.

Nowadays, Tutchener commands a fair price for his work, but it is refreshing to note his down to earth aspirations. "I'm not overwhelmed by all this new technology - if it's not reliable it doesn't stay in my designs." With a slight chuckle in his voice, he states his main wish for future development: "I'd like all mix positions to come fully carpeted and equipped

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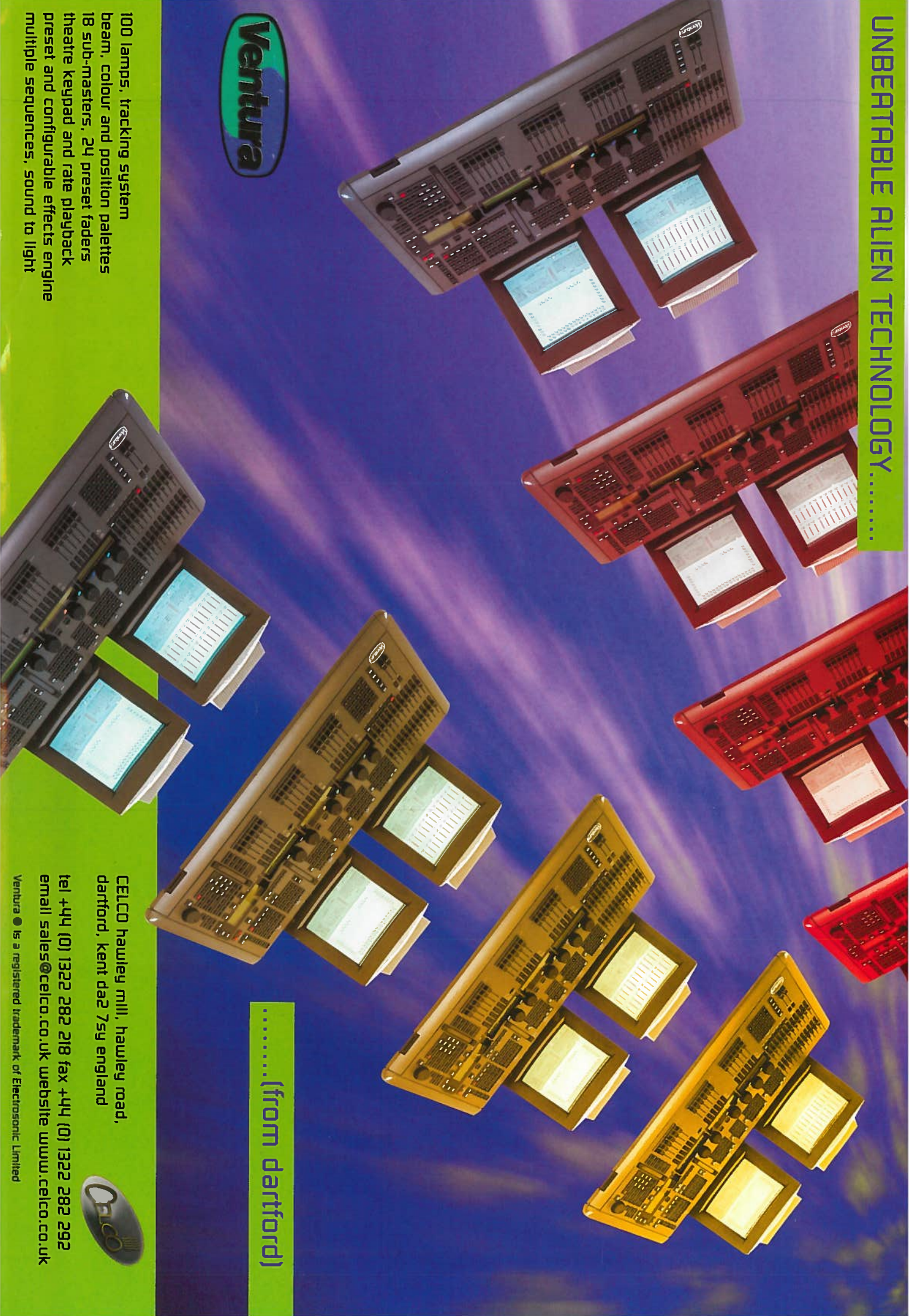
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