

# LIGHTING+SOUND *International*



## Roller coaster Launch

For our first-ever front cover not related to an inside feature, we've decided to present the tallest roller coaster in the world, The Pepsi Max Big One, which was launched spectacularly at the end of June, with the Royal Philharmonic Concert Orchestra playing Rock Classics on Blackpool promenade. The event was organised by Scenic Happenings Inc of York, under the direction of Martin Wiffs. For the proms performance, lighting designer Durham Marengi created a 235ft lighting truss (the height of the ride) with 35 Golden Scan 3s. The lighting equipment was supplied by LSD, with the fireworks finale produced by Millennium Pyrotechnics. The £250,000 spectacular included Jazz Amiga, an eight piece jazz funk band, and was MC'd by DJ Liz Kershaw. Two TV screens, a Sony Jumbotron and a Starvision screen were used to relay the performance of the 80-piece Royal Philharmonic to the 20,000 crowd, using three cameras.

- Lisbon Highlights: two major venues 100 years apart
- Focus on Sound: Glastonbury's Monsters of Rock
- APRS 94 Show reviewed from Olympia 2
- Fluorescent comes of age - Bill Lee discovers why
- Reet Petite: inspiring theatrical dramatisation of Jackie Wilson's life
- Persil Roadshow - awash with technical know-how

**JULY 1994**



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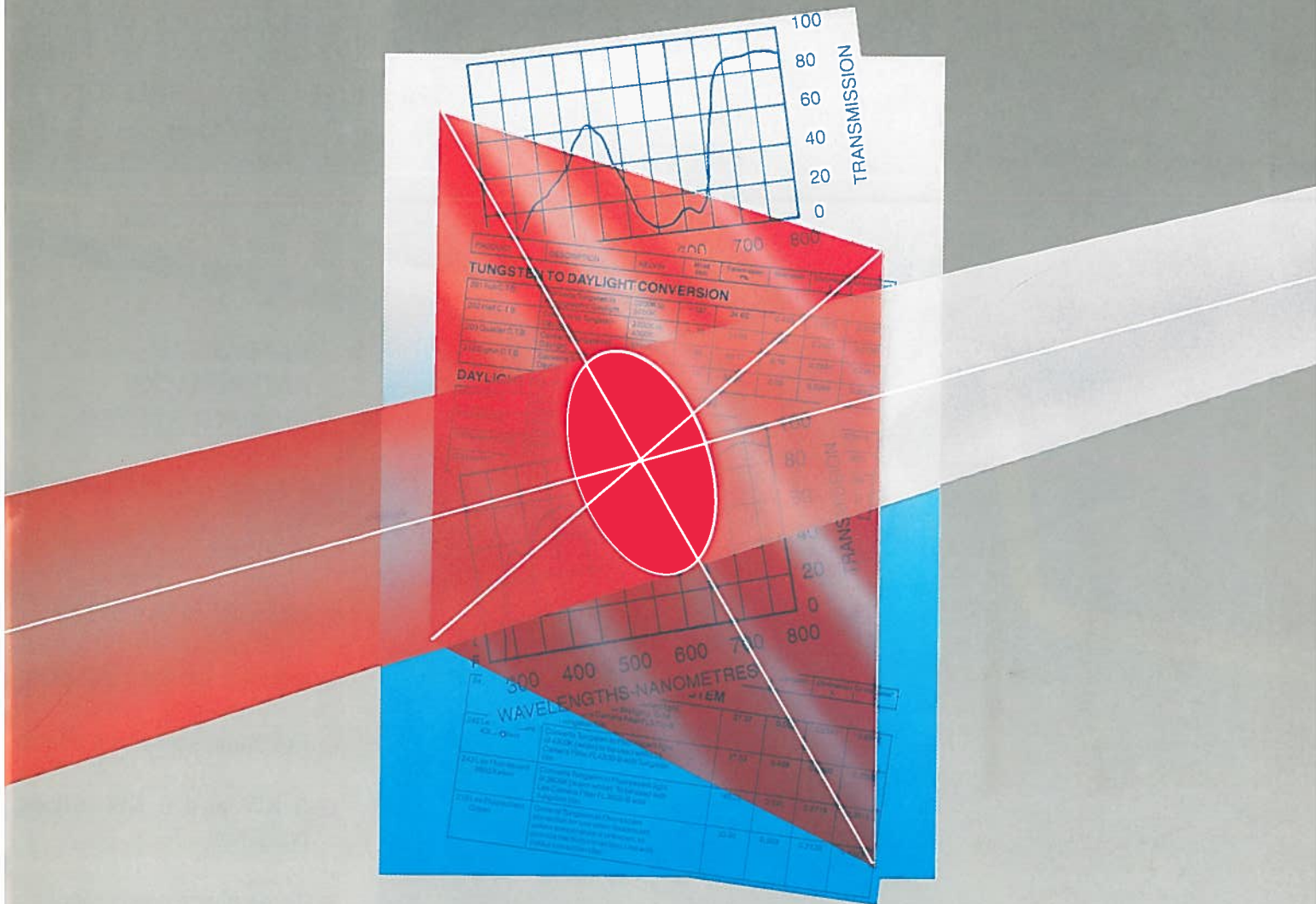
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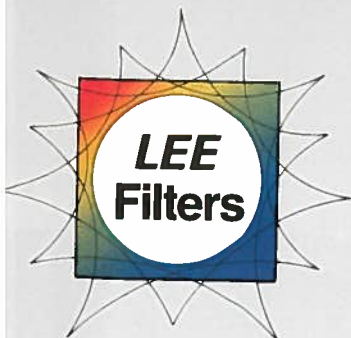
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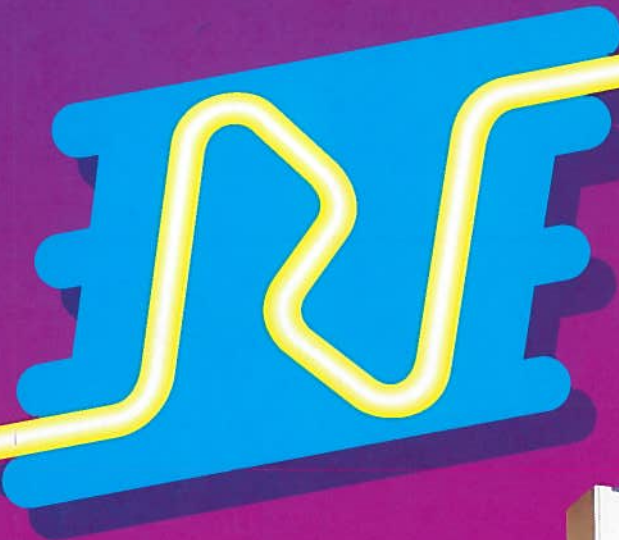
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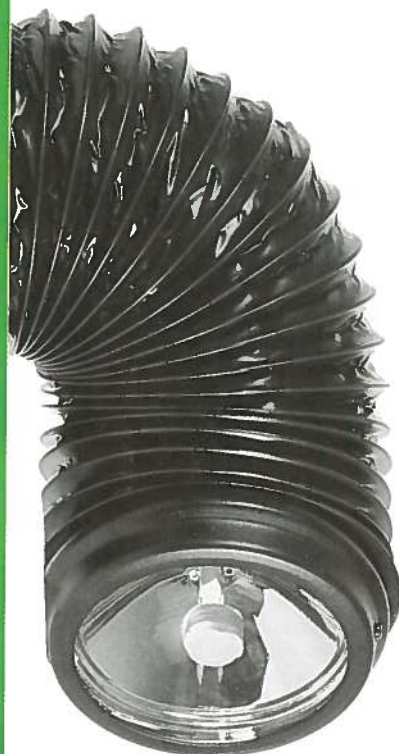
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## AVAB Niethammer: PLASA Members Complain

Despite the positive news in our June issue regarding the setting up of a new AVAB operation in Sweden, following the bankruptcy of the original company (AVAB AB) and the connected Emil Niethammer operation in Germany, considerable disquiet has surfaced from PLASA UK member companies owed money by either or both businesses at the point of their closure.

The major source of complaint was one of lack of information from the receivers concerned. None of the British companies L+SI talked to had received any response to requests for information from either of the receivers involved, despite the eight-week-long period since their appointment.

L+SI spoke to Thomas Dreijer of Advokatfirman Wistrand HB of Gothenberg, the receiver for AVAB AB, who stated that a "high pile" of documents on the case had already been passed to the appropriate district court, the normal procedure for such matters in Sweden. "No dividend can be expected," he told us.

"The return of AVAB from bankruptcy is ultimately good news, as it does the industry no good to lose one of the more innovative companies," said one PLASA member. "However I might feel less aggrieved if the article had reflected in some way the numerous UK suppliers who had lost considerable sums of money in its demise."

A great deal of money owed to British companies was connected with the re-equipment of the Gothenberg Opera House, located in the same city as AVAB. Equipment ordered by AVAB AB for the project was delivered to the Opera House and L+SI ascertained from an enquiry made to the managing director of the Opera that 90% of the monies owed to AVAB were passed over to that company prior to its closure. Although some companies did manage to retrieve equipment, others were not able to do so.

Meanwhile, in connection with the Niethammer situation in Germany, we understand that a number of well-known companies in the industry have expressed annoyance that whilst the new AVAB operation has no legal responsibility for any of the Niethammer debts, they have taken up the name AVAB Niethammer - particularly as they have made the information public that they, amongst other major industry players, have shown considerable interest in purchasing the company from the receiver.

L+SI has been informed by Ralph Dahlberg of AVAB Niethammer AB that the majority ownership of the company is from outside the lighting industry. "A small number of people from AVAB have together acquired a minority share," he said. "On the board of directors, Jerry Oster comes from the audio visual industry. He was for many years managing director for Hasselblad.

"AVAB Niethammer AB bought the complete business of AVAB AB from the receiver, including all the assets. It also undertook to employ all the employees from AVAB effective from the date of the bankruptcy.

"In a situation like this it is inevitable that creditors, including some suppliers and banks, get hurt. This is very unfortunate and we regret it very much. But in this case the whole thing was triggered by external factors and everything happened so fast that there was nothing anybody could do anything about."

## Conference Focus on Future Technologies

The third annual TILE (Technology in Leisure and Entertainment) conference held at the Maastricht Exhibition and Conference Centre in June was host to several hundred delegates who saw a vision of the future, largely emerging from the US theme park industry, which could have been entitled 'the future now' writes *Tony Gottelier*.

Much of the really radical technology on show was based on virtual reality programming generated on the Silicon Graphics' Onyx Reality Engine, a sophisticated visual computing system on which highly sophisticated interactive three dimensional artificial environments can be originated.

Developed from major involvement with such blockbuster movies as Jurassic Park and from earlier knowledge of flight simulation, companies such as Imax, Showsan, Iwerks, Evans and Sutherland, Greystone, Angel Studios and others have developed extraordinarily sophisticated artificial environments of virtual worlds from this technological and software base, even adding motion seating for further simulation.

While all of this visual technology seems light years away from the real reality (yes, I actually heard this expression used several times - I suppose, when you can't differentiate between the unreality and reality, what else can you say?) of today's market-place in Europe at least, there were several British companies participating ready to

bring us back to earth with some more accessible reality. Among these were Electrosonic, Harkness Screens, Media Projects International, Rosco (adopted British through Mike Hall) and Maris Ensing through new agents Sarner. Jim Douglas of Unusual Automation gave a paper on rigging systems with particular reference to theme park environments.

Another British company, though not of our sector, Denne Developments, who manufacture motion bases, have developed a product which could have considerable potential for moving scenery and rigging. Their Pemram product which is available for OEM use, is a medium thrust linear actuator incorporating electro-magnetic end-buffers and integral position transducer which makes it a very controllable device indeed.

By the end of the three day conference I was just beginning to get the hang of a whole new language and jargon and not much more than that - 'full immersion simulation' and 'high resolution photo-realistic animation' being just two examples.

Since, in the advent of the information superhighway and video-on-demand, which is simple stuff by comparison, all this new media is probably just around the corner - L+SI plan to organise a keynote session during the PLASA Show in September (see page 10 this issue), as part of the annual seminar programme, to give delegates a feel for what we are all going to be faced with in new forms of visual entertainment in the not so distant future.

## PLASA Show Stoppers

- **L+SI free T-Shirt offer for first-time visitors to Earls Court 2 see pages 28/29**
- **Seminar News see story page 10**
- **Hospitality Marquees Available see advertisement page 53**
- **Attendance records set to be broken**
- **55 first-time exhibitors to date**
- **First involvement of Sound and Communication Industries Federation sees substantial growth in pro-audio sector**
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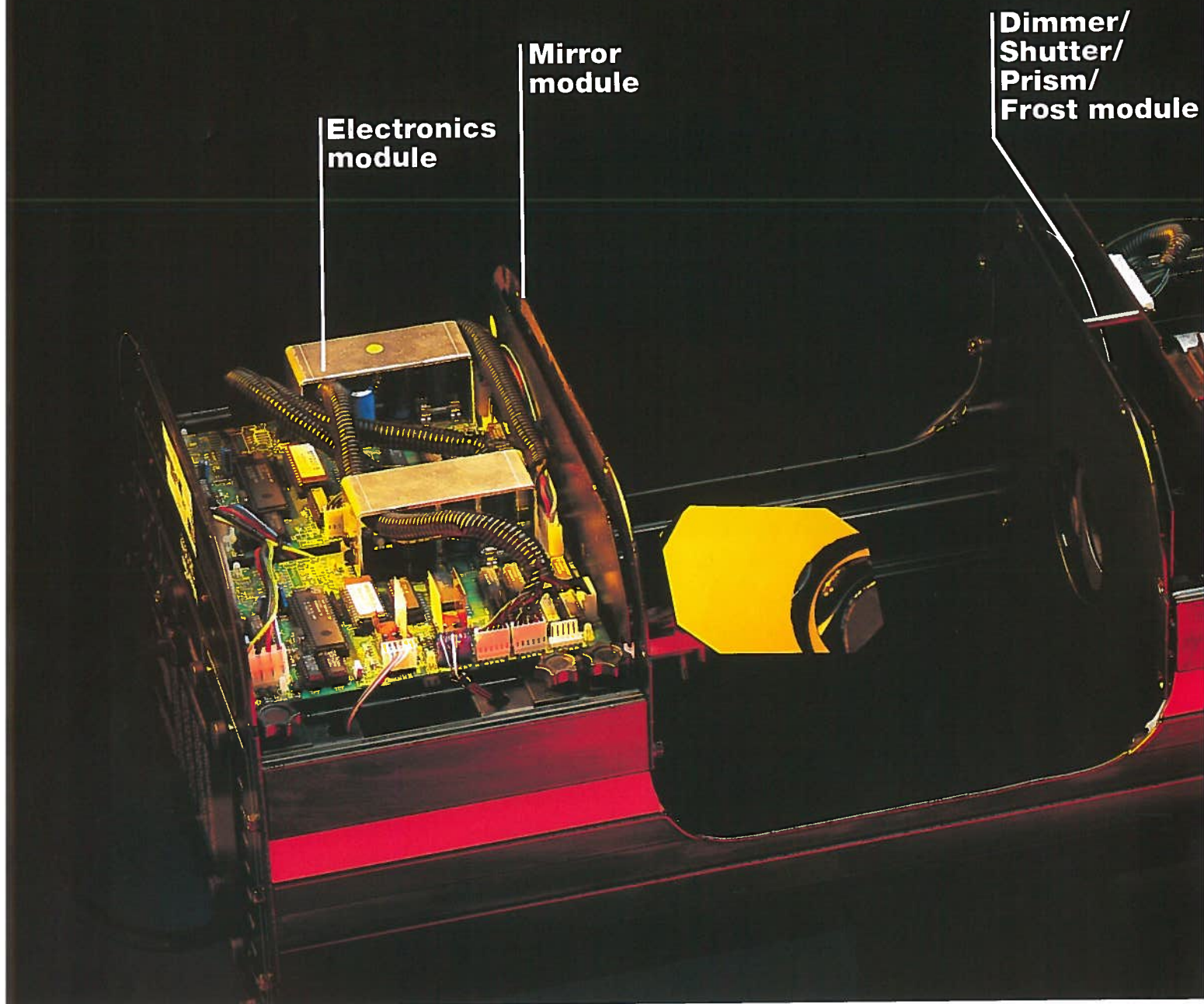
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## PLASA Seminars Break New Ground

The seminar programme at this year's PLASA Light & Sound Show promises to be one of the most challenging and informative yet. Sponsored by Lighting+Sound International, it brings together some of the leading international figures in the industry who have all agreed to share their knowledge and techniques with a wider audience.

The keynote seminar will look at the impact of 'Future Technologies' on lighting and sound and offers some insight into just what we as an industry may be up against in the years to come. With Tony Gottelier in the chair this promises to be an eye-opening experience for those who have yet to learn the impact of the Information Highway and the current applications of Virtual Reality.

Other highlights of the programme include a presentation by Allen Mornington West of Quad Electroacoustics who will discuss the number of protocols and formats which have been devised in order that audio - and by simple extension video, stagecraft and lighting - can be controlled remotely. The seminar will review the existence of electronic technologies, existing protocols and signal formats. It will also seek to establish whether there is any desire or even need to reach some common standard in order that audio, video, and maybe even lighting devices, might be controlled through a similar electrical and protocol structure.

Gil Densham of CBC Studios in Toronto will offer an insight into the TV Studio set-up in Canada. Members of the audience will learn of the innovative techniques being employed by CBC to maximise the efficiency of its studio operation and its move towards increasing levels of automation. CBC have an impressive 14,000sq.ft studio which is completely pre-wired and features the latest moving lights and scrollers on the market, as well as employing a sophisticated computer software system to simulate lighting in real-time.

No seminar programme would be complete without a return visit to the DMX512 protocol. This year's approach will, however, be slightly different and with Peter Brooks of Zero 88 in the chair, the seminar will be targeted at those who are about to use DMX or are experiencing problems with its application. There will be a brief overview of the protocol followed by a 'DMX clinic' with members of the audience invited to raise questions on DMX and other protocols.

Andrew Martin of ATM Flyware will chair a seminar on the technical and practical aspects of rigging for sound. Highlighting important safety issues, the discussion will also focus on loudspeaker rigging in particular, encompassing touring event and fixed installations.

Under the banner 'Acoustics First' SCIF chairman Peter Barnett will take a two tier approach to the matter discussing first the planning and licensing applications for entertainment venues and secondly, acoustical

considerations when designing and installing sound systems.

As we go to press, latest news is that plans are now being finalised for an Anglo-German seminar on discotheque, and a major highlight will see Mark Fisher describe his work on the current Pink Floyd tour (subject to confirmation).

The seminar programme and booking form will be printed in full in the August issue of L+SI. However, if you wish to register your interest in attending any of the above before then, please call L+SI on (0323) 642639.

## AES Convention

The APRS has been approved as sponsor of a joint venture at the AES Convention & Exhibition, San Francisco USA, 10-13 November 1994, with the DTI offering substantial financial support for British firms participating as exhibitors.

Eligible are those companies who have not received support previously in the USA more than four times.

For further details, contact APRS in Reading, telephone (0734) 756218.

## Sales Award



At the EdgeTech distributors' convention held on board HMS Belfast in the Pool of London on 21 June (prior to the APRS Show), Autograph Sales Ltd were presented with an award for 'Outstanding Theatre Sales of BSS Audio Products'. In the picture above Graham Paddon and Aviva Ozin of Autograph show the Award to L+SI at APRS.

## Laser Grafix Closes

Laser Grafix Sales and Hire Ltd ceased trading as from the end of June and a receiver has been appointed. Director Mark Brown told L+SI: "The market in lasers for new installations had dropped back dramatically and we didn't react quickly enough to the market changes."

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## Good Companion

Gradav has for some time been producing technical helpsheets for distribution to their customers, the service became so popular and the subjects so wide ranging that the company decided to bring them all together in one book - 'The Gradav Companion'. This A4 publication covers subjects ranging from portable appliance testing, through special effects, microphones, communications systems, lanterns and projection to multiplex dimming. None of the articles is intended to be more than an introduction to some of the jargon, equipment, disciplines and regulations associated with the technical aspects of theatre. The company admits that some parts of the publication are Gradav-specific, but hopes that the objective nature of most of the chapters will give it general appeal to all those involved in lighting, sound or stage management. The Companion can be obtained direct from Gradav, by telephoning 081-886 1300.

## Radio Spectrum

The Radio Communications Agency (RCA) has produced a consultative document entitled 'The Future Management of the Radio Spectrum'. The document is intended to open up discussion on the potential uses and licensing of the radio spectrum. It covers the current means of managing the radio spectrum, distribution of radio services and patterns of spectrum use and management, whilst discussing the options for change and possible outcomes, along with a consideration of recent spectrum management developments in other countries. Brian Copsey of the ASP feels that the document will be pivotal in determining the future of the radio spectrum and is keen to hear from anybody who would like to get involved in the consultative process. He can be reached at the ASP on (0296) 770458. The document can also be obtained from the RCA itself.

## Teatro 2k for BLT



During the highly successful Showlight '93 event in Bradford, Mike Lowe of Teatro (Italy) made Richard Thompson of Bingley Little Theatre an offer he couldn't refuse. So impressed was Mike by Richard's presentation covering the work of the Little Theatre and its dedicated technical staff that he offered to donate to the theatre a Teatro 2k followspot, complete with stand and colour magazine, to complement the existing lighting inventory. In return for this act of generosity Richard arranged a season ticket for Joan Rochford, Mike's aunt who lives in nearby Leeds, and promised to give her the full red carpet treatment on her first visit to the theatre. And he kept to his promise when Joan recently attended a performance of a Neil Simon play, and even threw in a bottle of champagne. Joan is pictured formally handing over the followspot to Richard who accepted on behalf of Bingley Little Theatre. The theatre is delighted with its latest technical acquisition and is also pleased to be welcoming a new regular member of the audience.

## Cathedral Concert

Theatre Projects has co-ordinated an ambitious lighting system for a special concert which took place recently at St Paul's Cathedral - 'The Music of Andrew Lloyd Webber'.

The concert was held to raise funds for the Lord Mayor's appeal in aid of the Restoration of St. Paul's - which benefited to the tune of over £100,000. It starred many of the leading names from the casts of Andrew Lloyd Webber's hit West End musicals - including Cats, Joseph, Jesus Christ Superstar, Song and Dance, Starlight Express, Aspects of Love and Sunset Boulevard.

The show was lit by lighting designer Durham Marengi, and his ambitious concept transformed the cathedral's historic nave into an appropriately glorious setting for this prestigious show. Theatre Projects, under Peter Marshall and production electrician Nick Jones, were appointed by the show's producer Jeremy Sturt at Imagination Entertainments as lighting contractors.

They co-ordinated and installed a large rig incorporating conventional lighting, 96 VL5 wash luminaires, controlled by an Artisan control console, and a host of other moving lights including the new Clay Paky Super Scan Zoom which was controlled by a Scanc Commander, operated by John Sinden.

Durham Marengi told L+SI: "The main point, given that lighting is all about reflections, is that most of the credit has to go to Sir Christopher Wren and his fine artists. Ninety per cent of the lighting was done on the building itself. For the performances I had to find a balance between an 'Old Masters' approach, keeping it in sympathy with the cathedral, and the West End razzmatazz of Andrew Lloyd-Webber's shows."

The lighting crew for the show included Nick Jones (production electrician), Andy Cave (control technician) Mark Stitfall, James Tomlinson, Steve Eastham, Matthew Jenson, Patrick Murray and Bill Egan of Templeline.

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Anybody who's anybody has promised to look in, so it's bound to be one big affair.

And one not to miss if you ask us!

So get ticking and pre-register now. (Tickets on the door are £10, including catalogue.) Send your completed form to Miss Cynthia Bagshaw-Trimmm, PLASA 94, Suite 218, Grove House, Church Road, Ashford, Middlesex, TW15 2UD, no later than 23rd August. Please make cheques payable to P&O Events Ltd. Thanks awfully.



**REGISTRATION FORM**

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Surname

Job Title

Company Name

Address

Town

County

Postcode  Country

Telephone with STD

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EARLS COURT 2, LONDON  
11-14 SEPTEMBER 1994

**A. Nature of Business**  
(Please tick one only)

- 01  Mobile
- 02  Wholesaler
- 03  Retailer
- 04  Installer
- 05  Club/Discotheque
- 06  Theatre
- 07  Broadcast/Film
- 08  Rental
- 09  Manufacturer
- 10  Leisure
- 11  Local Authority
- 12  Live/Touring
- 13  Education
- 14  Other (Please specify)

**B. Size of Business**

- 01  Freelance
- 02  1-10 Employees
- 03  11-25
- 04  26+

E.  I am interested in the seminar information

F.  I am a member of PLASA

G.  I am interested in the travel and accommodation package

Data Protection. We permit other organisations to write to you about their products or services. If you would prefer not to hear from such organisations, please tick this box.

LSI (1)

**C. Product Interest**

- 01  Lighting Equipment
- 02  Sound Systems/  
Sound Equipment
- 03  Lighting Control  
Equipment
- 04  Special Effects
- 05  Laser Technology
- 06  Audio-Visual Equipment
- 07  Touring Equipment
- 08  Lamp Systems
- 09  Stage Equipment  
& Trussing
- 10  Presentation Systems
- 11  Club Outfitters/Designers

**D. Purchasing Authority**

- 01  0 - £499
- 02  £500 - £4999
- 03  £5000 - £9999
- 04  £10000+

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## Star Spangled Sales

July 4th - American Independence Day - is an appropriate date for the announcement of the formation of new company, US Lights. The brainchild of Daryl Vaughan, with backing from Wybron Inc. in Colorado, the company will specialise in the importation, marketing, sales and distribution of US-manufactured lighting products. Based in Park Royal, North West London, the initial line-up of manufacturers to be represented is an impressive one:

The Great American Market is a name familiar to most lighting industry professionals, but their wares have not been widely available in the UK or Europe. Leprecon/CAE manufactures an extensive range of lighting control consoles, from simple two-preset boards to sophisticated memory desks. Lycian Stage Lighting produces a family of followspots renowned for their quality and performance. Wybron is the originator of the rolling colour changer. Sales of their Scroller and Coloram colour changers in the UK and Europe will now be incorporated under the US Lights banner. The unique ColorExpress gelstringing service continues to grow and the eagerly awaited launch of Autopilot, the automated lighting tracking system, is planned for September at PLASA '94.

US Lights will join the growing number of first time exhibitors at this year's PLASA Light and Sound Show. For further information US Lights can be contacted on 081-838 2254.

## UKD Change Supply

UKD have announced that as from July this year they will no longer be responsible for the UK marketing, distribution and after-sales service of the ProgramSistem range from Italy. Ian Potter told L+S: "We are currently designing some 'own' product and two new Italian manufacturers have approached us regarding this. Ian is also busy looking for new sales personnel, and anybody interested should contact (0926) 314878.

## Peavey BS5750



At a recent ceremony at the Corby headquarters of Peavey Electronics (UK) Ltd, Melia Peavey, president of the group, was presented with a brass plaque in recognition of the company's attainment of the BS5750 certification.

Pictured above are (left to right) Ken Achard managing director of Peavey, Steven Luck of Central Certification Services and Melia Peavey.

## From TDA to ESTA

The Theatrical Dealers Association (USA) has introduced Entertainment Services and Technology Association (ESTA) as its new operating name. This important change is a result of the members' desire for a name that better represents both the variety of member companies and the fact that their business activities extend far beyond the realm of 'theatrical'. The new name will be phased in over the next few months.

## Ryger Hotline

In response to growing demand Ryger have introduced a sales hotline. Clients can now call Ryger on (0773) 530053, whilst (0773) 530325 will now be for general and technical enquiries.

## BEDA Awards

Following last month's story on the rebirth of First Leisure's Dome nightclub in Birmingham, Dome II has picked up most of the major prizes at the recent BEDA annual awards dinner.

Tony Marshall, Rank Leisure's operations director and BEDA chairman, welcomed the assembled diners and explained that the Association was having considerable success with its parliamentary lobbying and in raising the profile of the industry. During the meal the guests were entertained to a background light show provided by a clutch of Clay Paky Golden Scans from the rental stock of The Spot Co.

Later, during the award ceremony itself the prize candidates premises were shown on two giant video screens on either side of the stage. The whole presentation was put together by Talk Talk with PA provided by The Music Company. First Leisure's Dome II carried off the coveted 'Discotheque of the Year' award and its lighting and interior designers, Design Intervention and Group Northern Design, won in the 'Best Lighting' and 'Best Interior' categories. The Dome's lighting operator Richard Gibbons, also in part responsible for the lighting design, won the award for his skills at the controller and 'Best Sound' went to The Music Company for another First Leisure venue - Utopia in Reading. After the meal guests were entertained to live music and a discotheque set up in an adjacent room, with lighting equipment provided by Martin Professional.

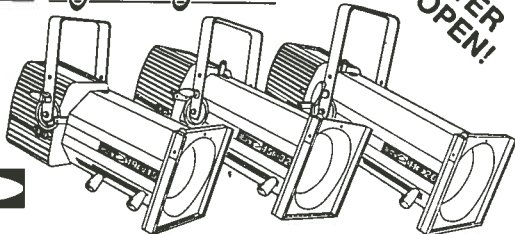
During the evening, two pieces of discotheque industry news came to the shell-like ears of your reporter. The first was that Ivor Green's CTS has been appointed UK distributor for Tarm Laser, the German suppliers of high-end graphic laser systems. The second that Keith Hardy, for many years the star freelance writer at Disco International, has jumped ship and will in future be writing for arch rivals Disco Mirror and EDR.

Tony Gottelier

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Great Britain	Tel : 0932 - 75.28.85	Fax : 0932 - 75.28.83

**ADB**  
A Siemens Company





## HTV Drama Workshop Launch Theatrebuss

The Welsh Television Company HTV has always maintained a long-term commitment to the community through its drama workshop. Renowned for its innovative performance projects, the workshop has recently completed a three-month long project in collaboration with a number of Welsh companies. The result, Theatrebuss, provides Wales with a new performance venue for 1994.

The original concept was put together by Peter Wooldridge with Ian Hill of Illusion Lighting carrying out the design and lighting installation. The bus itself is a silver blue vehicle with a polished aluminium and stainless steel interior finish. All ancillary staging, trussing and roofing is of aluminium, completing a contemporary metal and silver look. The staging was provided by

Altrofloors and the trussing by Penn Fabrication. From one side of the bus two centre panels fold down to form part of the main stage. Two semi-spiral staircases rise either side of the centre opening, providing access from the main stage to the top deck. The remaining staging, trussing and roof sections when erected create a stage area approximately 8m x 5m. The roof is designed from aluminium trussing to form a rectangular grid for lighting and sound installations. The bus is wired for mains supply.

The interior design of the bus is to quality high-tech standards with both decks finished in embossed-pattern, hard-wearing rubber flooring and in black to complement the bus's silver finish. Totally flexible and modular in structure Theatrebuss is suitable for open air events and large

indoor venues. For covered venues with limited access the modular stage structure with aluminium roof trussing can be assembled independently to create in-the-round, or end-on stage designs. It comes fully crewed, and is available for hire with complete technical rig.

Lighting control is via a Zero 88 Sirius 48 memory desk with soft patch and Arri demultiplexers with Alderham dimmers. Luminaires include Pars, fresnels, floods, HMI units and two Lycian 400HTI short-throw followspots.

Sound equipment includes a Soundtracs FM 24-4-2 mixing desk, Park Audio amps, various loudspeakers including EV horns with crossover, mics, and Quad and ART signal processing equipment.

For further information contact Theatrebuss in Cardiff, telephone (0222) 590496.



Diamond II in control at Hampton Court.

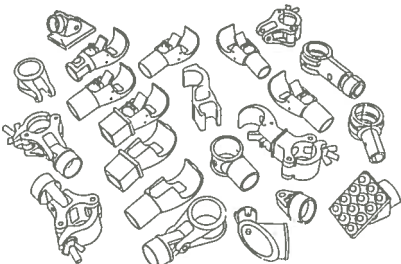
## A Festival of Light at the Palace

Billed as one of the most prestigious events in the social calendar, The Hampton Court Palace Festival lived up to its advance publicity with stunning performances from Monserrat Caballe, James Galway and the universally-acclaimed Kiri Te Kanawa

Lighting the festival for the two week event fell into the capable hands of Meteorlites, with lighting designer and operator John McCulloch using the Avolites Diamond II console. McCulloch asked Avolites to incorporate a number of refinements and custom changes to some of the features and functions of the desk to allow it to operate in a particular style suitable for the special performance. This customised adaptation of the Diamond II was carried out by the Avolites software development team lead by R&D director, Shahid Anwar. The Diamond II was controlling 30 VL5s, 12 ColorFaders and a variety of Pars. Much of the architectural lighting was also run from the Diamond II including illumination of the famous Hampton Court chimneys.

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## Space Shuttle America



The projector is in place, the audio and video systems are installed, and the show control programming is ready for the lift-off at the newest attraction at the Six Flag's Theme Park in Gurnee, Illinois - Space Shuttle America - the Next Century!

Electrosonic Systems in Burbank, California has completed the installation and commissioning of a 70mm projector, 17 video monitors, a unique digital audio system, and an advanced data-link control system that will operate this multi-sensory ride - Six Flags' first motion simulator attraction.

The new attraction, built by Solberg & Lowe of Santa Monica, is a life-size replica of the space shuttle parked out front. Inside, visitors view a 70mm film by Dream Quest Images of Simi Valley from two 50-seat Intimin hydraulic motion base systems experiencing a "fast-paced and perilous simulator journey to the moon on the space shuttle of the future," according to Jim Wintrode, president of Six Flags Great America. "The sophisticated, computer-monitored system puts guests in the middle of the action by surrounding them with a simultaneous visual, audio and physical ride experience in real time with the film adventure they are watching."

Six Flags worked closely with NASA on the details of the attraction, and turned to Dream Quest, creators of effects for 'Total Recall' and 'The Abyss' to produce the film. "We needed a state-of-the-art control and audio system to support the realism of the creative design and marry the different types of media involved - motion picture, laser video, digital audio," explained Mike Miller, Six Flags' technical director.

From the time visitors see a copy of the Space Shuttle parked in front of the attraction, they are transported into the world of space travel. In the pre-show, ten 13" video monitors and two 35" video monitors help recreate the feeling of Mission Control's 'routine' trip to the moon. Once inside the 'shuttle' cargo bay, guests see a unique take-off sequence on two 35" monitors, mounted on either side of the 22' x 45' main viewing screen. As the video scene ends, the main screen comes alive and guests are off on a 70mm film simulator ride that is anything but routine. The soundtrack, by Frank Serrafine, composer for the 'Star Trek' movies, is played back on a unique digital audio system that is locked to the projector through Electrosonic's proprietary timecode (EFM - Electrosonic Follow Me) printed directly onto the margin of the print - creating digital audio quality and absolute frame lock between picture, sound, and motion bases.

Altogether Space Shuttle America relies on five video discs and 12 channels of a digital audio to create a detailed environment throughout the 20 minute attraction. What holds all the diverse technical elements together is a sophisticated control system utilising Allen Bradley PLCs on a data highway used for networking subsystems. This includes the projector and motion base systems, the master PLC in the control rack, the audio, operator control panels, and other control room functions. This distributed control system greatly simplifies the wiring - just two twisted pairs in the control rack. It also means that the projector and motion bases can be treated as modular units and allows subsystem architecture and engineering design that is reusable and expandable without rewiring.

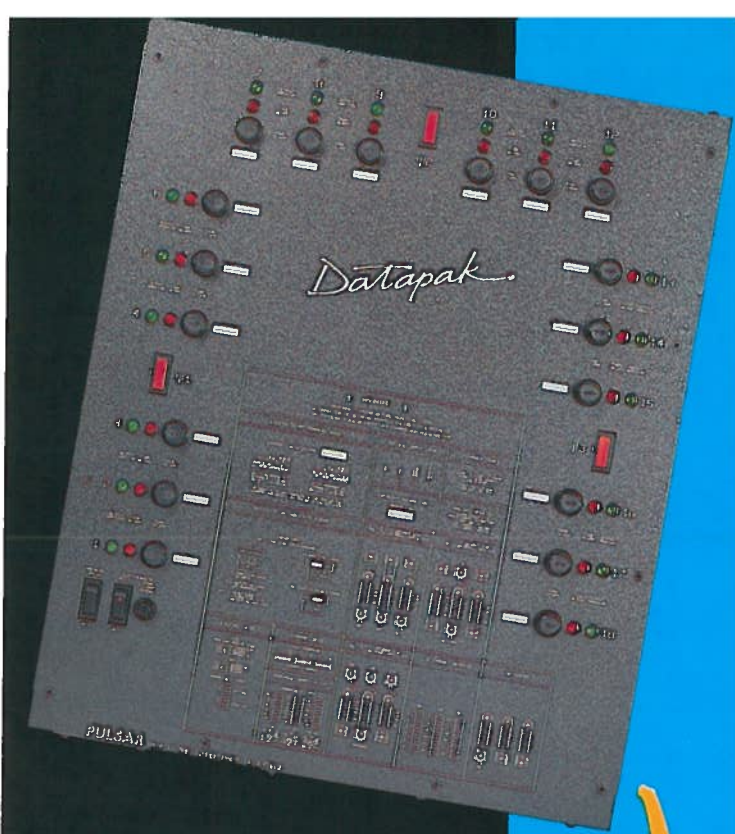
Apart from simplifying the control process, it also offers wide potential for data acquisition. The projector and motion base could eventually be self-diagnostic and accessible remotely. This could also mean that future software upgrades could be downloaded directly from Electrosonic to the site, thus supporting the long life of an attraction.



## Frankfurt Extends Sectors

Parts of the Frankfurt International Music Fair may well be larger than ever before when it is next held in the city from 8-12th March, 1995. The 'Pro Light Sound' segment, with professional lighting, sound and event technology product groups, will move to Hall 6 in the central section of the Frankfurt Fair and Exhibition Centre. Previously, this segment exhibited under restricted circumstances in Hall 9 in the western section of the Exhibition Centre.

With this measure, more exhibition space has been provided for 'Pro Sound Light' to cater for the demand for larger exhibition stands from existing exhibitors and requests from potential exhibitors to take part.



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## PLASA Show Broadens its Horizons

With only three months to go, the number of exhibitors at the PLASA Light & Sound Show, Europe's only comprehensive exhibition of equipment and technology for the performance and leisure industries, has surpassed all expectations. Of the 170 exhibitors representing over 300 companies, at least 50 will be in attendance for the first time. Committed to representing all areas of the lighting, sound and special effects industries, the PLASA Light & Sound Show 94 taking place from 11-14 September, truly reflects the growing diversity of the industry, both in terms of exhibitors and visitors.

Among those appearing at the show for the first time is Soundcraft Electronics Ltd, the largest manufacturer of professional mixing consoles in the world, and a company that services a vast array of entertainment sectors. The company's marketing director, Candy Davies, offered the following reason for attending the PLASA Light & Sound Show: "We've been aware of the Light & Sound Show for some time, but until last year we believed it was targeted primarily at the lighting sector. However, after attending last year's show we were convinced that the show was attracting a broader market and was addressing the needs of our clients. We have been in business for 21 years and many of our clients are interested in seeing what's new with regard to live performance mixing desks. We believe that at the PLASA Light & Sound Show they will finally have the opportunity to sample the broadest range of

mixing consoles under one roof."

PLASA's pan-European appeal is highlighted by the attendance at this year's show of ETC Audiovisuel. Founded in 1981, the Paris-based company entered into large format projection in 1985 and the following year were selected to provide equipment for the Jean Michel-Jarre event in Houston, Texas. ETC's team of designers and engineers has already provided specialised projection systems for such clients as Eurotunnel, The Museum Auvers sur Oise and the Beaubourg Centre in Paris.

The significant numbers of overseas visitors and exhibitors has made attendance at the Show mandatory. Baldwin Boxall Communications Ltd, manufacturers of public address systems and first-time exhibitors, are using PLASA as a means to expand their export market. Tony Hinman, marketing manager at Baldwin Boxall, explained: "We attended last year's show and were suitably impressed by the numbers of overseas exhibitors and visitors. In the past, we have attended other shows, but as we are keen to penetrate the overseas entertainment markets, it made sense to invest in a stand at the Light & Sound Show. The organisers of the show realise how valuable the overseas markets are to UK manufacturers. They appreciate that for many successful UK businesses exporting is the way to go."

Further exhibitor and visitor information for the PLASA Light & Sound Show 94 is available from P&O Events Limited, telephone 071-370 8179.

## Gallery to Gospel

Lighting Technology Projects have been chosen to design a new energy saving lighting installation for the Duveen Gallery in The British Museum. The gallery, housing The Elgin Marbles, is the only purpose-built display area in the Museum. After extensive on-site trials, monitored by the museum authorities, it was decided that the most suitable light sources would be HQI-T metal halide lamps.

A customised searchlight luminaire, re-designed by LTP to take the HQI-T lamp, was chosen as the basis of the scheme, which involved approximately 80 fittings using 150, 70 and 35W lamps.

The company have also recently completed a 'state-of-the-art' lighting installation in the refurbished Holy Trinity Church in Brompton, West London. The lighting design, by Bruce Kirk of LTP, features nearly 300 luminaires selected from a wide range of manufacturers including Microlights, ADB and Teatro. As well as providing quality lighting for general use, a stage and video lighting system is incorporated into the design.

## Harrow Theatre

Northern Light have installed the lighting, sound and communications systems at The Ryan Theatre in Harrow School.

The production lighting comprises a 120-channel Lightboard M with LD90 dimmers, fitted with the new Strand System Wide Control. A portable 16 push button station can be used in either the control room or from the prompt corner to control the lighting. A System 2000, Northern Light's own working light control system, controls the blues and the working lights, as well as a number of non-dim production lighting circuits.

The full production sound system has a Soundtracs Megas 16/4/2 desk and the communications system includes a stalls production desk, a stage manager's desk, cue lights, ring intercom and paging system.

### Lumo Support from XTBA

Following the purchase of the assets of Lumo Lighting from Light and Sound Design by Edison Lighting (see news last month), XTBA will be working with them to offer a complete spares and sales service for control and dimming products from Lumo Lighting, formerly Colortran UK. XTBA also has for sale Power Master dimmers, Trimaster, Status 12/24, Status 24/48, Prestige, Scene Master 60 control systems and Magic Sheets. All systems are new, boxed and fully guaranteed.

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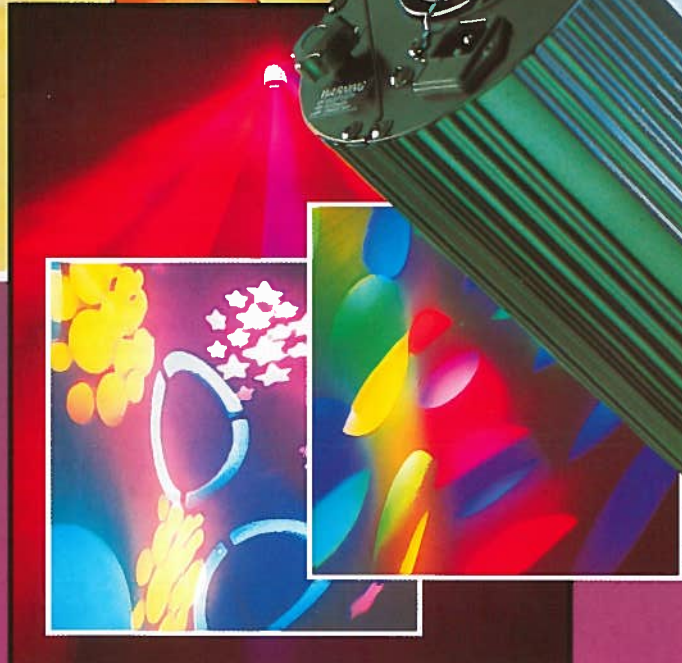
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**ABSTRACT**

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**ABSTRACT**

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## Compulite Action

All areas of Compulite sales have been very active over the past couple of months. At the beginning of June an Ovation 40 lighting control desk was delivered to the Marina Theatre, Lowestoft, along with Whisper colour scrollers, an Arri SmartRack and a Compulite DMX/D54 protocol converter to enable the existing demultiplexers to be retained. International Artistes' lighting designer Nigel Catmur has chosen the Animator Compact to control the complete lighting rig of conventionals and Golden Scans for the forthcoming Brian Conley Summer season at Blackpool North Pier and the Bradford Alhambra production of Aladdin at Christmas.

An order has just been placed for the first Compulite Digital Dimmer installation in the UK at the Kenneth More Theatre in Ilford. The system will be installed during the August close down and will include full reporting back to a new Compulite Applause lighting control desk and enhancement of the existing electrical installation, including supply of a new patch panel.

Sales of Compulite Whisper colour scrollers have also been experiencing an upturn with significant deliveries to Preston Guildhall and Glasgow Royal Concert Hall, with a number of other smaller orders. DMX 'dodgy boxes' have always been a good seller and the last couple of months have cleared out virtually all of the UK stocks of splitters, mergers and protocol converters, but new supplies should be in the UK by early July, say the company.

## Trans-Atlantic Links

The New York version of Sunset Boulevard will be using 14 Robert Juliat 18/38° 2500W D'Artagnan HMI profiles. The units have a digital control block built into the ballast allowing one DMX circuit to control the lamp ignition and one for the internal fader. The fader is an iris style diaphragm with 5120 steps between open and closed giving a near perfect fade. A smoothing function inside the digital control converts the 256 steps of DMX to the higher resolution of the fader. The HMI bulbs used are the newer single-ended G38 allowing easier bulb changing and offering perfect bulb alignment.

Meanwhile, Robert Juliat and UK agent Decoupe Ltd are discussing a joint venture in the form of a British hire company offering solely Robert Juliat equipment. The intention is not to compete with the established hire companies but to offer equipment not easily obtainable in Britain, such as Juliat's HMI profiles. The company hopes to be up and running this year.

## New Irish Lighting Production Service



A new independent lighting service, Lighting Design Associates, has been launched in Dublin by Andrew Leonard (pictured above), former MD and founder of Lighting Dimensions.

Lighting Design Associates provides a total package of lighting design, equipment hire and crews for clients throughout the entertainment industry, along with design and consultancy on a wide range of sales and installation projects. Leonard's career in lighting started almost 20 years ago in theatre. He worked in RTE television for three years, started his own company in 1978 and since then has worked with numerous top performance artistes including Bob Dylan, Placido Domingo, B.B. King and ZZ Top. His corporate clients, past and present, include IBM, Fiat, Renault and Polygram.

"The Irish market is a very personal one, and I am now in an excellent position to meet my clients' needs," Leonard told L+SI. "I source the best equipment and crews available, whether it's for a major festival or a small conference." Since starting up in February, Leonard has notched up an impressive list of events to his credit, including a live concert broadcast to the USA, the Renault Laguna launch and numerous corporate events.

Lighting Design Associates, can be contacted in Dublin, telephone (01) 2698692.

## LSC On Line

Australia-based LSC Electronics have asked us to point out that the contact numbers listed for the company in the 1994 Industry Yearbook are no longer in use. LSC can now be reached by telephone on +61 3 561 5255 or by fax on +61 3 561 5277. If you are having difficulty contacting any PLASA members, you can check the updated members listings which appear at the back of most issues of L+SI or ring us on (0323) 642639.

## Las Vegas Winner

RA Gray has recently supplied control systems and technical consulting for several shows and attractions at the MGM Grand Hotel, Casino and Theme Park. RA Gray's Performance Playback systems are used to control lighting, audio, video and animatronic figures. Sally Corporation chose RA Gray's Sound Solution (a CD-based audio playback system) and the playback system for control of their animatronic figures which are to be found throughout the MGM Casino. In the Theme Park, Gene Patrick Productions used the system for several shows including 'You're in the Movies' and 'Wizard's Secrets'.

The company have also just completed a fountain control system for the Laser Fantasy Fountain at the Hilton Hotel, Las Vegas. The fountain and lighting are controlled by the Playback system and audio is provided from the Sound Solution. Both digital valves and motor speed controllers receive commands from the system to create a light and sound synchronised performance. Custom control panels and timers were also supplied by RA Gray.

## DHA Gobo in Detail

If anyone thought DHA were at all concerned by the rise of other companies producing gobos at the recent ABTT Trade Show, a quick look at their latest development would show the advantage that their long years in gobo production have given them.

The demonstration I saw consisted of a glass gobo in an ordinary Minulette profile. Projected on a nearby wall was a complete page taken from an A5-sized DHA catalogue, with the standard sized text perfectly readable. The only modification needed to the lamp was the fitting of a donut in the colour frame, but even with that removed, the text, while slightly blurry, was still readable.

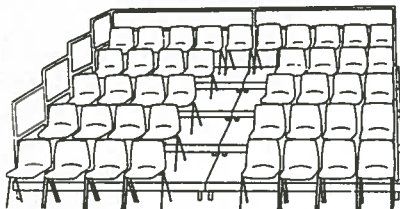
The gobo was, of course, a glass gobo, which DHA have been manufacturing for some time. However, this latest version contains a level of detail the company have never managed before, and of which they are very proud. Like all their glass gobos, the techniques involved are based on those used to produce microfilm, but it has taken some time and many tweaks of exposure settings to obtain this level of detail. DHA are now waiting for users to think up uses for such detailed gobos, away from their obvious use in trade shows.

These gobos are now available in the usual range of DHA sizes, and priced at the same level as standard custom glass gobos. More details can be obtained from DHA on 071-582 3600.

Robert Halliday

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# Lightfactor Nights

The Astoria International Corporation wanted nothing but the most progressive lighting installation for their new venue in Wales, the Cardiff Astoria, so Lightfactor's Dick Carrier leapt into action to design and specify a lighting rig suitable for the club that is set to follow the success of its sister venue in London.

Night club architect Aubrey Murray injected a touch of panache into the interior with Byzantine and surrealist influences prominent in the decor, and naturally the lighting came into line with these high quality creative demands. The Penn Fabrication box truss suspended above the dance floor provided lighting primarily for that area, although the instruments were carefully placed so that they could also be utilised for the stage.

The core lighting consists of 12 High End Systems' Trackspots, together with 12 Multirays, 24 Par 64 Raylites, Six Lightomation strobes and two Supersmoke 3000 Turbo machines, all driven by a Light Processor Integrator. Lightfactor also augmented the stage lighting with a further 24 Raylites and a Light Processor Q24 desk. The venue will be multi-purpose and will be used for live bands as well as club and student nights.

Dick Carrier has also been flying the company flag further afield in Turkey, where he has been overseeing the installation of the Oxyd disco, an open-air development on the, as yet, unspoilt approaches to Side, in the Antalya region. Lightfactor first became involved in the embryonic stages of the project in 1993, when they were approached by Istanbul Telesine to design and specify the lighting and sound rig for the club.

It was essential that the picturesque environs of the club were preserved in the scheme, and original foliage that had covered the site for hundreds of years was incorporated into the lighting structure to give it a natural feel. The spacious 2,500 capacity club's dance floor measures 14 metres in diameter, and Carrier opted



Lightfactor design and installations for the Cardiff Astoria (left) and the Oxyd Disco in Turkey (right).

for a dome-shaped rig.

Lighting fixtures include eight Intellabeams, 16 heads of Dataflash, 16 Synchronospheres and an MSR 1200 Helios on a three metre rise-and-fall elevator as the centre-piece. There were an abundance of other effects too, such as Multirays, Sharks, Raylites and 10-lamp rolling boxes. The curves of the structure were outlined in 24 volt tube lights. The rig is controlled from a Light Processor Integrator, and was designed with a 'spacey' feel to it, so each instrument has its own clearly defined area to work in. All the lighting and equipment was supplied jointly by Lightfactor and Istanbul Telesine, and the dome structure was manufactured by Penn Fabrication.

The sound system was also designed by Lightfactor and featured a Martin Audio EM system

driven by Crest amplifiers, with a Citronic SPX 7-27 for equalisation.

In addition to the dance floor system, there is a live stage system featuring a small Raylight lighting rig, driven by a Light Processor Q24, and a separate sound system - also Martin. Lightfactor were also responsible for the DJ equipment that features Technics decks, a Vestax CD33 twin CD system, and a Citronic SM650 mixer.

The installation took a gruelling nine days from the arrival of the gear to the opening of the club, with everyone working throughout the 90 degree heat of the day as well as a couple of over-night sessions. Dick Carrier's programming sessions took place at night, and were accompanied by an aerial assault from stag beetles and a superabundance of airborne insects!

## LSD London Office

As reported in last month's issue Chris Cronin, newly appointed sales director at LSD, has implemented the opening of a London sales and service office for LSD clients. Situated in Alliance Road, just off the M40 at Acton near the BBC, the 10,000 sq.ft warehouse will stock two generic and three Icon lighting systems, comprising between 40-50 Icons and two 40 foot box trusses of fully loaded pre-rig truss, plus all necessary rigging, mains and dimmers etc. The office will also be home to a sales team of four headed up by Micky Curbishley who left Vari-Lite in April.

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## M&M's New Addition



M&M Camelont has been appointed by Elite Technologies of San Diego as the sole European distributor of the Microscroller System.

The Microscroller, the first colour changer system for MR16 fittings, features a full 11 frame gel string with a scroll time of 1 to 30 seconds. The controller, which will operate as a stand alone system, supplies the power and signal for up to 12 scrollers and is able to store as many as 16 cues of both colour and speed data for each scroller. The Microscroller can also be controlled by a DMX512 signal from most standard lighting and automation control boards.

M&M are seeking European dealers for the Microscroller and interested companies should contact Adrian Hicks, telephone 071-284 2504.

## Prospot Double

The Moving Light Company's ProSpot moving lights have been used for the recent BAFTA Awards and in the Michael Barrymore show in Blackpool. Freelance lighting director Brian Pearce specified the lights for both productions.

Pearce chose the BAFTA awards ceremony as his debut with the ProSpots. "It was the first time that the awards were held in a theatre after many years at the Grosvenor House Hotel, so it was very important to get the set right. We had a short set up and rehearsal time and we needed a range of looks," he explained. Following their performance at the BAFTA Awards, he then went on to specify them for the Michael Barrymore show in Blackpool.

## New York Consultancy

Paul Garrity has formed his own New York City-based firm, Paul Garrity & Associates, providing sound and communication systems design and consulting services. The new firm specialises in systems for theatres and other performing arts venues. Paul Garrity was previously a principal consultant at Artec Consultants Inc, where for the past 12 years he has designed the extensive systems at the International Convention Centre, Birmingham, as well as for numerous theatres and concert halls throughout North America and Europe. Paul Garrity & Associates can be reached on (212) 645 4256.

## AquaLumia Show

Geoson International, Inc, the Seoul-based entertainment company and producer of 'Waterscreen Multi-Media Spectaculars', has teamed up with Los Angeles-based Laser Images, Inc, originators and producers of the Laserium Laser Shows, to create new show productions that integrate waterscreen technology with Laserium laser show technology.

The new arrangement will allow Geoson International to produce, market and sell Laserium laser shows exclusively for the waterscreen technology format world-wide. The new shows, dubbed 'AquaLumia Multi-Media Spectaculars' were conceived by Kurt Wilson, director of project management for Geoson.

Although this new concept is not a total replacement of custom film production, it does allow parks and attractions whose budgets may not be in the league of a typical Expo show the option to purchase or rent entire productions at a much lower cost.

Some of the shows already under development include 'Crystal Odyssey', a classical programme. The 'next generation' AquaLumia productions are supported by three new waterscreen system options, which have been developed specifically for the theme park industry. In addition to 16-metre high systems, there are now 10- and 6-metre high waterscreens, as well as custom-made to order, all of which are available on a temporary rental basis for peak seasons, or as a permanent installation.

## She Loves WL

White Light is supplying lighting hire for the new production of the award-winning musical 'She Loves Me' which opens at the Savoy Theatre later this month.

The lighting has been designed by Peter Kaczorowski and features two Color Arc Xenon followspots, 35 Cantata Profiles, 256 Lekos, 38 Cantata fresnels, 11 Minim fresnels, 16 Par 64/5 and 39 Rainbow scrollers. The show was nominated for five Tony awards when it first opened in New York in 1963 and subsequently played in London for a successful season. The current production opened in 1993 at the Roundabout Theatre in New York before transferring to Broadway in October last year. Since then 'She Loves Me' has been nominated for six Outer Critics Circle Awards, winning four, five Drama Desk Awards, of which it won two, and nine Tony Awards, winning one.

## Sarner's Monstrous Job at Land's End

Sarner International Limited - the London based creators of themed visitor attractions - have just completed a further installation at the Land's End attraction, the Last Labyrinth, considered to be one of the best of its kind in the world.

The latest feature at the attraction is a fully automated sea monster of huge proportions which was conceived, designed and installed by Sarner. With full pneumatic animation the monster's enormous head lunges forward and swings menacingly from side to side - roaring, snapping its jaws, and staring wildly with its huge eyes.

With a sound track mixed in Sarner's own studios, including specially created sound effects, the authentic smell of a dank seabed cavern and dramatic lighting effects, it is guaranteed to frighten even the most hardy soul - in fact this monster should carry a health warning!

Providing the audio are the JBL Control Series and 2 x 15 sub bass units driven by 2 x 150W amplifiers via Urei processors. As the cavern is dark, lighting is minimal, featuring over 30 miniature dichroic Par cans, four Mini Ripples, 1500W Linear Strobes and an Optikinetics Solar 250 FX projector, whilst the whole 'experience' is under the control of a powerful computer system with AMX control via RS232/Relay closure.

Meanwhile Sarner has been appointed the exclusive European distributors for the American Animatronic production company, Life-Formations.

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## A Million Dollars

It's the biggest single PA equipment purchase in the USA for 10 years. It's worth over \$1 m dollars, and it's the largest order in Turbosound's history.

Eighth Day Sound Systems of Cleveland, US, has joined the club of world-wide Flashlight users, with the purchase of a massive Flashlight and Floodlight sound reinforcement system which will debut with Meatloaf on the summer leg of his US tour. Comprising two complete arena systems, the equipment includes all loudspeaker enclosures, power amplification, system control electronics, flying hardware and speaker cabling. A Turbosound customer for many years, Eighth Day Sound specialises in national and international tours of world-class artistes including Jethro Tull, Frank Sinatra, Tears for Fears, The Lemonheads, Erasure, Tom Jones and the Jesus and Mary Chain.

## Wharfedale Invest

The Verity Group plc, holding company of Wharfedale International Limited, has initiated a major investment programme at Wharfedale's production site in Leeds. The investment will allow much-increased production capacity for the company's hi-fi loudspeakers and power range products. As part of the refurbishment and re-organisation, the board of directors has decided to split the company into two distinct operating divisions - Wharfedale Loudspeakers and Fane Acoustics.

## ABTT North

The 1994 ABTT North trade show of equipment for the entertainment industry is to be held in The Daily Telegraph Opera Theatre and foyer of The Royal Northern College of Music, Manchester, from Thursday 13th - Saturday 15th October. Anyone interested in exhibiting should contact the organiser Phil Windsor on (0204) 304479.

## TP Hollywood Bowl



Theatre Projects Consultants have been retained to provide a major study to renovate the Hollywood Bowl in Los Angeles. TPC will advise on theatre planning and performance support for a scheme which proposes a complete upgrade and refurbishment of the famous facility. TPC's David Taylor (pictured above on site) is managing the study and is working with colleague Mitja Hinderks on developing new rigging, lighting and sound infrastructure systems, backstage and support programming, and a design which re-addresses the icon form of the Bowl shell itself.

The 18,000 seat venue has been much celebrated since the 1920s. "It has a scale all its own," David Taylor told L+S, "not just because of the capacity of eager patrons who want to see and hear great shows, but also because the look and experience of the Bowl and its unique site are special. We're hoping to make it easier, safer and cheaper to do better shows by taking advantage of the advances in theatre technology and by building on the qualities that this venue has to offer."

TPC are advising architects and engineers Skidmore, Owings and Merrill in Los Angeles, as well as working closely with the Los Angeles Philharmonic, the Hollywood Bowl Orchestra and major rock producers BSP. Design continues through this summer season before major works begin on site in the autumn.

## Half Moon's New £1 million Home

Half Moon, London's renowned theatre organisation for young people, has just opened the doors of its new home with a week of celebration and events.

Young Londoners created their own shows, performing in plays, learning about lighting and sound and performing or watching powerful theatre - all in a place they can now call their own, London's Half Moon. The new building is a Victorian town hall, reborn as a state-of-the-art theatre space, full of light and colour. It provides some of the best architect-designed facilities available: a large 'black' space for performances, workshop rooms, a fully-equipped technical studio with a wide range of equipment, and a creche. There is full disabled access to all areas - and, in fact, disabled people are positively encouraged to join in the theatre and technical training courses.

Half Moon's technical training unit, led by Dipak Mistry, aims to create training opportunities for young people, enabling them to gain access to work in the theatre and community arts world. The main course that the unit operates is the 'Technical Training Course' which runs annually for six months. Trainees need no qualifications, apart from enthusiasm, and the company targets recruitment amongst local young unemployed people. The course is very well regarded within the theatre world and many Half Moon trainees are now working in theatres across the UK.

This summer there is a pilot workshop leader's course (co-run with Theatre Venture), the aim of which is to create a pool of well-trained workshop leaders. A special emphasis has been placed on recruiting people from the Black and Asian communities. For further details on the training courses available at Half Moon, contact the theatre on 071-837 2511.

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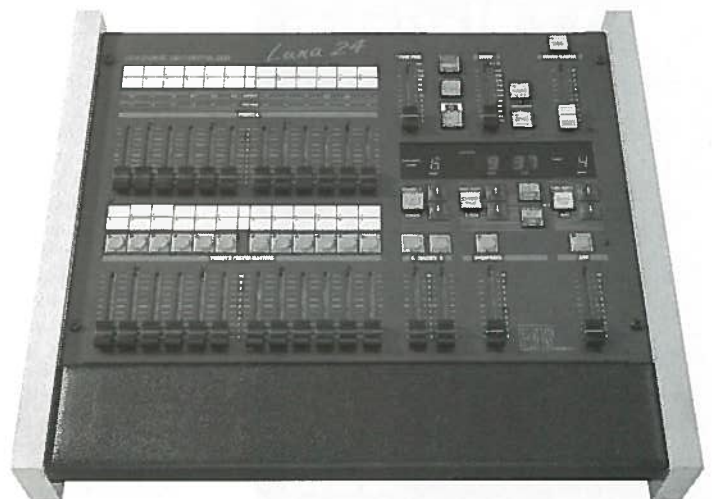
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## Scrolling Stones



When you're preparing something the size of the forthcoming Rolling Stones world tour, you need products which you know are going to last the course. Which is why Theatre Projects specified Rainbow colour changers. What you don't need is a photographer turning up to take your picture, but M&M managed to drag Wayne Boehning (left), Concert Productions' production manager in Dallas, and Carol Croft, production manager at Theatre Projects, away from overseeing the preparations of the 40 8-lite Rainbows needed in the States on August 1st. Adrian Hicks (right) product manager for M&M Camelont, world-wide distributor of Rainbows, was there to make sure the products maintained M&M's usual high standards.

## Tower Spectacular

Shell Shock Fireworks from Suffolk have won the contract to provide the fireworks finale for the Corporation of London's celebrations of the Tower Bridge Centenary on 30th June 1994.

Undoubtedly this will be one of the most spectacular displays seen in Central London for some years, as Tower Bridge itself will be used for some of the effects as well as a pontoon-based aerial blast. "We are absolutely delighted to have won this contract and have some very exciting ideas for ensuring that this unique display is remembered by the British public as one of the best in history," Andrew Smiley, managing partner and head of design for Shell Shock, told L+SI.

The company are known as aerial display specialists and have provided displays for a wide variety of events over the last nine years, both in the UK and internationally. It is not the first bridge centenary they have performed. In 1988 they provided something of a world first by firing from a moving train as it crossed the Tay Bridge.

## Ghostly Rosco Glo

At a recent six day play at the ICA, audiences were treated to a most unusual use of Rosco Glo phosphorescent paint. Normally used in small quantities for stage marking, in 'Beulah Land' designer Jeremy Herbert has used Rosco Glo as an intrinsic part of the set.

All three sides of the set had been painted with Rosco Glo, which under normal light appeared as white. The first use came at the very beginning of the hour-long play, when, with the set masked by a black curtain, a character's shadow was frozen to the back wall by the use of a strong light which energised the Rosco Glo on the rest of the set. When the curtain opened, this shadow remained as a still 'character' in the play, fading after about 15 minutes. A similar effect was used towards the end when bursts of light were again used to 'fix' the shadows of two people as they moved about the set, to create lingering ghostly images of their approaching death.

A totally different use was the drawing, by one of the actors, of a pencil slim torch in an erratic line of peaks and troughs across the back drop, which energised the paint and formed the image of a glowing arctic landscape.

## Strand Dealership for White Light North

White Light North has been appointed as the main distributor for Strand lighting for the North of England. The company's director, John Anderton, told L+SI: "This is the obvious next step for us because the level of our sales and installation business has increased over the last few years. Being the main distributor for Strand Lighting gives us access to an enormous range of equipment at competitive prices."

To develop this new business, Jeff Demain has been recruited to head-up the newly expanded sales department. White Light North has also set up a technical support department with Keith Hartley as the main service engineer. Keith has been servicing Strand equipment for nearly seven years, as well as other manufacturers' products.

## Wembley has the Last Laugh

Wembley Loudspeaker have recently completed an installation in what used to be The Comedy Store in Leicester Square. Since the Comedy Store's move across the road, the old premises were snapped up by Ken Edwards who already owns Lacey's in St. Martin's Lane. He has transformed the place into an upmarket discotheque specialising in 'garage' and 'house' music, which judging by the response of the opening night and subsequent weeks, promises to become one of the capital's hottest new nightspots.

Club Koo, as the venue is now known, is the proud owner of what is described by Wembley director, Paul MacCallum, as "one of the loudest systems in London. For what is essentially a pretty intimate little club - their maximum capacity is only 450 - we have put in one hell of a sound system. There is a 12K system on the dance floor alone, apart from what we've installed as in-fill sound!"

The main four way system is arranged in four towers, one at each corner of the dance floor. Each tower comprises two 2820 subs, two Spyderys and a specially designed JBL-driven mid-high pack. Amplification comes from Amcron for the main system, while Citronic amplifiers drive the in-fills. The total sound budget came to just under £40,000, much more than many venues of twice the capacity would consider spending on their systems.

## British Music Fair

Over the past three years, British Music Fairs Ltd has developed the British Music Fair (London, 24-26 July, Olympia 2) into one of the main trade events for the music industry in the UK, with major companies from all areas of manufacture and distribution taking part.

Now, the 1994 BMF is set to break all previous records. With space sales up 10%, the show has attracted exhibitors from many other European countries, the USA, South America and the Far East, as well as 30 first-time exhibitors. An interesting development is the recognition of BMF as a platform for manufacturers to launch new products, traditionally reserved for the NAMM show in the USA and the Frankfurt International Music Fair. The range of products displayed covers all areas of the music industry and includes acoustic instruments, accessories, and professional sound equipment. PLASA members exhibiting at the show include Audio Technica Ltd, HW International, Peavey Electronics UK, Shuttlesound Ltd, and John Hornby Skewes.

Further information is available from Liz Richards on (0442) 215435.



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**EARLS COURT 2, LONDON**  
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**FIRST TIME VISITOR**



# TWO VENUES AND ONE DAY IN LISBON

John Offord is hosted by Philips Portuguesa and Glantre Engineering

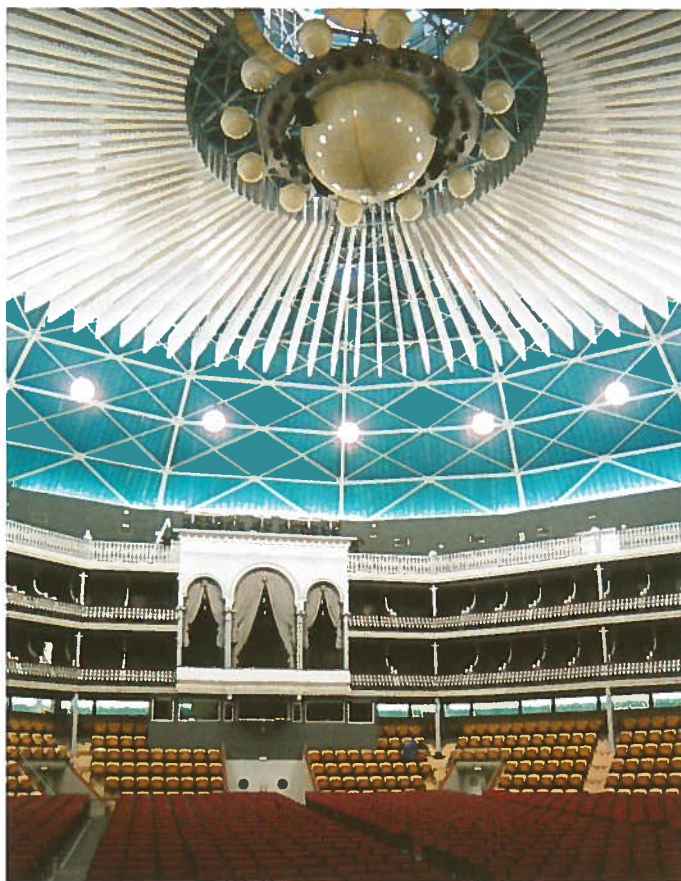
Glantre's managing director Derek Gilbert reckoned I'd find this trip interesting. He'd show me two major venues of totally different age, size, type and appeal, but both put into shape, operationally and performance-wise, using the joint expertise of Philips in Portugal and Reading-based Glantre Engineering Ltd.

The two venues turned out to be the massive and ultra-new Centro Cultural De Belém, Portugal's centre for national events for the future, located on the River Tagus a little to the west of Lisbon city centre, and the very special 104-year-old Coliseu, hidden away behind shopfronts in one of the extremely attractive central narrow-streeted pedestrian-only zones.

Early morning coffee was taken in the Philip Portuguesa SA' HQ at Miraflores, described in the Lisbon press as a high-tech and 'intelligent' building, where the day's plans were duly co-ordinated.

The integrated projects division within the Philips' Portugese operation, which had overall responsibility for both venues we were due to visit, commenced operations in 1991, and came about as part of a deliberate effort to reinforce the company's presence in the professional installation area, and to better promote itself and grasp more business in the field of lighting installations, communications systems, cable TV and so on in venues ranging from hotels and conference centres through to medical centres and TV installations. "They all come under the area and philosophy of integrated projects," said Dr Jorge do Carmo Simoes, of Philips Portuguesa.

Glantre Engineering is readily-known to our regular readers as one of the leading UK companies involved in turnkey projects world-wide. In fact, they were heavily involved with the Edinburgh Festival Theatre featured in



Spectacular auditorium of the Lisbon Coliseu, showing presidential box, arena seating and acoustic spheres and slat panels fitted within the dome.

our June issue. The company has been operating since 1974 and has twice won the Queen's Award for Export Achievement.

The new Cultural Centre at Belém is typical of the sort of major project work Philips want to go on getting, but our first port of call was the Coliseu as, very sensibly, it fitted lunchtime planning so much better. Our team leader, and man in charge of the Coliseu project, was Manuel Rodrigues Da Silva, director of Philips' integrated projects division. We were joined by Glantre's site manager, Andy Quinn, Amavel

irregularity of steps over the domed surface somewhat disconcerting, if you dared to climb and view at one and the same time.

A Portugese design team was appointed led by architects Mauricio de Vasconcelos with Jose Megre representing the client's organisation and with Victor Correia as technical director. Specialist international consultancy support was provided from Switzerland through a team based on SA du Grand Casino de Geneve (SAGC), led by Pierre Lutz as technical director, P Aklin as specialist

Fontes and Rui Castro of Philips and our splendid interpreter Jose De Sousa.

The Coliseu had become somewhat dilapidated and of late had had only occasional use, having been slowly deteriorating since its last coat of paint in 1929. But early in 1993 a decision was taken by the municipal authorities that it should be extensively refurbished to serve as one of the City's principal performance venues during Lisbon's incumbency as European City of Culture 1994. It is a beautifully proportioned octagonal arena space, with a stage taking one side of the octagon and faced by the presidential box set centrally on the opposite side. In the old days it could host a crushed audience of 5,000, but in today's more comfortable format can seat up to 3,600 for concert performances. It is the sort of venue that makes you gasp when you enter for the first time - a splendid one-off sort of place with its very own magic.

Due largely to the fact that the weather is much fairer to buildings in this part of the world than in the wetter climes of northern Europe, little had to be done to the main structure. The original iron roof work was in excellent shape, although a new roof covering was installed, and duly inspected from 'on top' by the intrepid technical team. The view



The proscenium stage with front of house catwalk .



The main entrance to the Coliseu is tucked away in the side streets of Lisbon.



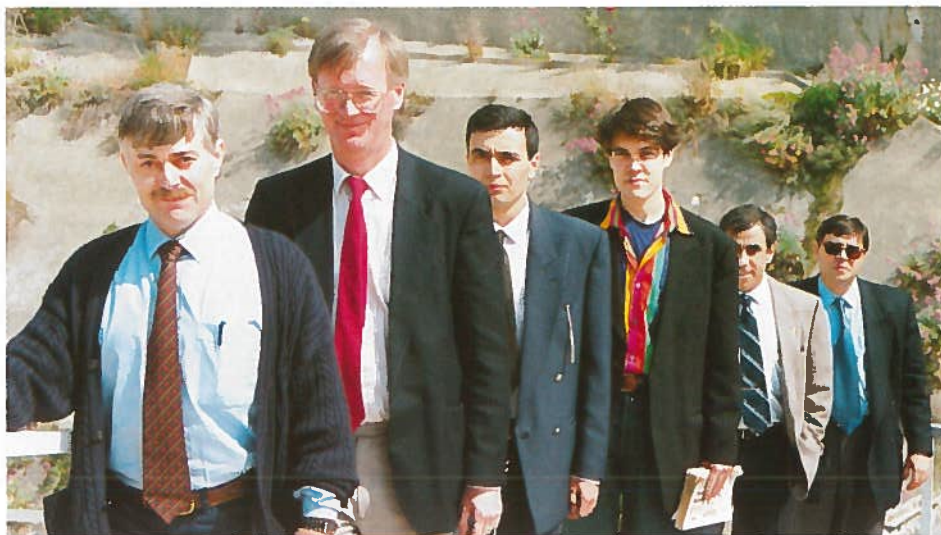
architect and J.L. Delacruz as theatre consultant. Design development was conducted through a series of meetings in Lisbon and Geneva.

"The operational brief for the refurbishment determined that the principal performance format should be based on the proscenium stage, even though sightline restrictions from both the sides of the octagon adjoining the stage tower would lead to considerable curtailment in seating capacity," explained Derek Gilbert. "This would be somewhat alleviated however by maximising the use of the forestage. A secondary requirement was that the Coliseu should be capable of handling arena-type productions and sporting events in a way rather similar to one of its distinguished contemporaries, the Royal Albert Hall in London.

"Unfortunately, budget restrictions ruled out the possibility of equipping the central arena area with a series of lifts and removable seating wagons to facilitate rapid changeovers between proscenium and arena formats. Instead, the design had to be based on fitting out the central area with a demountable structure gently raked towards the stage with fixed seating. It is hoped that at a future date, funds can be made available to enable this aspect to be completed and thereby provide a fast and easy interchange between the two contrasting formats."

Delays in securing the finance for the project finally led to the design and implementation period being restricted to a tight programme of less than five months, and in these circumstances, the Lisbon Municipality and their designers decided that the technical installation contract for lighting, sound and rigging could all be most satisfactorily covered under a single turnkey contract. This was placed with Philips Portuguesa SA whose two principal partners were Glantre Engineering (project manager David Lee), with responsibility for the complete stage lighting, rigging and electrical systems, and with locally-based Audium as sound system sub-contractor (project leader Filipe Santos).

During the refurbishment, the Coliseu fly tower was completely renewed, with the old roof and wooden grid being replaced by steel roof trusses, grid and galleries. A total of 42



Andy Quinn, Derek Gilbert, Rui Castro, Jose De Sousa, Amavel Fontes and Manuel Rodrigues Da Silva hold tight while L+S's editor takes a roof-top photograph on the Coliseu.



Centro Cultural De Belém (CCB).

double purchase counter-weights and ten motorised rigging sets were installed, the latter mainly dedicated to permanent lighting bars and acoustic overstage reflectors. Philips and Glantre selected Secoa Inc of Minneapolis, USA as principal rigging manufacturer.

There was a requirement for provision of two lifts, front and rear, to either serve as forestage or orchestra pit for the proscenium configuration, or in arena format to accept retractable seating wagons which are used to complete the eighth segment of the octagon. "Severe space restrictions in the pit area precluded use of conventional screwjack lifts, while scissor lifts were not

favoured by either client or consultants due to their tendency to lose height through gradual creep," explained Derek Gilbert.

"An important decision was taken to use Spiralifts. These innovative devices are operated by a spiral spring mechanism and invented by the Paco Corporation of Montreal. They are finding increasing popularity in North American theatres but are virtually unknown in Europe. One enormous advantage of the Spiralift is that in the lowered position it only requires a minimum pit depth of around

400mm," Gilbert continued.

Rather than importing completely made-up lifts from Canada, Glantre arranged to import only the Spiralift mechanisms, along with their drive, synchronisation and control systems. The lifts' steel frames and guides were fabricated locally in Portugal under the supervision of Andy Quinn. "Erection on site turned out to be very straightforward and the overall installation time was somewhat lower than would have been expected for screwjack lifts," said Derek Gilbert. "It surely won't be long before their use outside North America becomes far more widespread."

The stage lighting installation at the Coliseu



Coliseu: DDA Q Series audio mixer.



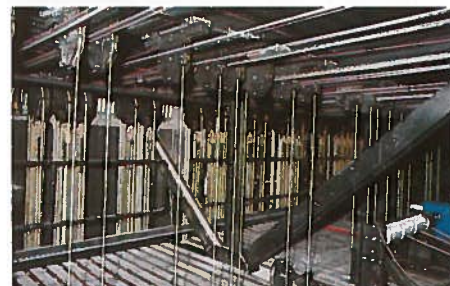
One of the refurbished Coliseu smoke lanterns.



Coliseu: Arri Imagine 2 in lighting control room.



Juliat luminaires below auditorium catwalk.



View of the grid with counterweight headblocks.





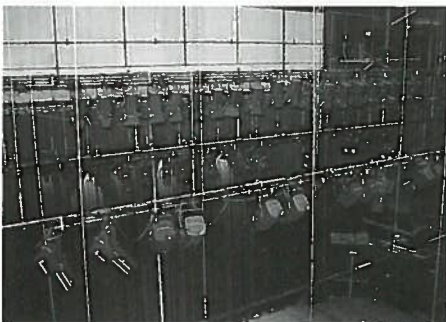
**The Coliseu in its heyday.**

is based on a 300 channel Arri Imagine 2 console with Smartrack digital dimmers, split between one dimmer room in the arena and a second room backstage. Stage lighting luminaires were sourced from Robert Juliat of France and James Thomas of the UK. Custom-built lighting bars, trusses, socket boxes and working light control systems were all manufactured in the UK.

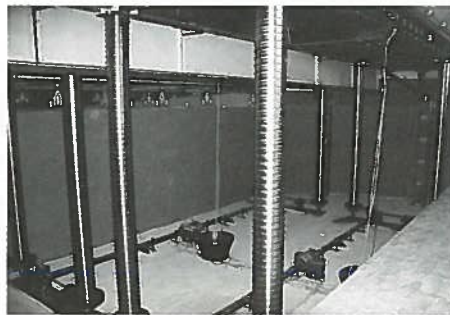
The sound reinforcement system was specially engineered by Philips and Audium to cater for a wide range of uses ranging from rock concert and circus to theatre, ballet and classical concerts. Principal loudspeaker positions are on the forestage bridges and at the proscenium sides, with additional loudspeakers mounted in a circle below the dome for arena coverage and for balcony reinforcement in proscenium format. Loudspeakers and processing are all based on the Electro-Voice Deltamax system under software control. Amplification is by Crest. The audio mixer is a DDA Q Series with 32 inputs, eight auxiliaries, four foldback, eight sub-groups and an 8 x 4 matrix. An extensive wiring and connection infrastructure was provided along with an extensive range of microphones and other equipment. Stage management and communication systems, including ring-intercoms, cue-lights, paging, show relay and video were jointly handled by Philips and Glantre.

The total cost of the project amounted to £7.5m, with £1.6m of that sum devoted to the work discussed in this article.

After lunch, and dodging Lisbon's famous old trams, it was time to follow the Tagus westwards to the Centro Cultural De Belém,



**Backstage from the stage left gallery showing lighting bars with Juliat luminaires.**



**Coliseu: underside of orchestra lift at the Coliseu showing spiral screw devices.**

which I'll now call CCB for short. The project received a substantial financial contribution from the EEC with completion of the first phase scheduled in time for the conference section to be used for various heads of state and foreign minister summit meetings during Portugal's presidency of the EEC during the first six months of 1992. As well as the entrance and the main entrance foyer, the first phase included all the conference rooms and the 400-seat Pequeno Auditorio which doubled as the press hall during the EEC events.

The second and third stages of the project were progressively opened up in the subsequent 18 months and included the 2200-seat Grande Auditorio together with extensive exhibition facilities. The brief for this venue was that it should be able to accommodate major operatic productions, ballet, full-scale orchestral concerts and conferences. As is usual with such extensive multi-purpose usage, a certain amount of compromise had to be adopted to strike a



**Glantre's Andy Quinn pictured on the Coliseu grid.**

balance between the sometimes contradictory requirements of the different usages.

The architectural team was led by Gregotti of Italy and local firm Risco, whose team was led by Manuel Salgado, Professor Daciano da Costa and Carlos Costa. Their theatre consultant was the well-respected Henri Oeschlin, a Berlin-based technical director, but sadly he was to pass away in the later stages of the project, however his contribution should serve as a worthy memorial. Further important theatre consultancy was provided by the UK's Carr and Angier, who were employed as special advisors to the Portuguese Ministry of Culture. Acousticians were P Martins da Silva with Sandy Brown Associates. Technical installations throughout the whole complex were again handled by Philips Portuguesa in partnership with JEM (electrical contractors), Glantre Engineering and Audium. Yet another theatre consultant who was heavily involved in detailed design was Leonard Greenwood during his spell of service on secondment to Glantre during a quiet time at Theatre Projects Consultants to whom he has subsequently returned.

Main features of the Grande Auditorio include an elaborate rigging system with 75 variable speed motorised rigging sets (33 bar and 42 point suspensions) controlled from a computerised MicroCommander console. These were supplemented by 24 manually operated double purchase counterweight sets interspersed between the motorised sets. While there are some experts who favour a mixture of motorised and manual rigging, a number of leading theatrical practitioners would generally advocate adopting a manual counterweight installation if the budget cannot run to a fully motorised and computer controlled system. Despite this, the CCB rigging installations work well and have been thoughtfully detailed. Additional stage machinery includes two screwjack-type orchestra lifts, safety curtain, lighting bridge and towers, acoustic shell and a modular stage floor into which the transportable hydraulic lifts can be fitted wherever required.

Stage lighting involves a 450-channel Strand Galaxy 3 console with EC90 digital dimmers and around 300 luminaires from Strand, Pani, Teatro and James Thomas. Again, there was an extensive infrastructure of lighting positions, socket boxes, PALS network and worklight controls. One small but interesting feature was one of the first usages of a programmable cue-light system from Howard Eaton Lighting.

Extensive sound and communication systems were based on ElectroVoice and Crest products while outside the two auditoria Philips were also responsible for extensive specialist installations covering public address, video distribution, security, conference and simultaneous interpretation. The vast majority of these were based on Philips' own product lines which were able to satisfy the demanding specification requirements most admirably.

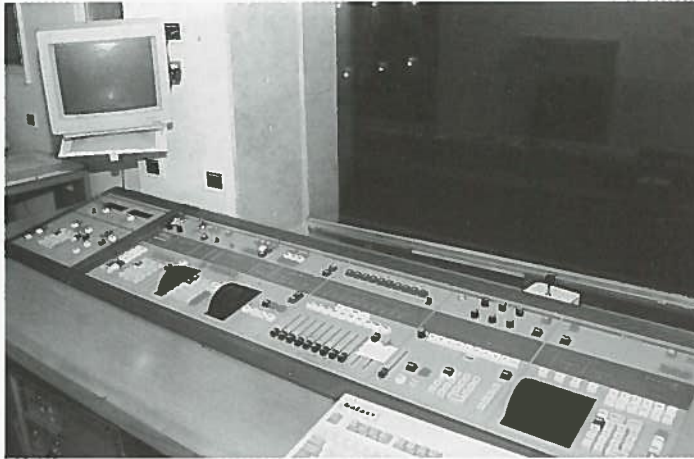


**CCB: MicroCommander rigging control console on the stage right gallery.**

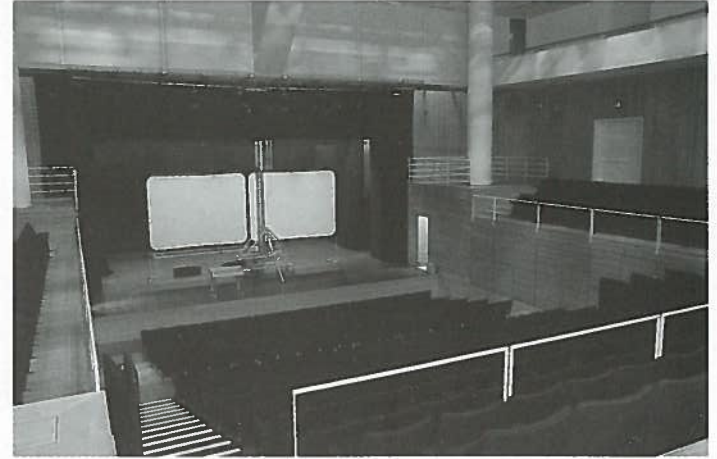




Above and right: CCB Grande Auditorio, with views towards and from the stage. Seating capacity is 1,500.



Strand Galaxy lighting control console, CCB Grande Auditorio.



The small 'Pequeno' auditorium, CCB.

To me, the CCB appeared as a massive latter-day square-rigged Moroccan fort permanently moored alongside the River Tagus, and there was something cold about its modernity, despite the brightness of the sunshine. However, it is by no means out of place in its setting - the stone facing is the same material that was used to construct the adjacent and ancient Mosteiro dos Jerónimos, and the flags of the EC member nations add the necessary splash of colour. It will need time to grow into both its setting and its role, and it is certainly more than suitably equipped for its purpose.

What Lisbon gets today, Oporto, the country's other major city, will get soon after, and the Philips/Glantre camp are now working on a major auditorium there forming part of the EuroParque complex. This will have similar facilities to CCB but with more exhibition space, and bearing in mind the spend in Lisbon was £7m for the complete Philips package and £2.8m on the AV installation alone, it's good business if you can get it.

Glantre have been working regularly with Philips for twelve years and the bank of experience built up over the period, both on these and other schemes world-wide, enables them to dovetail the necessary expertise into all kinds of projects. "Where Philips invite us to participate in their theatrical projects, the usual split is that Philips look after audio, video and other specialised low current systems, while Glantre takes care of the stage rigging, machinery, stage lighting and electrical contracting. We usually divide the stage management and communications, with Glantre doing things such as the stage manager's desk and ring intercom and cue light systems and working light controls," explained Derek Gilbert. "We may also be involved with such things as integration of paging systems, for instance.

"Whatever the eventual requirement we are now highly adept at running all types of major projects between the two of us in a seamless way, and integration of our project teams now happens almost as a matter of course."

So, one 'day-out' in Lisbon produced two interesting venues, aromatic early summer sunshine, an excellent traditional local lunch, and good conversation. However, the highlight for me was how in this industry you can walk into any similar projects anywhere in the world

and see the same expertise and the same technology being applied by the same (and similar) people.

Whatever the country or language, the commonality is in the fast-growing world coverage of the same high level of performance technology, put into place by companies such as Glantre, who can add to their base skills those of visa fixing, understanding airline timetables and the ability to fly off to any destination at a moment's notice.

## GLANTRE IN PORTUGAL

- For both the Coliseu and the Centro Cultural de Belem, Lisbon, Philips Portuguesa selected Glantre as their partner and sub-contractor for stage lighting, rigging and lifts. At the Coliseu, Glantre also handled the specialist electrical contracting including that for Philips' sound and communication systems. The two companies are now working together at EuroParque near Oporto; Glantre's total works in Portugal over a 4 year period are valued at well over £4 million.
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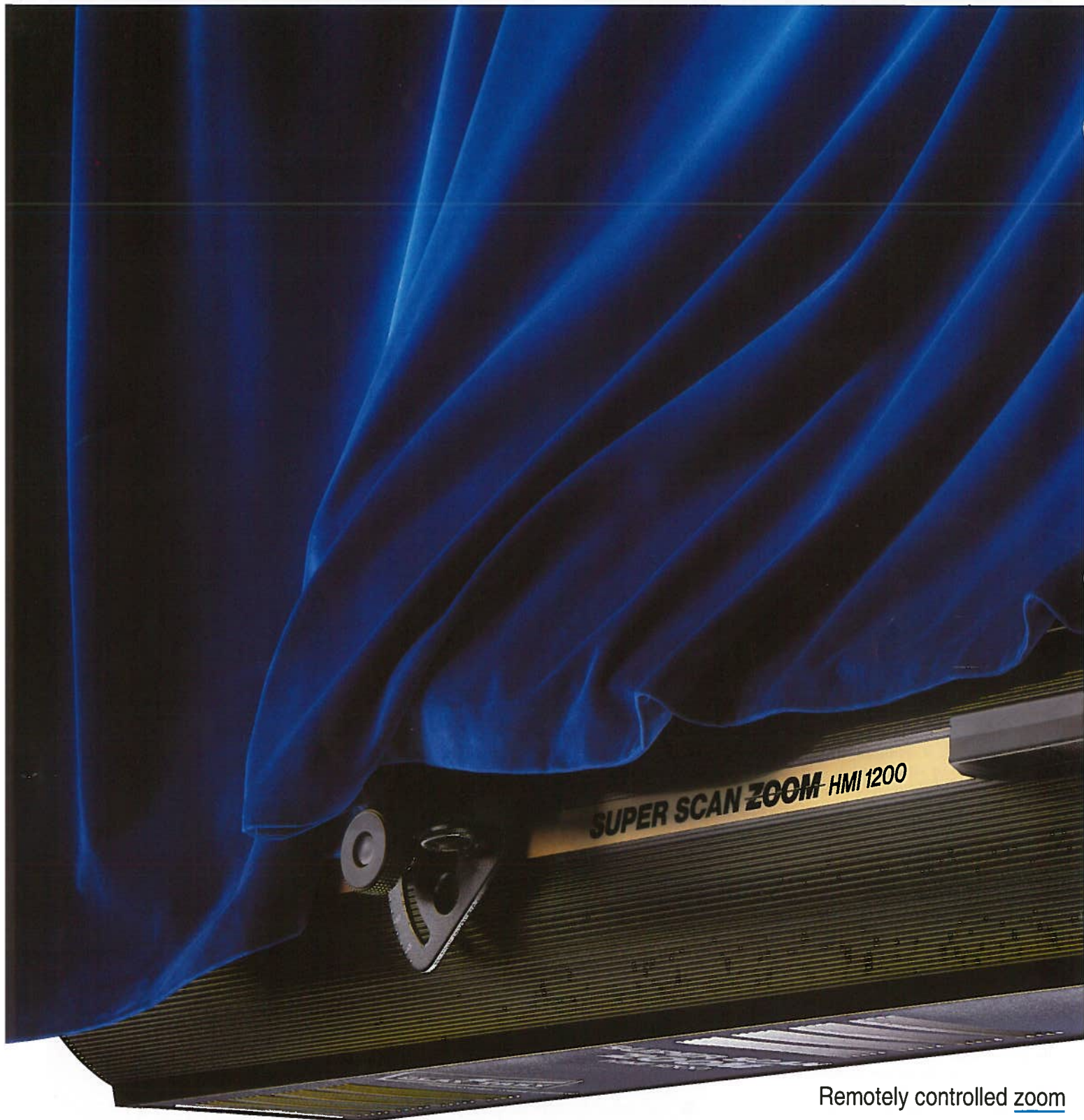
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PROFESSIONAL SHOW LIGHTING



# FLUORESCENT COMES OF AGE?

Bill Lee looks at the latest in studio and location lighting

Earlier this year Michael Samuelson Lighting hosted a seminar and exhibition of the latest light sources to interest the film and television industries. There was a remarkable turn-out of some of the most influential lighting experts from the British Society of Cinematographers, Guild of British Camera Technicians and the Society of Television Lighting Directors. From far and wide they assembled on a stage at Pinewood Studios to view a group of lamps that have become the latest hot property in the studio and location world. Well perhaps 'hot property' is scarcely the right description, since the fluorescent lamp is one of the coolest of all light units.

The fluorescent lamp? Yes. After all of these years has the film and video industry discovered what a useful, cool and efficient unit it can be? No. The fact is that until fairly recently the colour rendering of the fluorescent bulb was quite inadequate for reproducing subject colours on either film stock or video cameras. But the introduction of the series 90 tubes with greatly improved colour output, combined with high frequency supplies that eliminate flicker, has effectively transformed them into a potentially useful unit for studio and location shooting.

Michael Samuelson Lighting has for some time been marketing 'Videssence' lamps, an American unit, and at this meeting offered three other equipment suppliers the opportunity to talk and show their units. As Alan Bermingham, the first speaker explained, the recent interest in these units was their improved efficiency compared to tungsten (between 75 and 100 lumens per watt compared to tungsten's approximate 25 lumens per watt). There is a lack of radiated heat, they are extremely user-friendly, and they can be used with a variety of different colour temperature bulbs through the range of 2700 up to 5000 degrees Kelvin. Operating at frequencies above 28kHz they can be flicker-free and offer around 15% greater efficiency over non-high frequency. He claimed that their radiant energy is matched to the camera. They are dimmable and offer good colour rendition of 80 or 90 depending upon the tubes used. "I think," he concluded, "that fluorescent has now come of age."

Balcar are a French company, based in Paris, whose fluorescent lamps, the 'Fluxlite' range are marketed here by Strand Lighting. They were represented at the seminar by Mardic Bali and he based his design of the lamps upon a completely different concept from those "previously based on fresnel lenses in some sort of dish-pan reflector". He suggested that the fresnel is still basically the same light that was in use 50, 60 or 70 years ago.

Bali felt that there had to be some sort of change and improvement and he was happy to have participated in some of the changes that have taken place over the last five years. The early trials produced boxes that were almost too heavy to pick up, but overcoming those problems they eventually produced a new line of lights, the Fluxlite and the Duolite. These are really a revolution in lighting, giving a light that could only have been obtained previously by using 10 to 15 times more power - with the need to disperse the additional heat generated. They can work off normal studio triac dimmers, offer a pleasant, natural lighting effect and are available in a variety of fittings that offer



Kino Flo's Wall O Lite 10-lamp fixture in the background and two 15" single Kino Flos on the camera for the making of the Hooola Hoops advert.

different things. Their frequency of 56kHz enables them to be used for high speed work.

His remarks on colour temperature were particularly apposite. Basic colour temperature of the light is important, he added, because even the smallest correction filter will reduce the output by a minimum of 30%. The spectral characteristic of tri-phosphor tubes offers blue/green/red as peaks and it is important on the whole broad band spectrum and not only on the peaks, if you are interested in top quality.

***"You can go anywhere using these lamps, use a minimum of power and get some lovely lighting effects."***

As an example, he suggested that if no light is transmitted in a particular blue/green section, then you are not going to see that colour. Whilst each manufacturer must evolve their own philosophy, Balcar believe that it is important to offer a full colour spectrum. This means that bulbs cost about 30% more and give around 40% less light, but this is compensated for by using an extremely efficient optical system.

Balcar offer important accessories including reversible silver/black barn doors, reflecting corners, grid-spots, colour filters and umbrellas amongst other things. "You can go anywhere using these lamps, use a minimum of power and get some lovely lighting effects."

Bell Lighting were one of the first hire companies to offer fluorescent units in their hire fleet, as their spokesman Mike O'Hara explained. Bell's main interest is in simply renting the units, which are imported from Norway and are termed 'Softlights'. They are basically flat, fluorescent units, using bulbs of either 3000 or 5000 degrees Kelvin. They were to satisfy the demands of many directors of photography who require a compact fill light instead of bouncing light off polystyrene. They are not considered to be a main source, but a complement to the main lighting units. The lamps are offered as either 8 x 36watt or 8 x 18watt units.

Michael Samuelson expressed his pleasure that the designer of the Kino Flo units, Freider

Hochheim had flown from Los Angeles especially for the meeting. In his introduction Michael noted: "If there were any doubts about whether cinematographers want to use fluorescent fittings, the success of Kino Flo is proof enough." Kino Flo units are marketed here by Cirro Lite.

It all started with a cameraman's fantasy desire to stick a fluorescent wherever he wanted, without sight or sound of the ballast. Frieder was his gaffer, understood the need to create a soft quality of light in confined spaces, so he started to get involved with fluorescent fittings. The early results were a failure. But replacing the magnetic ballast with an electronic one resulted in the elimination of flicker and allowed the ballast to be removed some distance

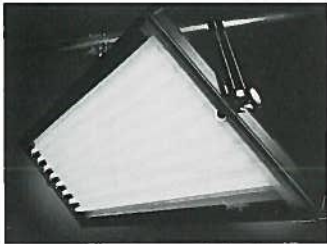
from the lamphead. Their original designs had folded paper reflectors and were for one, two, three or four lamp groupings. He worked around that time with cameraman Robby Muller who was prepared to see how far he could push the system. Backed by HMIs through windows, the flories inside the room allowed actors to walk close to the lamps without fear of over-exposure. They became a unique tool for this type of interior. There was at the time no thought of the energy saving potential, the 1000 amp generator that was on site had to be artificially loaded to compensate for the lack of power drawn by the flories.

Like Mardic Bali, he commented on the importance of the colour quality of the light source and how critical this can be for film work. Since the range of bulbs then available has an excess of green they formulated their own bulbs which are available at either 3200K or approximately 6000K, with the latter range giving a slightly cooler fill light compared to the keylight's 5000K. Their most important task was to convince the film world that the lights could be used alongside tungsten lamps without different values becoming apparent. The reaction from cameramen is that it works and that the fluorescent lamp has proved to be a problem solver for the film world. A special range of blue or green lamps are also available for lighting backgrounds for special effects work and this now appears to be the accepted

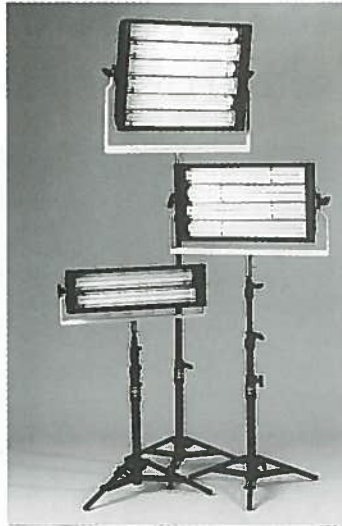




The Balcar Fluxlite.



The softlight from Bell Lighting.



Videssence baselights.

way of lighting these very large surface areas.

Cirro Lite now have available a range of units in two, four, six or eight foot lengths, any of which are extremely useful for difficult, tight areas. Also available are small units that can be used inside vehicles; they are dimmable and can work from the cigar lighter.

Finally, another American lamp, the Videssence and Michael Samuelson's introduction. "I guess that the reason we are all here is because in 1990 I went to NAB looking for something different, something innovative to launch my new independent company. There I met Paul Costa the inventor and designer of Videssence. In the past four years he hasn't stopped being prolific in his designs of new modules. Today so many of his lights are in studios all over the world."

Costa gave an outline of his company's platforms, of which there are three. Firstly a technical platform of RGB light. "I have tried over the years to be scientific about it and frankly it doesn't work, but the light does work and has done so in countless projects including film. There is a definite movement in both video and film, whose crafts are confronted with both opportunities and options that change the entire process of image and flow. The first technical platform of RGB means that our fixtures emanate an intense value of visible light, an emission of the red-blue-green spectrum. No violet. It is stable, constant and directional. That technical platform of fixture design led to a development of a lens characteristic in all of our fixtures, large or small. In television studios they are replacing incandescents at 100%. Between 80 and 90 percent of CNN bureaus world-wide have Videssence fixtures, with the complete exclusion of incandescent lights. Wherever we can we want to eliminate incandescents." A bold statement and he didn't wish to offend, "but when you get down to a controlled environment of production, like most studio applications or even documentary situations, this is a light source that has a direct relation to the film emulsion, to your eye, or to the video camera."

The second platform is operational: the energy saving of electricity with consequent saving of air-conditioning due to lack of infra-red means that the lamps last a long time. Some broadcast facilities are getting 15 to 20 thousand hours of tube life and are only changing them because in most cases they think that they *should* be changed!

The third platform is the artistes working in gentle light that is without glare. Videssence have created about 100 different configurations of fixtures and lamp sizes, some having different output levels, which give the LD or cinematographer options to emulate incandescent spotlights, or to use large fields or zones in controlled units of light. "You can pretty much have it the way you want it. It just requires some familiarisation, some hands-on, some experimentation."

The meeting closed with few words of thanks from Harvey Harrison, president of the BSC who thanked Michael, not only for a fascinating session, but for his generosity in inviting other organisations that might be considered rivals, to participate.

So have film and television at last caught up with the mainstream long term users of the florrie? Are we about to see a revolution in studio and location lighting?

Well there is no doubt that the introduction of these lamps offers lighting folk an important and additional flexibility in some situations, particularly in tight areas. They are a great asset in such places as news studios, where heat, glare and temperature limitation is important. Certainly at this stage of their development they are not a replacement for the range of fresnel spotlights that are in common use.

But this meeting was a useful and important one in showing and comparing the range of lights now available and informing the nervous prospective user, or those without understanding, of their possibilities. Indeed, it gave reassurance that they are already used regularly throughout the industry and will be used even more extensively in the future.

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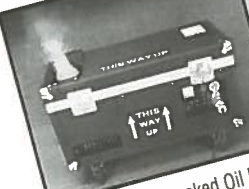
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## LEADING LIGHTS IN VISUAL TECHNOLOGY



# NEW AGE GLASTONBURY

## Andy Wood focuses on sound at the Festival

If you've never been to The Glastonbury Festival before, the first thing that hits you is the sheer size of the event. As you enter the village of Pitton and see the valley before you, it's obvious that this is no ordinary festival. Michael Eavis's Worthy Farm is now a town, with a huge, strident wind-powered generator standing over a myriad of tents, cars, marquees and stages in a blaze of colour that is literally breathtaking. If you can imagine moving a population the size of Bromley, with all its plethora of associated services, to a valley in the middle of Somerset, then that gives you a concept of what we are dealing with here.

With over 100,000 people expected to attend, entertainment is provided by a total of 17 stages which are augmented by a myriad of smaller tents and sound systems to provide a vehicle for the 1,000 plus performers over the three days of the event.

Every conceivable type of entertainment is covered, from rock to comedy, mime to folk and poetry to circus. No wonder then that Glastonbury is considered the largest event of its kind in Europe, if not the world.

Sound systems at Glastonbury are as varied as the acts themselves, with everything from large flown arrays through to homemade cabinets made from pipes and plastic cups, and even power supplies vary from windpower to pedal power. The majority of the market stalls also have fully working PA's, which although officially limited to 2kW in size, powered on through the night transforming areas into huge raves, with Martin and H/H cabinets seeming to be the most popular choice behind the homemade variants.

The main stage at Glastonbury was the domain of Britannia Row Productions, who, despite the lack of the Pyramid stage which had burned down amongst much publicity the previous week, had built their Turbosound rig around a stage borrowed for the occasion.

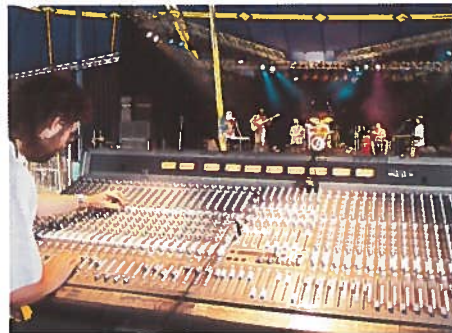
The 50k Turbosound system consisted of two flown arrays of 18 Flashlight cabinets 40ft off the floor, with 20 x 21" sub cabinets stacked underneath each array. As the flown wings were so far out from the stage, a further two boxes of Floodlight were placed stage left and right and fed with mid/top to give added clarity to the audience directly in front of the stage. Additionally, four Flashlight and four sub boxes were positioned behind the FOH position as a delay.

Main PA amplification was provided by BSS EPC760/780 amplifiers, with further BSS and QSC amplifiers on the Turbosound wedge stage monitors. Sidefills again were Floodlight. Other equipment included a selection of BSS crossovers, Klark-Teknik EQ's and dbx and Yamaha FX units.

Stage crew chief and monitor engineer Mick Sturgeon worked alongside Doug Pope, Guy



Elvis Costello in action on the main stage. Note wind power pylon left.



A Soundtracs Sequel II console provided the mix for the Field of Avalon stage.

Gilan and Simon Thomas, who were assigned to monitors, mic and line checks, with production manager Peter Brotzman overseeing the whole stage and organising the difficult task of loading each band on and off, with Brian Jordan and Neg in the production office.

Unlike some of the other stages, the main stage was using a single Ramsa S840 monitor desk, with a line check being performed as the gear for each band was brought forward from the rear loading area. Each band had provided a channel plot for monitors and front of house and these were plotted on wooden slots which were then pulled into position prior to each act.

John Gibbon, who along with Mick Sturgeon was working stage monitors, explained how the system worked: "With all line checks and channel plots in place, the desk is handed over

to each guest engineer, with one monitor engineer baby-sitting with him, whilst the other prepares for the next act. It's a well organised system which is why it works."

Due to changeover times, most of the other stages were using two sets of equipment and leapfrogging between acts, but with more time available on the main stage, a single desk gave more room to work in, and less chance of mistakes. The only problem occurred when both Peter Gabriel and Jackson Browne turned up with their own monitor desks especially for the occasion, and room had to be made at the side of the stage for each desk which was then leapfrogged in. Both these artistes are currently working with Britannia Row on tour, so the problem seemed more difficult than it actually was. Gabriel however, who also brought a selection of extra lighting which was slowly fitted into the rig between sets on the Sunday, also caused some hilarity in the front of house position by bringing his own FX racks and FOH desk in the shape of a Yamaha PM4000 delivered at 10am by Gabriel's system engineer Hugh Richards.

This was eventually placed behind the existing Yamaha PM4000 creating a secondary mix position for Gabriel's engineer, Peter Walsh. Out front, Britannia Row's Doug Hall and Dave Pringle were running the same system as on stage, with one baby-sitting the desk whilst the other ranged for the next band. The Yamaha 4000 was put to full use, running via five FX racks containing Summit Audio compressor-limiters, Eventide 8300



A Soundcraft Extender on NME stage (left), mainstage FOH sound engineer Doug Hall of Britannia Row and (right) Radio 1's Andy Kershaw acting as compere.





Compere for the NME stage John Peel (left), Turbosound Floodlight side-fills and Scan PA wedges (centre) and the Jazz stage Soundcraft 8000.

Harmonisers, Lexicon, Yamaha, AMS, Symetrics, BSS and Drawmer graphics, fx and gates plus four Turbosound LMS780 loudspeaker management system on both main and fill stacks.

Sonically, the rig was impressive, hitting all expectations.

"We flew the Flashlight arrays 40ft up in a 6 x 3 configuration angled down, giving us a very wide dispersion pattern to fill the area," explained Peter Brotzman.

Indeed, the 'cause' wasn't helped by a 99dB SPL A-weighted limit from the rig which was set and monitored by Mendip Council from the FOH desk. On Sunday this went down to 90dB for the Gabriel set due to prevailing winds, which brought the secondary measurement very close to the 66dB limit measured at the perimeter.

Sound limits also caused 'difficulties' at the other end of the site, where a 96dB threshold was placed on the Scan PA Hire-run NME Stage.

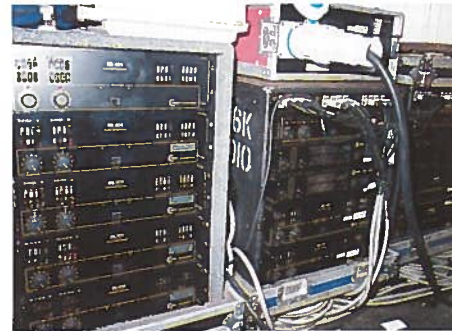
The Pretenders FOH engineer, Chris Ridgeway was the first to feel the effects: "I just couldn't get the most out of the performance and felt it was lacking that extra bite," he explained. On the field however, the view was that an excellent job had been done as Scan's Court Black Box system had both clarity and attack, and when Chris returned to mix Bjork the next day, the wind had dropped sufficiently to produce good full 'value for money' both in front and behind the desk.

The 60k C-Audio SR707 driven Black Box rig

had been partially flown for the first time this year with two clusters of 12 mid/high's in a 4 x 3 configuration flown on hoists left and right, and 12 bass cabinets stacked underneath. In addition there were four mid/high and four bass boxes in the pit as infills and also the same configuration behind the FOH positions as delay.

"We flew the system this year basically to give us more power in the main part of the arena and also to combat the beaming and phasing experienced last time round. The whole system has been improved in quality," explained Scan PA's Chris Fitch. "It's also given the monitor engineers far more room to move at the side of the stages, with no stacks of boxes in the way."

Leapfrogging was the order of the day on the NME stage with a pair of Soundcraft SM16 monitor desks being operated by Dave Guerin



C Audio racks for the Court Black Box system on the NME stage.

and Simon Higgs sharing monitor duties with line checks being performed on one desk while the other was in service. A selection of Audio Graphics plus BSS crossovers and Yamaha FX were also in use to augment the C-Audio SR707's.

Production manager Chris Hannam worked with stage manager Mark Gosling to get all the bands on and off stage, whilst the stage crew of Chris Fitch, Ady Barnard, Matt Vickers and Paul 'Euro' arranged patches, mics and lines again on a leapfrog basis.

On stage, Scan were utilising four boxes of Floodlight each side as sidefills, with all the wedges being Scan's own design utilizing a single 15" and 2" horn in each box.

Radio Station in-ear monitors were also in use for The Pretenders set, and according to engineer Chris Ridgeway are a great problem solver. The system broadcasts individual mixes direct to the performer who wears a pair of custom in-ear phones.

"Obviously, by getting rid of the wedges there are various benefits including more room on stage and less wiring. The main benefit though is that the artistes can get exactly the mix that they require and at the level that they require it. As an engineer you don't have to worry about any spillage from the monitors getting in the way either, through the mics or going over other monitor mixes due to the levels," he explained.

Front of house on the NME stage, Dennie Vidal and Rob Hodgkinson were line checking and baby-sitting a pair of Soundcraft 8000



Chris Ridgeway, sound engineer for The Pretenders and Bjork, sets up the Soundcraft 8000 on the NME stage.



Dave Zammit, sound engineer for Elvis Costello, at work on the mainstage mix.





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John Gibbons of Brit Row, monitor engineer on the mainstage Ramsa desk.

consoles with a 16 channel expander available to both desks. To add spice to the occasion, the boys were also running a points system for each guest engineer based on a variety of skills from use of effects, problem solving and personality. Nine points and two stars led the table on Saturday afternoon via Ultramarine's engineer.

Identical pairs of racks by each of the Soundcraft's featured AMS RMX 16 and Yamaha reverbs, plus Roland digital delays, Eventide Ultra harmonisers, Klark Teknik EQ's and Drawmer gates and compressors. A Soundcraft Spirit was also being used to feed DAT, CD and DJ John Peel's signals through from the stage.

These were the two main stages, but elsewhere, AdLib Audio could be found in the cabaret tent, whilst Sonix Audio's own-designed Fane and RCF driven rig was sounding good on The Jazz stage. Running through a Soundcraft 8000, this rig consistently performed well over the three days and peaked on the Sunday with exceptional sets by Steve Williamson and also by Lucky Dube who appeared on The Jazz stage before supporting Peter Gabriel later that night.

Another stage which consistently surprised was in The Field of Avalon, where Julian Spear of Precision Sound was using a brand new Soundtracs Sequel II with his own designed system.

Both main PA and monitors were designed by Precision, with dual compression driver

loaded horns and twin 15" loaded full range cabinets underneath. To augment the system, Julian had also added a pair of 24" sub cabinets under the front of the stage.

The 6k system was run via a selection of Hill amplifiers, but the major surprise was the lack of rack equipment with only a small selection of Alesis Midiverbs and the by now obligatory Drawmer gates on hand. The answer came from Julian Spear, who quoted the Soundtracs as the major force in the system.

"The advantage of the Sequel II from a hire desk point of view is that all the compressors and general effects are all included within the desk, so the need for outboard effects is reduced."

Certainly the system seemed to work well, to such an extent that The Levellers performed an impromptu gig on the stage after their main stage appearance on the Friday night. Nice endorsements if you can get them!

Amongst all the high-tech there was of course the high/low-tech.

The outside circus stage was working purely on an old self-contained Sunn 8-2 system, which despite seeing better days was still pumping it out, whilst the highlight of the show was the Green Field site area that had a peddle-power generator system.

After all, if the main stage can use a wind turbine generating 150kW for the lighting, why shouldn't the punters be expected to put their back into it for a little music? I can see quite a

few production companies questioning in their minds as to whether this as an ideal way of getting back at prima donna artistes.

So, that was Glastonbury. More sound than you could shake a stick at and not enough time to get round the site to the showers, let alone all the sound companies present.

As a final note, one particular rave tent, having smuggled in an extra 2kW of power, managed to keep all the production personnel on the NME stage awake for three days. Despite complaints to the organisers, health and safety and the market manager, the dulcet thud of sub-bass continued unabated throughout the event. After living with a 96dB limit on their system, Lighting + Sound International is proud to award Chris Hannam and the Scan PA crew with the 'Star Crew' Award for Glastonbury.

See you all, next year.

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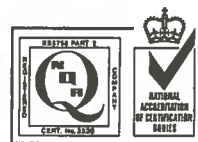
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# SOUND AT OLYMPIA

## Andy Wood at the APRS Show in London

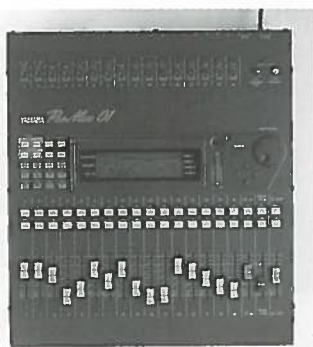
The Association of Professional Recording Services, or APRS show, has always managed to carve itself a specialist niche in the audio calendar - despite the recession and competition from overseas shows such as AES.

Now in its 27th year, APRS still thrives, despite being slightly pruned in size from its pre-recession heyday, and in recent years has shrugged off its 'studio only' tag to feature more live production and sound reinforcement products. Spread over three days at London's Olympia 2, the APRS has evolved therefore into one of the few shows that accurately reflects the changing technology across the complete audio spectrum.

Last year you couldn't move at the show without bumping into a new mixer, and this year the theme was the same with the added interest that the products either offered cost effective digital fun or automation for the live production engineer.

Yamaha offered both options at a pre-show reception on the Wednesday, where despite the train strike, many hardy souls battered their way into town and were well rewarded with champagne, croissants and the Yamaha Pro Mix 01 digital desk.

Featuring 18 inputs with 20-bit linear/64 times oversampled AD converters, the 16 balanced mic/line inputs offer phantom power on channels 1-8 and a main stereo output in S/PDIF digital format. Instant recall of the entire console is also available with 50 scene memory and dynamic automation of every console parameter. At well below £2,000, full digital mixing is now a lot more affordable, and of course being fully MIDI compatible, it'll even run a lighting programme.



Yamaha's Pro Mix 01.

Yamaha's other new desk offered full automation to the live engineer, via the M2000 series. With 128 MIDI controllable scene memory and eight direct recall switches, four models ranging from 16 to 40 channels are available with eight assignable groups plus stereo and monobusses.

*"It has been commented in the past that what starts life in the studio invariably ends up on the stage, and if this is the case we can look forward to much more automation and greater interactivity between sectors of the audio chain."*

Live automation was also the order of the day at Cadac where Clive Green was launching the Cadac 'Concert'. First shown in concept form at the APRS '91 show and recently installed at the National Theatre, the Concert is visually and technologically stunning, with complete and instant recall of all functions and unlimited scene capability programmable via external computer or internal control module with disk storage capability.

Full visual information on desk status is also possible via pairs of nulling LED's next to each potentiometer and non-motor fader, thus making manual status recall of any scene a simple task, especially when significant changes are made to pot and fader positions between cues.

Described as 'ultimately sexy' by one

engineer, the Cadac Concert looks to have a great future.

Further automation options were being shown by Klark Teknik/Midas, where Midas' Bob Doyle introduced an upgraded automation package for the award winning XL3 console. Currently out in a custom format with Pink Floyd, the XL3 now has full automation of all potentiometers and faders, including groups, via the latest SS2 system which can be supplied in both standalone and console retrofit formats.

Soundcraft chose APRS to offer the UK a look at products launched earlier in the year in the USA and Frankfurt in the shape of the Spirit Folio Lite, Studio LC and Folio Rac Pac. Despite being less than 11" in depth and being low in price, the Folio Lite offers 12 inputs, phantom power, two FX sends with stereo returns, PFL solo and twin-band EQ. Suitable for both live and recording, the Lite looks set to become a winner in the MI market.

The Spirit range has now been further enhanced with the introduction of two new models, the Studio LC, an 8-bus recording desk available in 16, 24 and 32 channel frame sizes, and the Rac Pac, an 8U rack-mountable unit priced between the existing Folio Si and Folio 4. With 28 inputs available on mixdown with an independent 4-bus group section and 6-busses in all, the Rac Pac has a neat feature in that the connector field can be rotated to either face backward to reduce racking height to 8U or forward flush with the front panel for easy rack access. Add both mono and stereo

channels plus 6 aux sends and the Rac Pac becomes a very desirable option for PA's, installations and as a submixer.

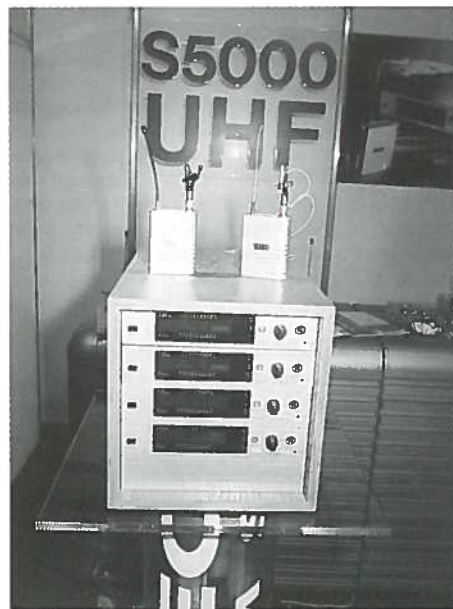
Other new desks included the Topaz recording console from Soundtracs which offers 24 and 32 channel frame sizes for less than £3,000 together with an upgraded Solitaire and new generation Megas



Soundtracs' new Topaz project studio console.



Max Lindsay-Johnson of Harman shows Allen & Heath's latest products.



Trantec's arrival in UHF: the UK-built developed S5000 system.



Bob Doyle of Klark Teknik with Midas' up-graded automation package.





A general view of the beyerdynamics/Soundtracs' stand.

II range. The latter now boasts a Megas II monitor console, which with 24, 32, 40 or 48 input variations is designed to complement the existing Megas II Stage FOH console.

The full range of Soundtracs consoles including Solo and Sequel II were on show on the **beyerdynamic** stand which also boasted a new mixer from Omniphonics in the shape of the AV-1 Audio-Visual mixer which features five stereo lines, four mic inputs and remote option for small presentations. Stephanie Scope and the beyer team were also launching their new compact NE700 two channel UHF diversity receiver system which features two separate receivers and built-in antenna splitter in a single 1U rack-mountable unit, plus new upgraded TG-X handheld and headworn microphones which feature improved gain before feedback characteristics via tighter polar patterns.

Following mixer automation, the microphone sector again showed itself to be moving forward with no less than four new UHF systems on the market from Trantec, Sony, Sennheiser and beyer.

**Trantec's** arrival in the UHF market was of particular interest, with Chris Gilbert announcing the S5000 system. This UK-built and developed system offers up to 64 channels in 4 groups of 16 as assigned by ASP Frequency Management. A fully synthesized system, the S5000's receivers offer full LCD indication of



Cadac's 'Concert' drew the crowds.

channel frequency, output levels and transmitter battery status. This final facility is achieved via a tone which is sent from the transmitter above audio level alongside a Channel Grip tone which identifies the transmitter to stop spurious and other intermodulations from entering the system. The system is currently available in belt-pack format, with handheld variations due later in 1994.

**Sennheiser** were another company with UHF product to impress, via the SKM 5000 handheld transmitter. Designed by Industrie-Forum Designe of Hannover, the SKM 5000 features 16 switchable transmission frequencies together with a fully integrated antenna and a range of dynamic and condenser variants.

Other UHF options included the new MKE 102 clip-on miniature microphone UHF system for OB and theatre applications which features the ME102 omni-condenser for greater presence. Broadcast visitors meanwhile were wooed via a new OB Reporter series of miniature pocket-size UHF receivers, transmitters and multi-channel receiver systems.

Additionally Sennheiser have increased their VHF systems with 1051 handheld dynamic on view. A twin frequency true diversity handheld with integral antenna, this mid-price unit is currently being used for conferencing work by Dimension Audio. A six channel selectable system is on the way. Plus, to make sure that no-one was left out, Sennheiser also previewed the 504 instrument mic for live applications. A small cardioid dynamic, the 504 is aimed primarily at drums and horns and will be launched officially at the BMF in July.

The final new UHF system was presented by **Sony**, whose ground floor castle offered a plethora of delights for all sectors.

Not content with launching a new series of



## Secret Services

Having once again bagged stand number 007, E.M.O. systems decided to have a little fun at this year's APRS show by showing a miniature digital tape recorder (shown above by Mike Reay) purpose-built (allegedly) for use by the espionage industry.

Designed to eavesdrop on conversations at high level musical functions throughout the world, the E007 was hailed as a shining example of how leading edge miniature technology has permitted a complete 4 track, 20-bit recording system to be condensed to a size where it can fit within the case of an E.M.O. Direct Injection Box, thus combining technical excellence with first class camouflage.

Visitors appeared unsurprised by the high technical specification of the product, though some scepticism was expressed over E.M.O.'s claim that the unit would operate as a standard DI Box as well.

On the last day of the show, sales manager Mike Reay was expressing satisfaction at how well the spoof had worked when he was approached by a visitor from Sony Broadcast expressing interest in the E007 spy recorder. "Let me introduce myself," purred the visitor and produced his card . . . the name was Bond . . . James Bond, assistant manager (sales support) of Sony.



Yamaha's new Pro Mix 01 was in constant demonstration.



The busy Audio Technica stand.



The Tannoy presentation.



Testing out the dbx range.





Leading audio suppliers Canford Audio.



Live interest in the Sadie disk editor.



An overview of APRS in action at Olympia 2, London in June.

three uni-directional dynamics for vocal instrument and conference/theatre use in the shape of the F-780, F-740 and F-710, Sony extended their digital mixer range with the DMX-E2000, which as a 20 input, 19" rack-mount unit can be used for any audio situation but is aimed primarily at all-digital audio for video production.

Ray Withers of **Raycom** was on hand at the show to promote his new appointment as UK market distributor of the latest Sony WL-800 Series of UHF wireless microphones. The new system, which has already been in use with both SSE and Sensible Music, offers a full selection of handheld belt-pack and Betacom variants. Operating in the 750-900MHz band, this is a fully synthesized system offering up to 94 channels, with 62 channels available in the UK on CH 69 within ASP guideline. Each receiver offers up to 19 channels, and incorporates a 32KHz tone system which identifies the transmitter to stop spurious and other intermodulation from entering the system or also carrying mute directive for quiet on/off switching of the transmitter. Other features include a facility to mix two 600 ohm signals through a single cable for twin guitar/vocal systems and up to eight hours battery life.

As far as post-APRS is concerned, the market for UHF systems has now become extremely competitive. **AKG's** current system is still out and about with Peter Gabriel, and having been joined by these latest models the term 'a buyers' market' takes on a whole new meaning. Only **Shure** have yet to join the game, as obviously they will, and in the meantime the battle between US and European devised systems hots up with the rhetoric already starting to flow. Watch this space!

Elsewhere around the APRS, microphones of a wired variation also featured heavily.

**AKG's** Justin Frost dominated the **Harman** stand with the highly acclaimed C12 VR,

which, as an upgrade to the **AKG C12** classic, was producing palpitations with those of whom valve studio microphones are akin to Van Gough originals. With the rest of the **AKG** range now firmly ensconced in the Harman stable the future looks bright for the Austrian manufacturer. The Harman stand also saw the **GL3**, a new broadcast mixer from Allen & Heath who were also packing them in at the seminars with mixing tips on the automated **GS3V** from various engineers, whilst **ART**, **Steinberg** and **JBL** all showed studio related product.

**Audio Technica** used the show to promote their UK launch of the **AT4050** multi-pattern studio capacitor microphone which has already received the endorsement of Alan Parson who introduced the product at **AES** in Amsterdam. The large diaphragm 4050 features three switchable patterns: cardioid, omni and figure of eight, and new **Audio Technica** personnel Neil Howe and Rod Geary were on hand to take the orders.

**John Hornby Skewes** were showing the new line of **CAD** mics from the USA which incorporates a full range of dynamic, electret condenser and special application models, plus yet more VHF radio mics from **Chiayo**, who have now been on the circuit for over 20 years.

The more unusual microphone 'award' of the show was picked up by **A.S. McKay** who made their **APRS** debut with the **Nevaton** and **Oktava** ranges of mics from Russia. These medium priced dynamic and studio condensers may not win any hi-tech design awards, but for classic retro looks they have already been winning support for use in videos and the like. They sound pretty good too, having already been placed with the likes of **Mike Oldfield**, **High Padgham**, **Rupert Neve** and **Roger Taylor**. **McKay** have now secured world-wide distribution rights for the products and expect

to be redesigning and improving the models, in conjunction with the manufacturers, over the coming months.

For the live sound market however, the **Shuttlesound** stand proved to be the Aladdin's cave with all new product on show. **Tony Oates** reported most enthusiasm for the latest **Crown** amplifier, the **MA 3600VZ**. The first of a new series of **Macro-Tech** amplifiers featuring **Crown's** latest variable impedance (**VZ**) technology, the 3600 packs 1800W per channel @ 2 ohms into a 2U space whilst weighing 56lbs. Studio amps were also represented by a new **Macro Reference** from **Crown** which at 760W into 8 ohms with S/N no greater than 100dB is aimed directly at the digital domain.

On the processor front, **Shuttlesound** showed product from **Dynacord** which included the new **DSP 224** digital sound system processor for setting up and optimising active multi-way systems, the **DRP 15** programmable stereo reverb and room simulator, plus the **DRP 5**, a junior version of the **DRP 15** but with factory presets only.

Tucked away in rack however, were the jewels: four new products from **Sabine** which included two new variations of the award winning **Sabine Feedback Exterminator**.

The first, the **FBX-1802** **Dual Feedback Exterminator** offers two channels of automatic feedback control in a 1U space with improved 18-bit resolution, S/N ratio, headroom and RF shielding. Incorporating switchable filter widths at 1/10 and 1/5 of an octave, the 1802 also now has lockable filter depths. The second model, the **FBX 901**, is a new single channel feedback exterminator, again with lockable filters and an improved algorithm which now effectively supersedes the established **FBX 900** model. Exciting new toys at their best!

**Sabine's** final two products are **ADF** (**Adaptive Digital Filters**) work stations, which



Shuttlesound and EV's System 200, first launched at Frankfurt.



Hughes & Kettner Linear Pro units were shown by John Hornby Skewes.



Best Stand? The EdgeTech group exhibit.





Mike Parry shows Formula Sound's Que-8 system.

by combining feedback exterminator technology with filtering, digital parametrics, real-time analysers, digital delay, programmable noise-gate and nine different system configuration presets are extremely powerful audio shaping tools. Available in single channel (ADF-1200) and dual mono/stereo (ADF-2400) models, expect to hear more of these in the months to come.

As icing on the cake Shuttlesound also launched a new Rane GE 60 equaliser, Samson Audio power amplifiers and mixing consoles, the S-60 compact 2-way reinforcement enclosure from E/V for clubs, bars and theatres, a new dynamic cardioid mic for vocal and speech applications from E/V, the RE36N/D, plus a first UK look at the ElectroVoice System 200 range of cabinets.

First shown at Frankfurt, the System 200 is a successor to the Stage 200 cabinet and consists of an Sx200, 2-way full-range portable cabinet, Sb 120 bass unit and compatible Xp200 dual-channel controller. The Sx200 is housed in a trapezoidal cabinet which can be arrayed, flown or stand-mounted, whilst the bass unit also features the same trapezoidal design and can go down to 40Hz.

All in all, loudspeaker technology for sound reinforcement was few and far between at APRS. As one would expect, the majority of companies were showing studio monitor systems, but there were a few exceptions.

Turbosound managed to get the few members of staff who weren't either working at Glastonbury or with Pink Floyd to man the stand, and David Bruml showed me the latest TCS-612 theatre box



Avid's presenter explains the AudioStation digital audio editing system.



AKG's new C12VR, an up-grade of the C12 classic.

together with a 'skeletal' version of the Floodlight cabinet. This installation model features no cabinet, and since being installed into Reading's Utopia club is now available to custom build orders. It's going to be a busy summer for Turbosound, and Lighting + Sound International will be reporting from deepest West Sussex in a future issue.

Further enclosures were to be found at John Hornby Skewes who launched the Linear Pro and Classic Line systems from Hughes and Kettner. Both of these systems are aimed at the cost-conscious user. Looked pretty good too.

Finally, Tannoy filled the audio frame with a new monitor, the PBM 6.5II, and the first APRS outing for the SuperDual range which, launched late last year, has already been installed at the RSC, Barbican and Pavilion Theatre, Glasgow. Tannoy's pro product manager, Derek West, reported a terrific response to the range, with orders now going to China via Hong Kong-based DCH.

Autograph Sales can always be relied upon to provide some new product and APRS was no exception. Meyer Sound have now added a MSW-2 subwoofer to complement the recently launched MSL-2A enclosure. The sub is



Terry Fearnley shows the Audio Technica range.

supplied in the same size arrayable enclosure as the MSL-2A and the new combination now offers a full-range, compact system for installation use. Milab announced a new condenser vocal mic for the touring market in the shape of the LSR-1000 which is already in use on the Velvet Underground tour, and a new Micron miniature diversity receiver plus other Micron radio microphone equipment was on show.

Autograph were also showing a selection of ATM-Ware loudspeaker rigging hardware plus new Cyberlogic NC-800 multi-channel power amplifiers and a new Matrix Plus II digital intercom system from ClearCom. The CyberLogic amplifiers are interesting as they integrate eight individual amps into a single 6U rack with a total power output of over 11k ideal for use with the Meyer's too.

Elsewhere, the award-winning team at Formula Sound were showing their latest 8 channel, 1U mixer, the FSM8, which with voice override, priority input, tamper free pre-sets and fire alarm interface looks set to make great inroads into a very busy sector of the market.

Formula's Que-8 stereo foldback system has now been redesigned and relaunched. It differs from many personal monitoring systems in that the performer has a small personal mixer which allows for adjustment of a personal mix and volumes into headphones. Already in use on the Cliff Richard tour as well as various West End Shows, the Que-8 is seen as an attractive alternative to wedges with the ultimate in individual performer control, and at under £400, highly cost effective.



Derek West and Alan Lohead take the enquiries for Tannoy.



The A & H seminar in progress. Part of a comprehensive programme.



Worth becoming a recording engineer for: the Nagra D digital recorder.



Topless 'Crown' amps on the Shuttlesound stand.



Part of the huge display from Sennheiser.

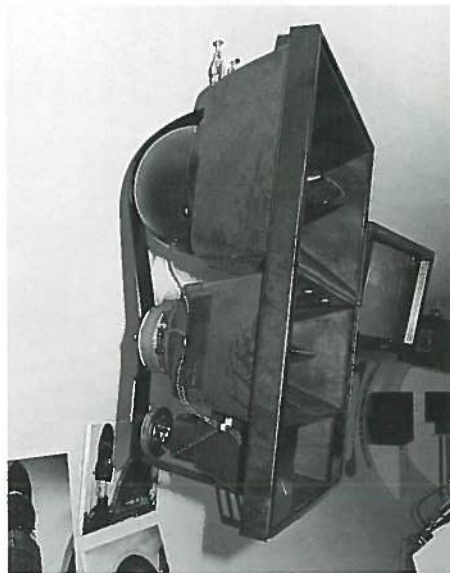




'Stake' Farley of Studiomaster (left) with Caroline and Julius Grafton of Connections magazine (Australia).

But if the Russians took top prize for the unusual, it was surely Richard Vickers of **Kelsey Acoustics** who won the stunt prize. Promoting Kelsey's new Flame Check flame retardant, Vickers calmly sprayed a tissue with the product and then proceeded to hold it in his hand and tried to ignite the tissue with a blow torch. The tissue merely charred, keeping the famous hand unscathed. Kelsey reported great interest in the product, but noted that no-one took up the offer to try the test for themselves.

Other new product at the show included dual and single channel equalisers from **Klark Teknik**, six new IU ISDN codecs from Systembase, plus the HR-MP5 and HR-GP5 multi effects and guitar effects processors from Sony, who were also showing a new PRMD-74 professional recordable minidisc. Recordable minidisc was also present on the Denon stand where the UK launch of the DN-990R player/recorder and DN-980F player took place. Denon's Ian Downs foresees recordable minidisc as a natural successor to DAT and feels that its applications for theatre, PA installation and audio visual market are enormous. Time will tell, but certainly minidisc

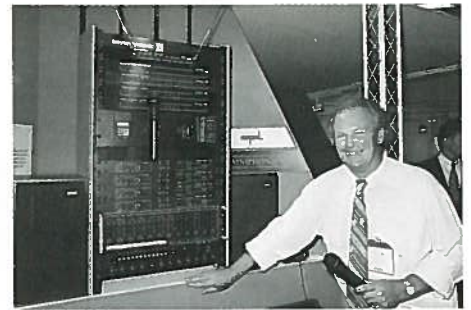


A 'skeletal' version of the Turbosound Floodlight unit.

is a highly accurate and adaptable medium, and with the price coming down is becoming an increasingly attractive option.

So there you have it, APRS '94. Not a full run down of all the products on view for the live sound market; more of a dip into the pot of new products. It has been commented in the past that what starts life in the studio invariably ends up on the stage, and if this is the case we can look forward to much more automation and greater interactivity between different sectors of the audio chain. The good news is that the technology is here, is becoming increasingly powerful and increasingly cost-effective.

The main question is whether products are becoming too technologically advanced for the



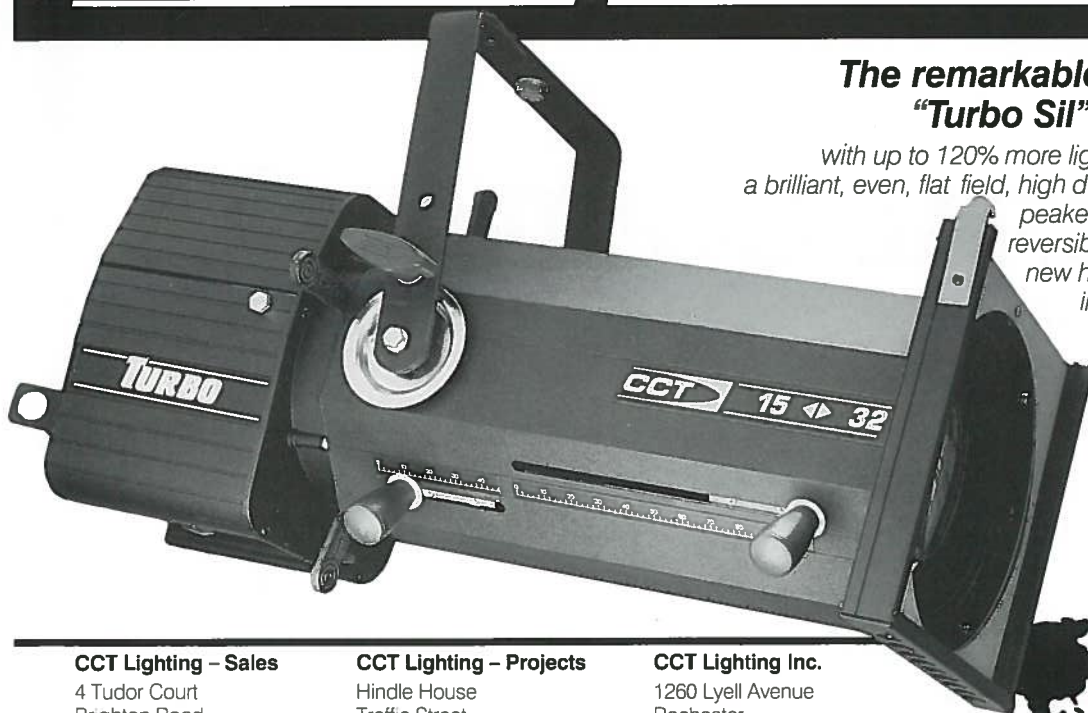
Neville Wake shows beyerdynamic's new NE700 2-channel UHF diversity receiver system.

operator. Like the human brain, only a percentage of the available product capability is actually being used. Answers on a postcard please!



Richard Vickers of Kelsey Acoustics and his now famous hand-burning trick.

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# THE R&B OF REET PETITE

Robert Halliday on the Jackie Wilson Story



Sonny Preston as Jackie Wilson in concert.



CP Lacey as Michael Jackson.

Take an eight-year-old, small-scale theatre company. Add a play about a legendary R&B singer. Throw in a sizeable Arts Council grant, and mix them firmly together, adding a combination of British and American performers and some highly experienced designers, technicians and stage managers. Bring to the boil and then serve to venues ranging from Manchester's Nia Centre to the main stage of the Leicester Haymarket. What have you got? Reet Petite - a musical charting the life of singer Jackie Wilson, along with proof that musicals don't have to have mega-budgets and mega-sets to win the loud approval and acclaim of their audiences.

The show follows the path established by other rockumentaries such as 'Elvis' and 'Buddy'. It sets out to tell the Jackie Wilson story but, along the way, gets sidetracked and ends up in a dream concert with a line-up including James Brown, Sam Cooke, Diana Ross, Dinah Washington, Elvis Presley and even Michael Jackson, as well as Wilson himself. The stars are given life by a group of talented impersonators and actors, some brought over from the States, backed by a four piece band.

The show ended up at the door of the Wolverhampton-based Open Door Theatre Company, who have been working as a professional, black community theatre company in the West Midlands since 1986. Circumstances also brought them a sizeable grant from the Arts Council which was tied into producing the show in larger venues than the company normally played to, resulting in a tour moving from the Nia Centre on to the Leicester Haymarket and Liverpool Playhouse, and ending at the Newcastle Playhouse.

Such venues demand more complex staging than the company had been used too, and the Arts Council's call for someone to oversee the technical side of the production led to production manager Graham Lister's involvement with the show, between and around his stints on Copacabana. Lister then brought in a team he knew well to create and look after the show. Rodney Ford, perhaps best known for his settings for 'Return to the Forbidden Planet', was drafted as set designer. Brian 'Basher' Harris was brought in as lighting designer. Long-time English Shakespeare Company colleague Derek Scriminger came on board as stage manager, along with Catherine Palmer as DSM and Bruce Anderson as ASM.

10 out of 10 Productions' Richard York and Saul V. Mudd were persuaded to design the show's sound, and brought Keith Brake in as operator. And, to move the show around the country, Pat Ayling came in as production carpenter and Kevin Fitz-Simons as production electrician, the show marking his return to a freelance career after 18 months with Opera North and the re-establishment of his long working partnership with LD Harris.

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***"Who knows, in a few years time there might be a resurgence of such shows because of the novelty value of having a show without moving lights!"***

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To define the various areas called for by the script - an office, a recording studio, an area for the band who remained on-stage throughout the action, and upper- and lower-level areas for the scenes and musical numbers, Rodney Ford created a series of platforms with a central entrance and staircases at either side. These were created from a combination of Steeldeck

and specially fabricated staircases which, along with the painted backcloth, were produced by the Duke's Playhouse, Lancaster. The staircases were wired with golfball lamps, to allow walk-downs and chases. Seven lightboxes were also included in the set for the concert section in the second half.

The show's tight production schedule, with just two weeks of rehearsal and then a Wednesday night opening after a Sunday evening get-in, gave Brian Harris little time to go into great depth about specific lighting requirements with director Junior Douglas. The rig he produced for the production week at the Nia Centre was therefore larger than any the budget could reasonably be stretched to accommodate, but thanks to the good graces of White Light North, the Manchester rig included 155 Pars of assorted beam angles and can colours, with the flown rig of silver cans left in view. Ten of these, and the two R&V 500W beamlight followspots, were topped with Rainbow scrollers. Control was split between the Nia's in-house dimmers and 60-way Celco control desk, and 120 ways of touring dimming controlled from an Arri Imagine 250, which also drove the scrollers and two Skywalker smoke machines. The crew at the Nia Centre didn't quite seem sure what had hit them as the show moved in, but coped remarkably well, their enthusiasm and energy giving Reet Petite a flying start.

The rig, consisting basically of three-colour back-light and side-light washes together with a carefully focused series of profiles covering the acting area gave Harris a high level of control over areas of the set as well as a wide variety of mood-looks and chases for the songs - these looks needing to cover both the atmosphere of songs sung by characters as part of their thought process, and songs given the concert treatment.

He achieved this stunningly well, with the lighting throughout the show seeming completely clean yet always exciting - and all this achieved without the aid of the moving lights that are now more-or-less standard in the rock-and-roll world. While the use of such lamps wouldn't, in any case, have fitted with the sixties and seventies period of the show, Harris's work on Reet Petite gave a clear demonstration of what is possible without



The curtain call shows a host of 'stars' including Elvis, Sam Cooke and Diana Ross.



them. And who knows, in a few years time there might be a resurgence of such shows because of the novelty value of having a show without moving lights!

With the show's looks established, Harris and Fitz-Simons rationalised the design, taking the rig down to 94 Pars (ten topped with Rainbows) and 11 AC1001 floods, toured on internally wired bars and run from local dimmers and control, with DMX for the scrollers generated from a Sage conversion box where a Strand desk was encountered. These were supplemented by a smattering of local profiles and fresnels and a local followspot.

The revised rig could be fitted-up and focused very quickly which, when combined with the simplicity of the set, allowed the show to fit-up on a Monday with Tuesdays then given over to re-lighting for the venue and sound-checking for the band and singers.

10 out of 10 Productions, brought into the tour like everyone else by the ever-persuasive Graham Lister, had even less time than other members of the production team, coming in with less than three days remaining before the first fit-up. Budget constraints led them to the decision to use the local front-of-house PA system at each venue.

They did, however, tour a Soundcraft Venue 28-8-2 desk with an 8-way matrix along with Yamaha 2031A EQs, Bose 802s and Yamaha 150W wedges for foldback, Shure SM58 and SM57, Beyer 201, AKGD112, and Crown PCC wired mics and Sennheiser diversity radio mics for the singers and band, and, for effects replay, Tascam DAT, CD and cassette players and a Revox B77. Richard York and Saul Mudd's



Sound operator Keith Brake at the Soundcraft Venue desk supplied by 10 out of 10 Productions.

approach was to give a stereo output and, where required, a mono delay, with the EQs being used to compensate for the venues' acoustics and foldback problems. The kick and bass drums were compressed to keep the bottom end of the sound tighter. The result of their, and operator Keith Brake's efforts, was a clean, tight sound which gave the required energy to the R&B numbers while retaining the subtlety required by the slower songs.

Like the set and the lighting, the sound system also remained versatile. The importance of this in touring of this scale was clearly demonstrated when the Liverpool Playhouse flooded and the show had to be diverted, at very short notice, to the city's Everyman Theatre. This is a very different space, yet the touring team's experience, and the fact that the show was small enough not to depend on 'to-the-millimetre' planning, meant that while looking very different in the Everyman's confined spaces that fortnight was, in fact, one

of the shows best, with sell-out audiences screaming, cheering and rising to their feet as the show drew to a close.

Reet Petite isn't perfect as a piece of drama. But as a piece of entertainment it works surprisingly well thanks to the performers in it and the experience of the team who supported it (and all had their names read out over the curtain call on the first night. Basher may have cringed, but he doesn't get such credit at the RSC!).

It clearly shows that, whatever is said about audiences being more demanding these days, a show doesn't need millions of pounds of high-tech spectacle, months of pre-planning, weeks of fit-up and rehearsal and a huge publicity budget to wow an audience. If it is well presented, enjoyable and fun, you can still get an audience on their feet and asking for more. And, although its not yet confirmed, Reet Petite may return next year, to demonstrate that all over again.

**Lighting equipment** (supplied by White Light North): 48 Par 64 CP62 silver; 30 Par 64 CP61 silver; 16 Par 64 CP61 floor cans; 11 AC1001 floods; 10 Rainbow scrollers; 2 Skywalker smoke machines; 1 Arri Connexion demux; 1 Sage unit; 1 scroller PSU & splitter; 10 6-way internally wired bars; 4 drop booms; multicore, TRS and scroller cable.

**Sound equipment** (supplied by 10 Productions): 1 Soundcraft Venue 28/4/2 desk; 4 Yamaha 2031A EQs; 2 BSS DPR402 compressors; 2 Yamaha SPX900s; 1 Tascam DA30 DAT player; 1 Tascam 401 CD player; 1 Tascam 122 Cassette deck; 1 Revox B77 high-speed tape deck; 2 Crest 601 amplifiers; 4 Bose 802 loudspeakers; 4 Yamaha 150W wedges; 2 Sennheiser diversity radio mics; 6 Shure SM58 mics; 2 Shure SM57 mics; 2 Beyer 201 mics; 4 BSS AR116 DI boxes; 1 AKG D112 mic; 3 Crown PCC mics.

Set constructed by the Dukes Playhouse, Lancaster. Trucking by PC Transport.

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Fresnels						
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Selecon 1200	7-56°	228,939	27,158	126,000	14,040	175mm/7"
PC's						
Compact 6	5-60°	306,000	15,840	205,200	10,000	150mm/6"
Selecon 1200	4.5-60°	342,000	14,220	226,800	10,000	175mm/7"

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# SELECON

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# ASLEEP IN THE STALLS

You'll be getting used to dogmatic pronouncements in this column. Before we go too much further I'd better issue the biggest one of them all: don't expect the dogma to be consistent. Nobody's ever got consistency from the fount of all dogma, the Papacy, and why should I should aim higher? This warning comes because I was going on something shocking last month about black sets. This month I have to clue you in on two very high quality shows, both of which strongly feature - yes, black sets. They're highly monochrome productions altogether, which both deliver considerable power with minimal assault on the eye, and because of their self-imposed visual restrictions the role of their lighting (not to mention sound) design is crucial.

What was for me slightly the less successful of the two, *Rutherford and Son*, is directed in the National Theatre's Cottesloe space by Katie Mitchell, whose work for the RSC on *Ghosts* with Vicki Mortimer (sets) and Tina McHugh (lights) I was raving about earlier this year. The same team, plus sound designer Sue Patrick, have put together a production that has many similarities to the almost-contemporary Ibsen, particularly a very strong sense of things happening in real time - there's even a doomily ticking clock on the (black) back wall to ram the point home. Critics have praised this "rediscovered masterpiece". Perhaps they have rather overpraised it, because Katie Mitchell's usual meticulous approach, plus her decision to use the entire end-stage of the Cottesloe, reveal not only the wide open spaces between Githa Sowerby's embittered characters, but some fairly large gaps in the play's plot. And where Tina McHugh's lighting gave pinpoint accuracy to the passage of time in *Ghosts*, here it has a more all-purpose feel, a few shafts of brightness from the limited windows penetrating the general gloom of the Rutherford living-room, with little differentiation between dawn and dusk. Where the sound score makes us thrillingly aware that the family house (not possible to call it home) is next to the family glassworks, that all-devouring Moloch which has formed - if not deformed - all the play's characters, the opportunity to show this through lighting is not taken. After *Ghosts*, we might have expected more technical impact - but it's still one heck of a show with some stand-out performances.

If the black set gave problems in *Rutherford* that weren't completely solved, my allergy to dark box theatre didn't break out for a moment at the Cheek By Jowl *Measure for Measure*, which has arrived in Hammersmith as one of the less glamorous dates on a tour that has included Tokyo, Perth, Rio and St. Petersburg. No doubt the demands of touring called for a flexibility of staging that made a minimal set a specially attractive proposition - and I suppose it's just possible that the black back walls of the Lyric were left as they had been for the preceding *Uncle Silas*. Otherwise, the one big feature of Nick Ormerod's design is a metre-wide red stripe of cloth, hung from the back fly-bar, which from time to time, usually on big public moments, is dramatically highlighted by lighting designer Judith Greenwood. Otherwise the furniture and most of the costumes are monochrome. Declan Donnellan's production is never without excitement, however, for we are in a twilight world of police courts, prisons, seedy offices and dark street corners where the vice and corruption of Shakespeare's Vienna (here transferred to Profumo's Soho, it would appear) can fester. Greenwood uses very little FOH lighting, apart from a stage wash of white, relying more on top light for the big moments - rich blues for Mariana's house (where she sings a boozily rich blues) and some red spill beyond that cloth strip for the final public denouement, when the absentee Duke returns, punishes the wicked, restores the good guys to liberty and makes off with the girl in a set of speedy flourishes that is pretty impressive even for Shakespeare,

**"One critic praised Hamlet for being much more audible than the Dream. This may be because Dream director Deborah Paige bravely staged her production without mics. Risky, but at least you avoid the alternative risk of Hamlet getting feedback from Gertrude's cleavage."**



The Royal National Theatre production of *Rutherford and Son* by Githa Sowerby, which opened recently at the Cottesloe. photo: Neil Libbert

master of the unlikely reconciliation. A couple of welcome shafts of spotlight bring relief to the prison scenes - and to that black back wall. Otherwise the most notable feature of Greenwood's plot is part of a trend that may have been in for years but has only just struck me with some force, namely the use of lots of eye-level lighting from the wings. At the start of each half the actors assemble on stage, to be picked out by this sidelighting. It's not over-used, and is very effective in a production where the principal decoration of the stage is performance going to be the actors themselves.

I first really twigged this heavy use of side-lighting in Jim Hepplewhite's set-up for the Opera Factory *Rake's Progress* at the QEH last month, but once you've seen it you can't stop noticing it. There was quite a lot of it in Alan Burrett's plot for *King Lear*, Adrian Noble's production in which Robert Stephens and some top-notch support are thrilling Barbican audiences at the moment, but then there's quite a lot of everything on Anthony Ward's somewhat over-symbolic set, where a huge hung globe doubles as a cracking firmament (which leaks sand in a fine if not entirely comprehensible effect at the end of the first half) and as a bloody moon at the play's close. 'Over-wrought' was the one-word summary I noted for the lighting, which gave us one of the play's best furnished and brightest lit scenes in the derelict (and surely stygian?) hovel where the poor mad king and his entourage find shelter after the storm. It makes a good description for Paul Slocombe's splendidly noisy storm, too, but this time I'd intend it as a compliment.

I don't know whether he's (she's?) a member of ALD, but God gets a credit from Time Out for the lighting on *Hamlet*, which is being presented for the first time in this year's Open Air season.

This seems a little unfair on Jason Taylor, the name in the programme, for although the Almighty does the work up to the interval, the Taylor contribution is not insignificant. Indeed, it's unusual for Regent's Park, because instead of the usual big sweep of floods from the gantries at the rear of the house he uses some very atmospheric - wait for it - eye-level side-lighting. By this time the audience has forgotten the rather strange opening sight of a ghost sweeping on to a daylight stage just before cockcrow and is enjoying a suitably murky setting for the climactic action in Tim Pigott-Smith's brisk, indeed swathingly cut production. On a warm night, any show at the Open Air is going to be magic - even the rather pedestrian *Dream* which is the season's other Shakespeare offering finally comes alive in a welter of fairy lights under Geraldine Pilgrim's artificial moon - but the special spell cast by this *Hamlet* is more due to Jason Taylor than to his celestial co-designer. One critic praised *Hamlet* for being much more audible than the *Dream*. This may be because *Dream* director Deborah Paige bravely staged her production without mics. Risky, but at least you avoid the alternative risk of *Hamlet* getting feedback from Gertrude's cleavage.

Let's leave all this Shakespeare talk to mention that some of the best theatre to be seen in London at present is very contemporary, and in two cases almost technique-free. In *Half the Picture* at the Tricycle, the edited highlights of the Scott Report on arms for Iraq, they switch on the preset and the practical mics in the House of Commons committee room and let it roll. In *Home*, only the gentlest of Mark Henderson's fades from blue to grey distinguish the background to two of the finest performances around, those of Richard Briers and Paul Eddington. And finally, at the Haymarket, probably the last thing you notice in Tom Stoppard's utterly magnificent *Arcadia*, transferred to this much more suitable setting from the Lyttelton, is Paul Pyant's lighting and Scott Myers' sound - which in its way is the highest compliment of all.

That's enough dogma for now - unless there's room to tell you about the now affluent, but otherwise unreformed hippy who was inconsolable when his karma ran over his dogma.

Ian Herbert




The New Shakespeare Company's production of *A Midsummer Night's Dream* at the Open Air Theatre, Regent's Park. photo: Alistair Muir



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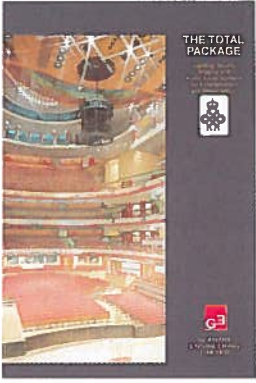
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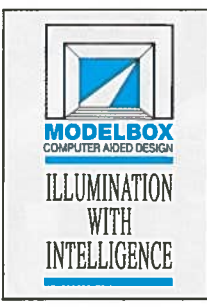
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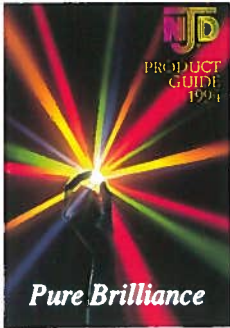


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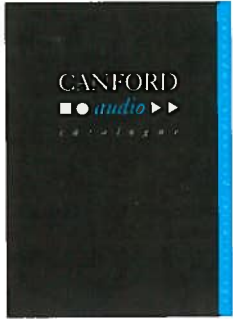
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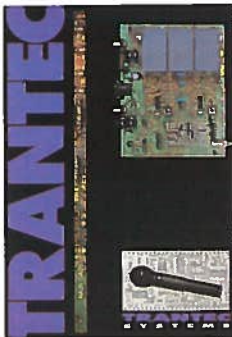
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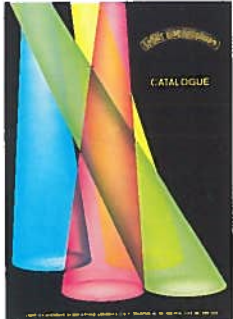
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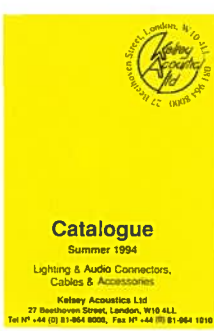
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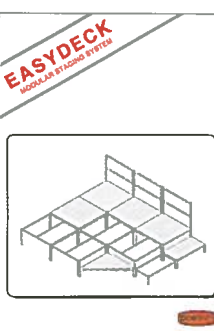


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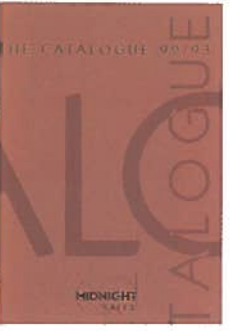
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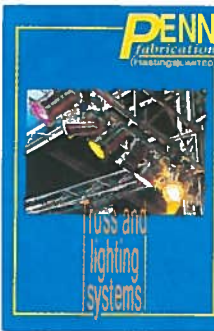
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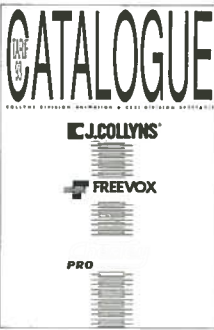
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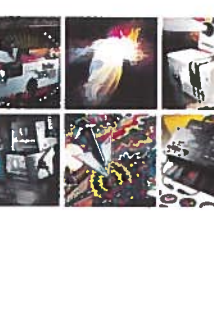
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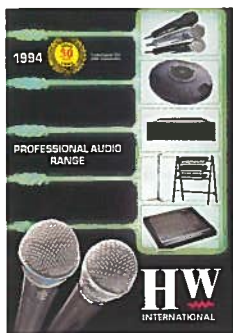


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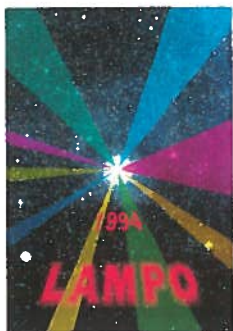
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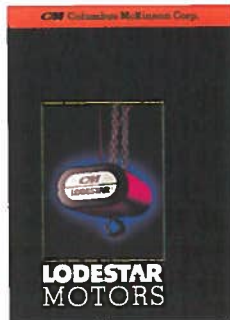
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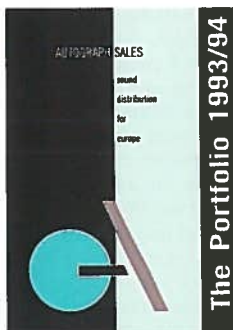
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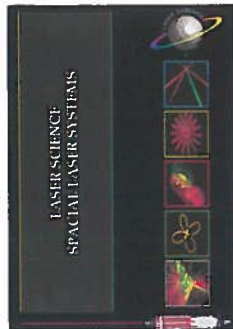
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# ON TOUR

by STEVE MOLES

## AND PRODUCTION NEWS

**Billy Joel**  
**Earls Court**

**LD: Steve Cohen**

**SD: Brian Ruggles**

Now here's a man totally at ease with his art: relaxed, light-hearted humour, coupled with broad brush stroke songs makes for an all engaging performance - the piano man is a consummate performer. Buried in the vastness of Earls Court (now surely the last remaining ugly arena in England), and performing on a remarkably bare stage, Billy Joel was, in spite of this, able to bring charm and character to even the most distant seats.

During two hours and 25 minutes of songs spanning the almost 30 years of his career, the pace never waned. Such is the strength of his song writing that even new songs culled from his latest album stood up well alongside his countless classics. For a man of 45 (he celebrated his birthday as a guest of Elton John on Monday 9th May), his energy never seemed to slacken and what is most noticeable about Billy Joel's performance is that he is obviously having a whale of a time up there and wants everyone else to join in the fun.

### SOUND

Brian Ruggles (BR to everyone on the tour) has, in his own words, "been mixing sound for Billy forever, certainly since he really became famous", and as you might expect from such a long-standing relationship, and is as relaxed as his employer when it comes to addressing the demands of his job. Clair Brothers Audio from the US are providing the PA; they returned to servicing Billy Joel for this tour after a couple of year's hiatus when Audio Analysts took over the job. As both companies have almost identical systems centred around the Clair-designed S4 cabinet, and each are equally well known for the quality of their service, can I assume a fierce price war taking place?

No expense is spared on hardware: BR mixes from two Yamaha PM4000s and Andy Sottile has both 32-channel and 16-channel extension Harrison's for monitors. He uses all the usual effects and his most recent acquisition is a TC Electronics M5000 which he's using for reverb on Billy's vocal and for the saxophone: "I've had it on the tour since September and it's been just great," was his effusive assessment.

The PA was all flown, instead of the usual wall of speakers wrapped around the wings of the stage, and with each bumper linked to the next in a predominantly horizontal configuration, the PA was hung in vertical strips. Using short bumpers (they come in two sizes, three or two cabinets wide) the 64 speaker cabinets were hung in eight positions around the stage, ten feet each side of a centre strip of ten, then two strips of eight further out and, positioned for the seats at the side of stage, a strip of six. To be honest, the sound dispersion around the room seemed no better or worse than when I've heard other S4 systems hung at Earls Court in their more conventional array (there was however a very noticeable hole in the highs around the guest enclosure - the price of free admission?).

Whatever the reason for this configuration it worked fine, but was unfortunately highly detrimental to the lighting system as it obscured a very visual rig from the view of approximately 60



The 'Piano Man' Billy Joel in performance.

***"Using instruments from all over the rig and combinations of subtly different hues, LD Steve Cohen built and subtracted layer upon layer of colour, working the beams against the darkness of the void between stage and rig."***

per cent of the audience. However, as sound men are often quick to point out (though to his credit not BR) audiences come primarily to hear rock stars, and as long as they can see the band on stage, the lighting is a secondary consideration. Billy Joel's songs are big; that is they are fully orchestrated. When a guitar solo needed to cut above the rest of the band it was predominant; when not it fell back into the group. Never too loud, the PA seemed to reside at about the same level throughout the show, without any incremental build up as instruments strove competitively to become louder and louder - and when the excitement was there, so was the sound.

### LIGHTING

Steve Cohen has been Billy's lighting designer for an equally long time (since back in the seventies), yet curiously this is the first tour where he has used automated lighting for his show: "Billy decided it was the one area of the show he hadn't spent any money on," explained Steve. The system is supplied and shipped from the US by All Access who are running all of Showlite's old equipment. Half the Pars and all four of the 8-Lites are using old Showchanger colour changers which, despite their age, worked absolutely flawlessly all night. The rig features 50 VL5s, 14 VL2Cs and 24 Intellabeams, as well as 48 Pars, four 8-Lites, 16 five and ten degree profiles and 14 Lycian 400 HTI



The rig has Vari\*Lites and Intellabeams in the mix.

followspots. Steve runs the show from an Avo QM with Robert Cochran on Vari\*Lites and Steve Yarboro on Intellabeams.

What is most striking about the rig is its height (trimmed at over 50 feet) and, if you can see them, the four truss chandeliers that hang from it. The chandeliers are independently flown 'icicles' of S-type truss (several truss sections are clamped together in staggered formation to form a taper) approximately 30 feet long, and clamped all around and up and down them is the majority of the lighting system. Providing cable runs for the chandeliers and support for back lights and five of the followspots is a U-shaped truss enclosing the sides and rear of the stage. Out in the house is a spot bridge shaped like a ship's anchor laid horizontally, supporting the remaining nine Lycians.

Steve has some very straightforward principles when it comes to designing a show for Billy as he explained: "the rig is trimmed high because of two things; firstly, we nearly always play in the round and secondly, because Billy insists on never selling obstructed seats we block as few as possible. I always aim to accomplish the natural aspects of lighting and always provide a keylight for every member of the band." The spots? "No amount of Intellabeam programming will ever cover what a well run spot can - and it's nice to provide employment for 14 people. What's more important is to get good shooters, because I can get great things out of them."

The show is not totally confined by cues and Steve likes to leave some latitude so that when the opportunity arises he can exploit good spot operators; this partially unstructured approach goes some way to explaining his use of the Vari\*Lites and Intellabeams. "Lighting is about placement and colour, not gadgets - automated lighting can be finicky. The advent of the VL5 has brought in a cost-effective element, you get twice as much lamp as you would with just a colour changer. What the automated lamps have given me is a great box of paints. I'm a musical director, that is I'm a musician so I feel my interpretation is as joyous as if I could put paint on canvas. Billy does big numbers with big dynamics and I can make big compositions - it's what I like doing."

This idea of big composition was exquisitely executed on two numbers 'Goodnight Saigon' and 'We Didn't Start the Fire'. In both numbers Steve chose obvious colours to evoke the lyrical setting, green for the jungles of Vietnam and reds and ambers for the fire. Using instruments from all over the rig and combinations of subtly different hues, Steve built and subtracted layer upon layer of colour, working the beams against the darkness of the void between stage and rig. Again in 'Allentown' the stage alternated between quite sulphurous yellows and good 'ole red, white and blue, while the lyric told the story of an old decaying steel town inhabited by patriotic Americans. Not all Steve's 'looks' were so lavish; he was not averse to dropping suddenly to just one lamp on Billy at the piano, preceded on one occasion by a bump flash from the audience blinders that made the drop even more pronounced.

Plenty of drama interspersed with light and humour characterised the show. Before ending the night with the inevitable 'Piano Man' Billy chose to play 'Hard Days's Night' and mercifully parodied McCartney's thumbs-up good-bloke gestures much to the delight of the audience and his own band. For the song the stage was lit in Dulux's most famous colour, white and a hint of pink, and we saw just the man and his band, exposed. He looked and sounded good to me.



# Marillion

## Sheffield City Hall

### LD: Alan Parker

### SD: Chris Hedge

Steve Hoggarth, lead vocalist with Marillion since 1989, saw a news item in the media concerning a young woman who'd been found wandering along the M4 suspension bridge over the Bristol Channel. So traumatised was she by the abuse meted out to her by her brother and father that she was rendered incapable of speech. To write a concept album about such a subject, where the lyric posits

itself in the mind of the victim, requires great sensitivity: to be entertained by it (if 'entertained' is the right word) requires only that you come and listen. Concept albums have a bad provenance: often pretentious they rest heavily on childlike assumptions: "we are only travellers on space ship Earth" or are frankly ridiculous "let's all pretend we're Indians and live in a teepee in Somerset" and other such hippy clap-trap. This isn't; it's grim, disturbing and ultimately thought provoking.

Considering the subject, and the very visual and dramatic way it's performed, this is not a depressing show, but it is hard work. Like opera, if you don't understand Italian and even if you've read the libretto, you must concentrate to understand what the hell is going on.

#### LIGHTING

From the moment the audience is admitted the house lights are down and four solitary Intellabeams pan the auditorium in gently changing split colour beams, whilst in the background sampled extracts of the more pastoral passages of some of Marillion's earlier works swirl around the room. Blow me, it's time to pop outside for a student cigarette! It's easy to jump to such a conclusion, but despite misgivings, the lighting and sound sets a sombre tone. The band come on and play the album without pause from beginning to end for 70 minutes.

With such a musically highly structured show Alan Parker's lighting design was obliged to fulfil some quite definite functions: "Steve Hoggarth had some very fixed ideas about how he wanted the show to look. At one point we even employed a stylist, but the suggestion of Steve actually dressing as a girl for some passages was open to ridicule and would have detracted from the seriousness of the subject." The lighting system, supplied by Meteorlites, is a very odd amalgam of small parts of every lighting discipline: four Intellabeams, six VL5s, three carousel slide projectors, six 1.2kW Cantatas with rotating gobos, four Lowel Omnis (one hand-held), three ellipsoidals, two Molelights with Wybron scrollers and 40 Par 64s dotted about the place - all controlled from a Whole Hog. There are even two ten foot sections of truss but these are stood on end, not flown, and have had cross struts cut out to accommodate the Molelights within them.

To set the scene for you ninety-nine per cent of the lighting is to the side and across the rear of stage, mostly between zero and 14 feet above stage level, courtesy of four Manfrotto stands and the two pieces of truss. The only front light comes from a couple of floor Pars, three Omnis tucked in amongst the monitors and two HTI modified Orbiters in the balcony, whilst atmosphere is courtesy of a Jem Cracker. "I really wanted to use smoke for its density, but the slide projectors from PSL are only 400W and couldn't cut it."

Alan has succumbed to budgetary pressures, hence the less powerful slide projectors, but has made great personal effort to make the show work: "I built the three screens myself, the frames are scaff and clamps with Velcro edging and the front projection material I bought from Gerriets and cut



A grim, disturbing and ultimately thought-provoking performance from Marillion.



accordingly." The slides are very much an integral part of the show, comprising of stills cut from a feature length movie of the girl's story that the band commissioned. Again Alan, in his own time, spent days laboriously sifting through miles of film to find the right frames to back certain songs. His lighting is obliged to be atmospheric: the show is ultimately dark, the Intellabeams work rarely and mainly for effect, whilst the VL5s labour between backlight on the musicians, wash onto the screens and motion effects.

The work-horses of the show are the Pars which are used very selectively to raise and lower the mood. "I've got a lot of the Pars on single channels, 240V bulbs, so I can lift specific areas. Much of the time I'm only using low level fades, perhaps at fifty per cent intensity." The Cantatas are also used heavily and to great effect. Positioned at the top of the Manfrottos all six of these lamps are focused down onto each member of the band. Donuts have been fitted in the gel slot and very tight beams of a simple gobo break up pattern emerge from them. Rotating slowly, and often at low intensity, these lamps are mesmerising - like sunlight on gently lapping water.

The show progresses through some quite disturbing and unnerving moments charged with emotion and it would be easy to laugh at the two brutes in ski masks who wrench Steve (as the girl personified) from the stage, but Steve's highly evocative voice carries the conviction to overcome this and we suspend our disbelief. Visually it is the continuity and apparent tranquillity of the Cantatas that after each such heightened moment, pull us back from the brink to contemplate what's taken place.

#### SOUND

There is similar need for application to the task from the sound engineer, Chris 'Privet' Hedge, using Concert Sound's EAW system to fill the role. The PA was flown in three different locations: a pair of KF850 cabinets hung either side of stage and a centre cluster of eight cabinets arrayed to cover the middle section of both the City Hall's

two balconies, whilst a further two stacks of four sit to each side at stage level. Nowhere in the hall does the system or the listener have to strain. Privet uses a Yamaha PM4000 augmented by an Allen & Heath GL3 to marshal the considerable number of stage sends. For added warmth, and to bring back that natural sound that seems to be in vogue with rock and roll engineers at the moment, he uses Tube Tech's range of valve levelling amps and compressors, particularly the Summit LA100 for Steve Hoggarth's vocal. Steve has a powerful and generally well modulated voice, but at times has to stretch and strain to evoke the victim's stress and femininity, and thus needs all the help he can get.

It's difficult to review the sound in any way as thoroughly as the lighting as the content was so immersing that the aural environment took second place to the visual. A complete list of equipment and effects doesn't help convey the atmosphere at all. However, music was the principle medium of the night and emotionally drove the show. That it was performed well by the musicians goes without saying; that its reproduction was equal to the performance only becomes apparent if compared to a lesser show.

The show was actually in two halves. In total the band played for two hours and 20 minutes, and in the second half resorted to the heart of their earlier repertoire, their hits. For lighting, this presented several problems, not the least of which was the rig's devotion to the concept theme. There is not the space here to deal with these, however, both band and light and sound contrived to lift the air and succeeded.

Physical and sexual abuse are a pithy subject for a concept album and show and it takes a great deal of courage to attempt such a task. To lampoon it would be too easy. It's an issue of our times and is far more pertinent than a bunch of underprivileged kids rapping about shooting cops and taking crack, because it's an issue that crosses all racial and social divides. It was an excellent show - well presented and well performed and extremely thought provoking. The band deserve better recognition for it.

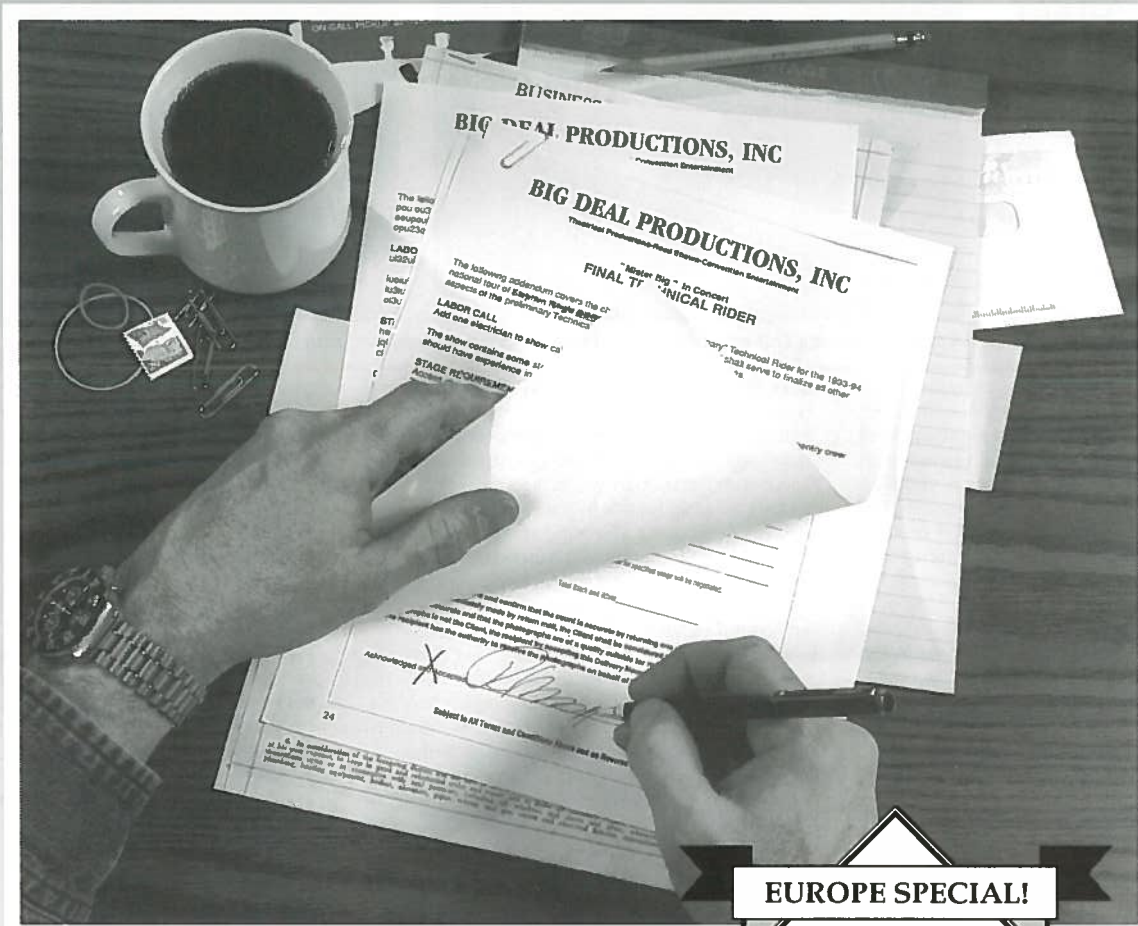
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# PERSIL POWER: A MOVING EXPERIENCE

Ruth Rossington considers swapping her current brand

Richard Dale Stage & Lighting Design Ltd have a hard earned reputation for bringing highly creative solutions to the challenges presented to them by a range of clients, and an even greater range of presentation requirements. Their most recent project, the Persil Roadshow, provides a high profile example of their work.

To undertake this project and with an eye on potential future work in this area, Richard Dale set up a separate specialist sector company - Moving Experiences International Ltd.

The bottom line was the UK launch of the new Persil products in the 'Persil Power' range and the formal criteria was that the promotion should be sales-oriented, accessible to the widest possible age group reaching across the full demographic spectrum, and most of all, informative and fun. A simple task? The solution was a little more complex.

Moving Experience decided to evaluate the project from two standpoints: creative and logistic. This inevitably led them to the concept of a roadshow. The plan then quickly took form and the company soon arrived at the idea of a touring demonstration trailer with themed areas that could give an audience a total environment in which they could absorb all the information possible about the new product, and which would of course heighten the profile of the Persil brand considerably.

Informing all of this was the underlying concept of Lever Brothers' commitment to the community and to the environment - two pillars of their philosophy that the clients insisted had to be expressed. So, once the various themes had been designed and formulated it was time to get down to practicalities.

Taking over 6,000 man hours to build, the 32 tonne trailer contains over 23 miles of cable, an 18kW climate control system capable of maintaining a temperature of 65degF in all conditions, two 500 gallon stainless steel water tanks and a roof viewing platform accessed by a concealed spiral staircase. Standing on four hydraulic levelling and landing legs, the unit can be set up in an afternoon by a small technical crew.

Based on a specially fabricated deep section RSJ longitudinal chassis, the Persil Roadshow trailer contains many highly sophisticated systems to ensure quick set-up and reliable operation. More importantly, it contains all the facilities tailored to operate the numerous

effects and services required for an exhibition of this nature. The trailer contains four hydraulically-operated telescopic pods mounted on Teflon runners, effectively

*"I've yet to find the washing powder that can shift the editor's blue pen from my copy."*

doubling the available floor area. The pods themselves contain some revolutionary engineering. For instance, in the reveal position, they require no external support - a considerable feat as each pod weighs some six tonnes when empty.

As part of their Fun Fit programme, Lever Brothers were keen to work into the equation one of the personalities associated with their promotion - Olympic athlete Sally Gunnell. As it would naturally be costly to secure the year-round services of the hurdler, they opted for the next best thing - a 3D talking head, communicating directly with the visitor. The creation of such a special effect is a lengthy process. Firstly, a life cast is taken of the sitter's head. The cast of this is scaled and re-sculpted so that the final fabrication of the face may take place. Once the head has been formed, a sophisticated camera system is used to film the performer, whilst specialist computer software is used in the post-production process to ensure an accurate line up between the projection and the sculpted face itself. Once complete, the image was installed as the centre-piece of the exhibition.

The initial concept was to divide the exhibition into two unequal parts - The Problem and The Solution. Now as everyone who's ever operated a washing machine knows there are always more problems than solutions (I've yet to find the washing powder that can shift the editor's blue pen from my copy). As the first part of the exhibition - the problem (a euphemism for those horrible bits of spaghetti that fall off your fork and onto your lap when you're trying to impress at dinner) - was intended to be lighthearted, it was felt that the ideal medium for portraying these problem

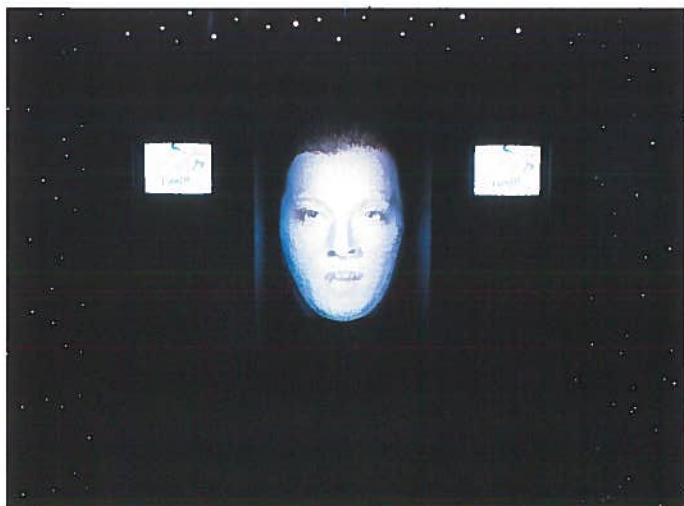


Persil Power on the road.

stains was to recreate them as props in super scale. In effect to 'cartoonise' them without abstraction, as it was vital that the visitor should identify the specific stains. The props themselves were sculpted by a special effects company and then skinned in GRP. This hard polyester coating was sanded for over three weeks to create the high gloss finish before a lengthy painting and lacquering process.

In the final element of the stain tunnel - and hence the introduction to the stain solution - the company wanted to give the visitor to the exhibition some idea of what it was like to be dirty washing inside a washing machine. The machine itself (six times larger than your average Bendix) is fabricated from rolled steel tubing and clad in a high impact polycarbonate sheeting - usually to be found in the windows of Police Riot Control vehicles. This plastic was vacuum-formed to recreate the inside of a washing machine drum and then chromed. Upon entering, visitors find themselves inside the simulated stainless steel drum. The effects lighting within this is created by hundreds of 800W low voltage bulbs supplied by Light Projects recessed into the dimples, vacuum-formed in the surface, which are linked to a chaser to create a spinning effect. To allow exit from the drum a curved door moves outwards from the drum wall and then automatically tracks sideways to clear the exit into the audio-visual area.

The construction process involved several highly specialised contractors throughout the



Sally Gunnell's Talking Head surrounded by six DHA fibre optic looms.



Watch out, there's ketchup about!



Inside the washing machine.





The stain challenge area.

country. Well-known theatrical set designer and engineer Peter Kemp, a consultant to the Royal National Theatre, who has been involved in the design and manufacture of the mechanical aspects of such productions as *Cats*, *Chess*, *Evita* and *Les Miserables*, designed the automatic door of the washing machine. This feature is highly sophisticated and leads the public through from the washing machine, once the cycle is complete, to the Talking Head area.

It does so by means of a highly advanced computer-controlled programme which is sound sensitive and responds to the sound track running through the stain tunnel and washing machine tour. The washing machine, the stain tunnel and the Sally Gunnell talking head are all operated by this sophisticated computer controlled laser disk system which controls all technical functions and checks in these areas.

The launch of Persil Power involved more than the promotion of the new product for Lever Brothers also wished to inform the public of their environmental and community activities. To deliver this amount of information in an interesting and comprehensible manner would traditionally have involved the use of video, a linear medium that gives the viewer

little opportunity to move freely to the areas of their particular interest.

Moving Experience decided to adopt the use of Interactive Multimedia, a new and innovative technology which, by combining text, graphics, animation, video and sound, provides a simple means of accessing an area of information of indefinite size. To this end the solution was a series of four touch screens, each with a well-designed, yet basic user interface. The system had to be easily understood by the general public, the majority of whom would never have previously encountered an interactive touch-screen system, therefore a 'menu' system was devised.

As well as digitally recorded music and voice-overs, and the use of animation throughout, the Persil Roadshow saw the first use of a new video-recording system. This enabled the capture of video footage in real-time onto hard disk, and its playback via an internal card without any loss in resolution or frames-per-second. In all 17 video clips were used varying in duration from 30 seconds to over two minutes, all held within the computer. In addition, there are over 70 music and voice over clips.

Throughout the trailer the sound is provided by a series of Electro-Voice loudspeakers and C Audio amplification. For external PA for live presentations, there are two all-weather 200W EV speakers, C Audio SR404 amplifiers and Shure SM58 microphones. For the internal PA, ceiling mounted speakers are again linked to C Audio amplification. In the mains room there is a Delta FOH 18U effects rack, a Yamaha rack mount mixer and an amplifier rack patch bay for the 10 signal inputs from the computers. There is also a Denon rackmount CD player. Projection is utilised both internally and externally and Creative Technology have supplied a package



The bank of interactive touch-screens.

of Sony monitors and VHS equipment.

One of the most interesting aspects of the Persil project is the unit control system designed by Maris Ensing. Two Sony LDP 3300 laser disk players provide the video and the audio for the show aspect. Also in tow is the curiously named Maris Electronic Glue which comprises a solid state show replay board set to continuously run the show, a digital output board to control the washing machine door, the strobe lights and the 'traffic lights' which indicate to the receptionist when to allow the next group of visitors to enter. Two analogue output boards are used to control the dimmers and the voltage-controlled amplifiers used to control audio levels during the show. The system has been configured to allow two shows to run in parallel.

Apart from the four interactive terminals mentioned earlier, there is an additional touch screen kiosk connected to a printer. This enables the user to key in answers to various questions, add their name from an on screen keyboard, then receive a print-out telling them which Persil Power product is the most suitable for their purposes with tips for the removal of particular stains. Persil obviously haven't been to my house.

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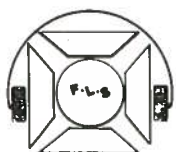
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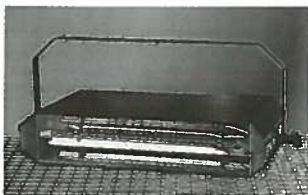
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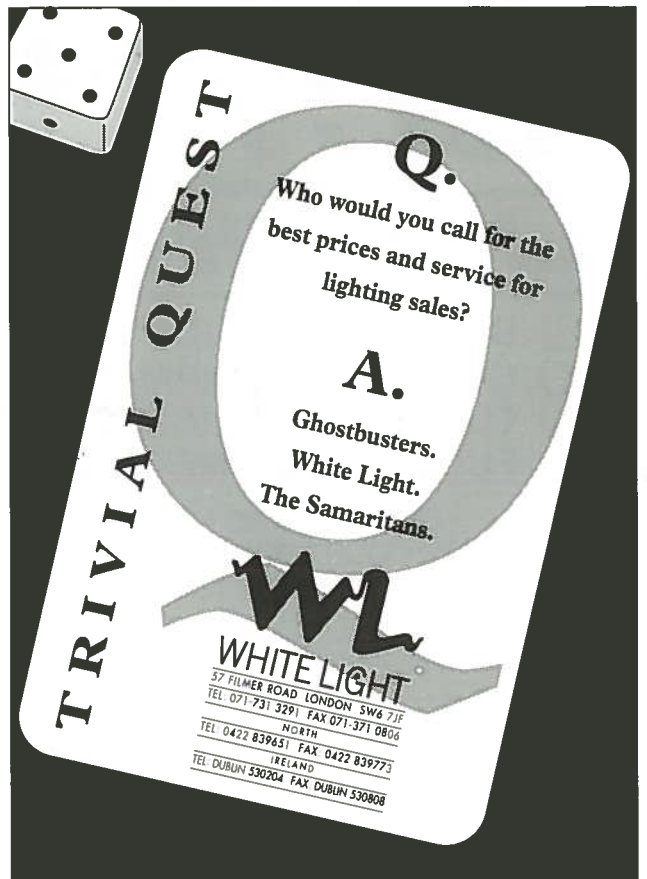
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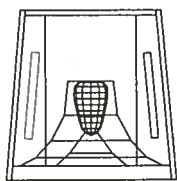
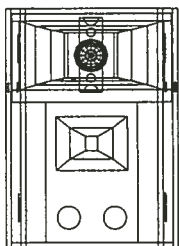
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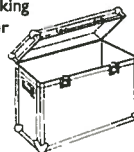
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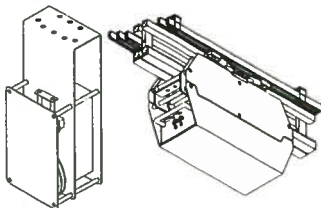
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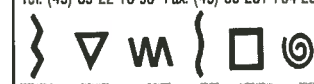
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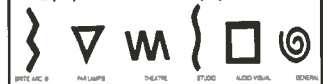


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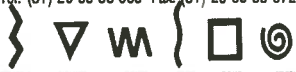
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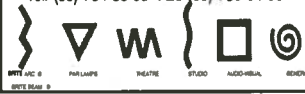
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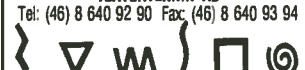
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# VIEWPOINT

Vic Dobbs reviews

## Developments in Show Control Systems

The Theatre going public now expect increasingly complex effects to enhance the drama and excitement in the performing arts. As a consequence, a corresponding increase in the sophistication of control systems is required, and lighting control systems were the first to take advantage of the latest digital technology towards the end of the 1960s. These early consoles provided memory storage and easy, and generally consistent, replay of complex effects. Today there are computer-controlled consoles for every technical area of the theatre.

These control consoles allow the operators to assemble the programmes to achieve the desired effects, test them during rehearsals and modify the programmes as necessary. The effects may then be replayed during the performances in a consistent manner, but subject to amendment by the operator according to the vagaries of a live performance. Consoles tend to be designed to control a specific category of devices and require the operator to initiate an effect. With complex multi-discipline effects, a single operator would have a difficult, if not impossible, task to synchronise the various events.

In the field of sound replay and reinforcement there is considerable use of high technology including impressive remote control and monitoring facilities. Unfortunately there are few system-wide control systems, presumably because of the wide range of requirements and configurations, as well as commercial considerations. Thus, a relatively simple audio effect might require the synchronisation of replay machines or samplers, sound mixing console, routing systems and other signal processing equipment.

Show control systems can provide a communications path to sound system components, as well as intelligent control consoles for other disciplines. A central command console can thus control and synchronise these individual items of equipment providing, of course, that they all talk the same language.

Recommended standards such as RS232 and RS485 define the electrical specifications and data structure for the interface between equipment. It is left to the individual manufacturers to determine the command that will instigate the required response from their equipment. By contrast DMX512 and MIDI have defined instruction sets allowing a product from one manufacturer to readily communicate with a product from another.

Although originally intended for the control of lighting levels, DMX512 has been used by

manufacturers of lighting equipment for the remote selection of colour filter media and positional control of moving lights. Those who make effects equipment have also adopted this standard to allow, for example, a smoke machine to be controlled via DMX512 from a lighting desk.

A MIDI interface is frequently found on sound system components. Its command protocol, which is well suited to its original purpose as a musical instrument interface, has restrictive commands for show control systems. The MIDI Show Control (MSC) recommended practice was introduced in 1991 to allow MIDI systems to communicate with and to control dedicated intelligent consoles. Applications may range from a simple interface through which a single lighting control console can be instructed to 'go', 'stop', or 'resume' to complex communications with large, timed and synchronised systems utilising many different controllers. Major manufacturers of sound and lighting controls, such as Amek and Strand Lighting, are implementing the MIDI Show Control protocol on their latest consoles.

To facilitate motion control of tape machines requiring commands such as 'play', 'stop', 'fast forward' and 'rewind' a further recommended practice, MIDI Machine Control (MMC) was introduced.

The first version of MIDI Show Control specification expressly cautions users against use in safety-critical conditions since this version has not been designed for fail-safe control. MSC is not yet intended to serve as a critical link between intelligent controllers and relatively unintelligent peripheral devices that may have uncontrolled responses to corrupt data. Manual controls such as emergency stops, deadman switches and confirmation enable controls together with automatic devices such as limit switches, proximity detectors and motion detectors should be used for maximum safety. MSC is not intended to command potentially dangerous equipment to 'go', it is only intended to signal the desire to 'go' if conditions are correct for safe operation.

The MSC working party have proposed an



After completing an honours degree course in electrical engineering at University College, London, Vic Dobbs worked for Thorn Lighting and Spectrum Audio before joining Glantre Engineering. He has project managed many major Glantre contracts including Athens Concert Hall and Bryggeteatret Oslo. He was appointed technical director in 1989.

extension of MSC to include 'two-phase commit' capability thereby adding data checking and error detection. A 'standby-cue' message is sent from the controller to the device. If the controlled device is able to execute the cue it responds with a 'standing-by' message. If it is not able it responds with an 'abort' message. If the controller does not receive any message within two seconds it proceeds as if an 'abort' message had been sent. Only when the 'standing-by' message has been received does the controller send the 'go' cue message. When the cue has been carried out the it responds with a 'cue-complete' message.

Although originally developed for use in live performances, show control systems are particularly suited to fully automated systems such as those used for theme park attractions, rides and museums. There is also a trend in light entertainment shows for segments to be performed using a pre-recorded sound track. This is a middle case between the fully automated systems and the requirements of live show controls. It should be noted that MSC system controllers do not replace the familiar intelligent consoles which are tailored for the control of specific equipment. MSC simply acts as an overlay drawing the individual consoles into an integrated show control system.

It would be good to think of a world where all equipment would include the same interfaces and command protocol. The reality is otherwise. Fortunately, there is a growing market in little black boxes to interface the interfaces!

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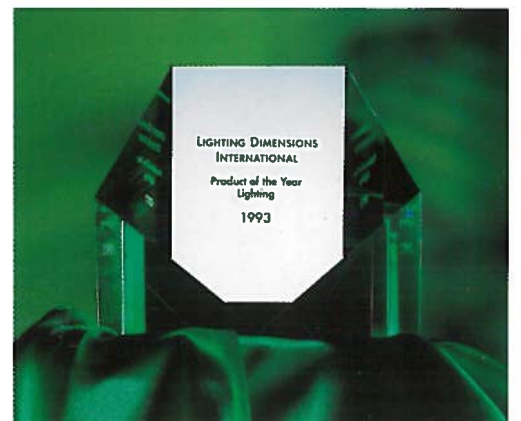


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