

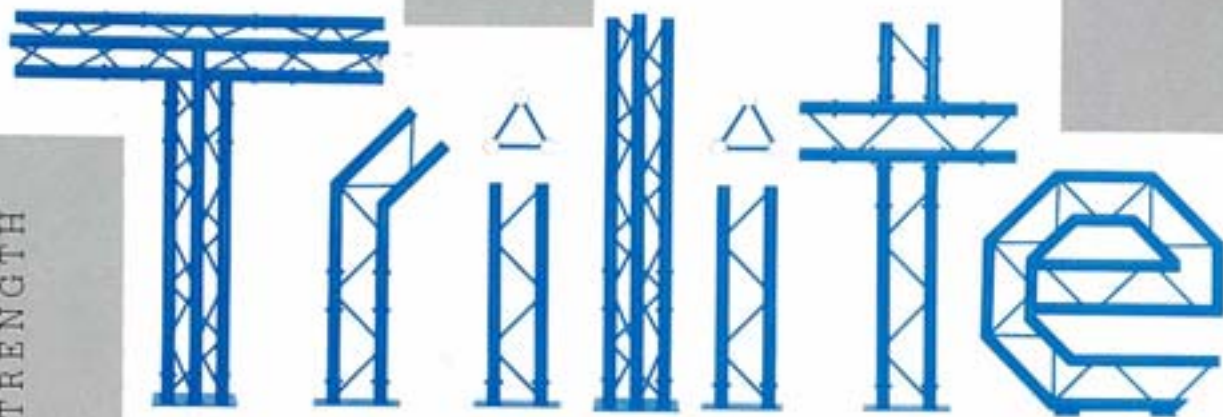


# LIGHTING SOUND

*International*

APRIL 1989

A DISPLAY OF STRENGTH



The Trilite Structural System is strong yet lightweight and easy to assemble. Available in any colour, 'Trilites' simple modular construction allows it to be built into an incredible variety of structures.

Full customer support service available.

For further details contact:

OPTIKINETICS LTD  
38 Cromwell Road  
Luton LU3 1DN, England  
Tel (0582) 411413, Tlx 825920  
Fax (0582) 400613

North America  
TRILITE STRUCTURAL SYSTEMS INC  
499 O'Brien Road, PO Box 778  
Renfrew, Ontario K7V 4H2, Canada  
Tel (800) 267 0727, Fax (613) 432 7672

# PANCAN

**PANCAN** is now in the advanced stages of development of its System 4 remote control lighting range. This follows logically the sequence of our current systems which are:

**SYSTEM 1**, our lowest cost system. System 1 has a hand held controller which gives joystick control of one or two **Panacan** heads. Ideal for remote follow spot operation and effects.

**SYSTEM 2**, our computer controlled system with colour changer. Gives programmable positions, colours and movement speeds for up to 80 presets and up to 32 luminaires. Superb accuracy and controllability.

**SYSTEM 3**, programmable position and colour controlled from your **existing control desk**.

## The Industry Standard Remote Spotlight

**SYSTEM 4**, will combine the most advanced features of the range and retain true compatibility with existing control sources, including in addition for the first time, **AUTO IRIS**. We expect this state of the art product to be in a higher price range than our current systems, although, as with most **Panacan** products, we will deliver to you, the customer, on the spot - **the best value on the market**.

**PANCAN TOUCHSTONE**, a low cost lighting control desk which in its basic form gives up to 99 presets on 24 channels of output. Battery backed memory, crossfades and full sortpatching are just some of the features of this remarkable unit.

**PHONE NOW** for free information pack - 0273 672 043



# PANCAN

83 GLOUCESTER ROAD BRIGHTON

EAST SUSSEX BN1 4AP U.K.

TELEPHONE: 0273 672 043

TELEX: 265451 MONREF G REF: S00755

**(Please note, all Panacan heads retro-fit to your existing luminaires)**



# SILHOUETTE



## 35 DIFFERENT PROFILE SPOTLIGHTS

### 5 LAMPHOUSES –

### and 7 INTERCHANGEABLE LENS TUBES –

### and look at these STANDARD features –

### and these options –

- AXIAL LAMP LAMPHOUSE 1000W
- BASE DOWN LAMP LAMPHOUSE 1000W ★
- BASE DOWN LAMP LAMPHOUSE 1200W ★
- BASE DOWN LAMP LAMPHOUSE 2000W
- BASE DOWN LAMP LAMPHOUSE 2500W

- ZOOM 31° – 47°
- ZOOM 19° – 40°
- ZOOM 18° – 28°
- ZOOM 15° – 32°
- ZOOM 9° – 21°
- NON-ZOOM 8°
- NON-ZOOM 5°

- Aluminium Extrusion
- Peak/Flat Field Adjustment
- Built-in Shutters - Iris/Gobo Gate
- Balance Adjustment, Top or Bottom Lens Control
- Top or Side Colour Frame entry
- Plug-in Lampray or Auto-eject Cable

- Drop-in Iris or Iris Blackout
- Standard or Roto Gobo Holder
- Quick-fit Lamphouse/Tube assembly
- Rotatable Shutter Set

**SILHOUETTE - A Spotlight system like no other**  
**Wherever you are, SILHOUETTE is for you**  
100V/120V/220V/240V

★ SILHOUETTE 3 can be adjusted to 1000W or 1200W

**CCT theatre lighting limited**

WINDSOR HOUSE, 26 WILLOW LANE, MITCHAM, SURREY, CR4 4NA, UK.  
TEL: 01-640 3366 TELEX: 946648 FAXUK: 01-648 5263 FAX INT: 441-648 5263

# "FADE TO GREY."



And then reverse the process whenever you want and in whatever combination you like.

Again and again and again.

The Celco 30 and 60 Major utilise the latest in technology to provide the creative lighting designer with the opportunity to plot and execute the most complex lighting patterns quickly, simply and indefinitely.

Whats more, the integrity of the electronic design, featuring Absolute Level Programming (ALP), offers a level of accuracy and repeatability that enables the boards to be used to control analogue colour changers and moving lights.

The Celco 30 and 60 Major can store up to 150 and 300 different scenes respectively. And, unlike other systems, the Celco 30 and 60 Major do not use floppy discs. Instead all programs are stored on a unique Q-Card, the size of an every day credit card.

Celco products are manufactured and distributed by: Celco Ltd, 1/3 Bellingham Road, London SE6 2PN, England tel: 01-698 1027 tlx: 927624 (CELCO G) fax: 01-461 2017 and Celco Inc, 30B Banfi Plaza North, Farmingdale, New York 11735, USA tel: (516) 249 3662 fax: (516) 420 1863.

*Celco. Enough said.*

# LIGHTING+SOUND *International*

## APRIL 1989

- |    |   |
|----|---|
| 7  | NEWS in Lighting+Sound International                  |
| 19 | Metropolis: Designer Lighting for the Concept Musical |
| 26 | Le Maitre: Launch Date 1990                           |
| 30 | Fiesta Launch to Lights and Movement                  |
| 34 | Avolites America                                      |
| 43 | PLASA News  |
| 49 | Flying Again: the Disco Mix Champs                    |
| 55 | Theatre Underground at Wookey Hole                    |
| 59 | Lanterns Lead the Lamps                               |
| 65 | Equipment News  |
| 68 | On Tour   |
| 72 | PLASA Members   |
| 74 | Directory   |
| 78 | Viewpoint   |



### Cover: Metropolis at the Piccadilly

In our cover story this month (see pages 19-24) Julian Williams talked to lighting designer David Hersey during rehearsals of Metropolis at London's Piccadilly Theatre. Cover picture shows Brian Blessed as John Freeman, the Master of Metropolis, commencing the destruction of Metropolis from the control centre module. In the picture above the module is seen descending into Metropolis.

## LIGHTING+SOUND *International*

published monthly by the Professional Lighting and Sound Association

Editor: John Offord

Assistant: Ruth Rossington

Telephone: (0323) 642639 Fax (0323) 646905

Editorial Advisers: Tony Akers, David Bearman, Andrew Bridge, Peter Brooks, Jenny Cane, Tim Chapman, Mike Gerrish, Kevin Hopcroft, Tony Kingsley, John Lethbridge, Rob Peck, Iain Price-Smith, Neil Rice, Hazel Simpson.

PLASA Office:  
7 Highlight House, St. Leonards Road,  
Eastbourne, Sussex BN21 3UH.  
Telephone: (0323) 410335



© Copyright Professional Lighting & Sound Association

No part of this magazine may be reproduced without the permission of the Editor.

The magazine is available on annual subscription:  
UK: £25.00; Europe and rest of world surface rate £30.00; Airmail £45.00.

**Distributors of:**



Thomas

TOMCAT

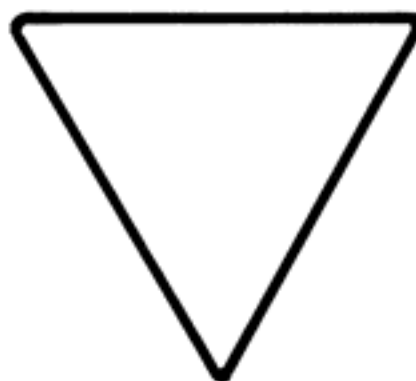
*Le Maître*

ROSCO

**LE MARK**  
Self-Adhesives Ltd

**CLS**

**SALES**



**Suppliers of:**

SocaPex

Camlocs

Zero 88

CCT

Lee Gel & Products

Green Ginger/  
Lightmode

Cables & Flexibles  
Aceflex Range of  
Cables

Duraplug

**Lamp sales of:**

Philips

Thorn EMI

Wotan

Osram – GEC

G.E.

Sylvania GTE

Professional lighting suppliers for  
Entertainment, Leisure and the Arts

**Contact: Jeff Demain, Sales Manager**

**C.L.S. SALES LTD.**

Undershore Works, Brookside Road, Crompton Way,  
Bolton BL2 2SF

Telephone: (0204) 364139

Fax: (0204) 363238

E-mail: CLS-UK

Telex: 265 871 Monref.G

Att. DG52288

# LIGHTING|SOUND *News* International

## PLASA Show Goes Up to New Levels

As reported in last month's L+SI, demand for exhibition space at this year's PLASA Light and Sound Show (Sept 10-13) continues apace. This month has proved no exception. The ground floor at Olympia 2, London, is now completely booked and the first floor looks set to follow shortly. To accommodate the increased interest, organiser David Street has considerably expanded the available floor space on the second level, and to date much of this has already been booked or is in the process of enquiry.

New exhibitors to the 1989 Show include: Kelsey Acoustics Ltd, Light Technology, LMC Audio Systems Ltd, Mystical Lighting Ltd, ACT Services, Celco, Fabtronic, Pancan, Northern lights and Norman Gray MCSO.

Any companies who have so far failed to book their exhibition space should contact show organiser David Street urgently if they want to ensure themselves a good position. Contact 3D Services, 10 Barley Mow Passage, Chiswick, London W4 4PH telephone 01-994 6477.

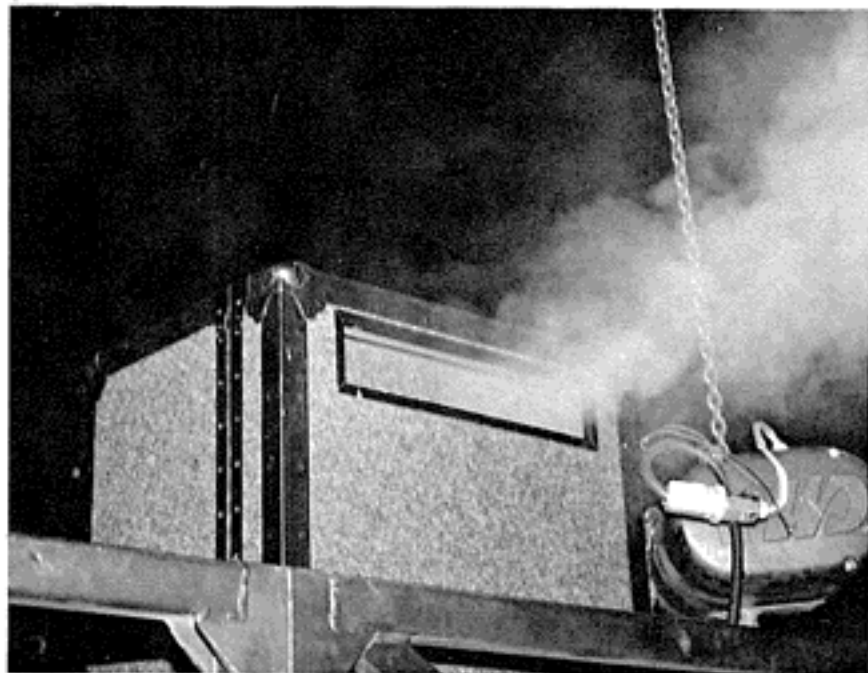
For the 1989 Show a much larger promotion budget has been agreed by the PLASA committee, with the intention of increasing visitor numbers, particularly from overseas.

## Letters Patent

A press release has been received at the offices of L+SI stating that Dallas-based Vari-Lite Inc., the manufacturers and lessors of automated lighting systems, has filed suit against Syncrolite Systems Inc., also of Dallas. The suit was filed with the United States District Court for the Northern District of Texas, and alleges that the stage lighting equipment being marketed by Syncrolite infringes two patents owned by Vari-Lite Inc.

Jack Calmes, president of Syncrolite, confirmed to L+SI that the company's lawyers had received the lawsuit from Vari-Lite, Inc. He told L+SI: "I founded and was president and owner of Showco, Inc. which developed the Vari-Lite and spun off Vari-Lite, Inc. Syncrolite Systems, Inc. is a small lighting company I founded in 1984 after the expiration of my non-competition agreement with Showco, Inc. We and our attorneys answered Vari-Lite's initial concerns in writing several months ago and have offered to disclose our technology numerous times provided our trade secrets are protected."

"It is our opinion that the filing of this lawsuit is without merit and designed to stifle competition. Further, it is irresponsible of Vari-Lite to publicise questionable litigation that could be damaging to our company."



A 'cracker' in action at The Shrine auditorium, Los Angeles for the 1989 Grammy Awards.

## Cracked It!

Jet lag clearly doesn't hinder the eagle eared editor of this publication because, in the middle of reporting on the Grammys from LA (L+SI March), he was halted by the crews' talk of a new toy, the 'cracked oil smoke machine' and he immediately tracked the device to its lair at REEL EFX in Hollywood. But UK readers don't have to go that far, and eagle-eyed readers of the March issue may have spotted 'cracked oil smoke machines' being used for Bryan Ferry and hidden in the list of equipment supplied by Samuelsons.

So what is a 'cracked oil smoke machine'? It really isn't a smoke machine at all. It supplies a thin white mist of airborne oil, but unlike other machines, the mist is almost invisible until hit by light beams or lasers, a useful factor for television or film production. Moreover, since the mist is not produced by heat, it stays around for a considerable time. Another advantage of the absence of heat is that without it the overall size of the airborne particles is increased.

John Coppen of Samuelsons Concert Productions (01-450 8955) has made and hired the units used here, by Pink Floyd among others. His units are called 'Cirrus' and are approved by the London Fire Brigade. Unlike the US units (commonly called 'Crackers') which have on-board compressors, the Cirrus' compressor is off-board and can be at a considerable distance from the tank. Indeed, the compressor can be outside the building if desired.

John Coppen says the Cirrus really goes against the grain of traditional smoke machines, 'it produces subliminal smoke!'

L+SI will be featuring the Cirrus in a survey of fog, smoke and mist machines later in the year.

Graham Walne

## KNEED KNOBS?



216-218 SOUTHMEAD RD. BRISTOL BS10 5EB. TEL: (0272) 506866 TELEX: 44763 FAX: 504550

## FABTRONIC LIGHTING

Entertainment and Display Lighting Manufacturers

Full brochure and price list available  
Lighting for all your needs  
Quality products manufactured

Contact: Sue Riley

62 Tenter Road, Moulton Park Ind. Estate,

Northampton NN3 1AX

Telephone: (0604) 790765

Fax: (0604) 47403



# THE SHARP ONE

## New range of 1 KW spotlights

- F101 / Fresnel spotlight.
- C101-C103 / Plano-convex spotlights.
- DS101 / Zoom profile spotlight.
- CN101 / Long throw plano-convex spotlight.

# ADB

*lighting systems*

#### **N.V. ADB S.A.**

Leuvensesteenweg 585  
B-1930 Zaventem  
Belgium  
Tel. +32/2/722.17.11  
Tx 22154  
Fax +32/2/722.17.64

#### **ADB-Sofair S.A.**

47, Rue de la Vanne  
F-92120 Montrouge  
France  
Tel. +33/1/42.53.14.33  
Tx 206428  
Fax +33/1/42.53.54.76

#### **ADB-Sofair**

218, Grande rue de la  
Guillotière  
F-69007 Lyon  
France  
Tel. +33/78.58.46.50  
Tx 900264  
Fax +33/72.72.98.20

#### **ADB Marseille**

22, Av. St. Barnabé  
F-13004 Marseille  
France  
Tel. +33/91.25.22.00  
Fax +33/91.34.24.70

#### **ADB GmbH**

Dieselstrasse 4  
D-6052 Mühlheim am  
Main  
Deutschland  
Tel. +49/6108/66204  
Tx 4189103  
Fax +49/6108/66205



## Expomusica 89

To be held at the Casa de Campo in Madrid from the 17th to 20th May, the organisers report that the 1989 Expomusica show will be at least 30% bigger than last year's. Now in its fifth year, 108 companies have already booked space, representing a total of over 750 trade names, with directly participating companies from the UK, France, Italy, Portugal and the United States. The first two days are reserved exclusively for trade visitors, with opening hours 11.00 to 20.00 daily.

## ABTT North

Dates for ABTT North have been confirmed. The show will be held at Oldham College from October 26-28, the same venue as in 1987. Full details are available from D. Cusworth, 4a Meriton Road, Handforth, Wilmslow, Cheshire SK9 3HB telephone (0625) 523391.

## Farrahs for Carver

Immediately following the Frankfurt Music Fair in February, HW International appointed Farrahs as main dealers for the Carver range of power amplifiers. Farrahs have now received their first delivery of these amplifiers, some of which will go into immediate service with the Farrah Hire Company. A full colour descriptive catalogue is available upon request.

## New Store

Leamington Sight & Sound has opened a new store in Whitefriars Street to serve the club, disco and mobile markets in Coventry and the surrounding area. The store will be carrying products such as the Electro-Voice, Amcron, Furman and BBE. Leamington Sight & Sound also has a permanent demonstration rig featuring E-V and Amcron components so that prospective purchasers can hear what they are buying on the spot. The company has already installed an E-V system at Stables in the Chesford Grange Hotel in Kenilworth.



Steve Easy, stage director of the Orchard Theatre Dartford (left) and Ken Priddy of Luff Light & Sound with the new Allen & Heath Sabre sound consoles Luff's have just supplied and installed at the venue.

## Setting the Record Straight

A press release received from the Firework Makers' Guild has stated that the impression given by The Daily Mirror in a recent article was misleading. The paper reported that the lorry that caught fire and exploded on a Peterborough Trading Estate last month was carrying 'A vanload of fireworks'.

Spokesmen for both the Firework Industry and ICI deny that this was the case. According to their statement, the majority of the contents of the lorry was made up of explosives for general commercial purposes, and the delivery to the firework

display company in Peterborough (Le Maitre) consisted of fuse heads packed in double tin containers and enclosed in wooden crates and therefore could not have caused or contributed to the subsequent explosion.

## Saber at The Orchard

The first UK installation of Allen & Heath's Sabre 16 track mixing desk has taken place at The Orchard Theatre in Dartford. Following a successful showing of the Sabre during Lenny Henry's tour, Luff Light & Sound supplied the mixer as part of a complete and permanent sound refurbishment package at the venue.

# Trade Show '89

## Exhibition of Backstage Equipment & Supplies

Thursday 18 May  
10.00am - 6.00pm

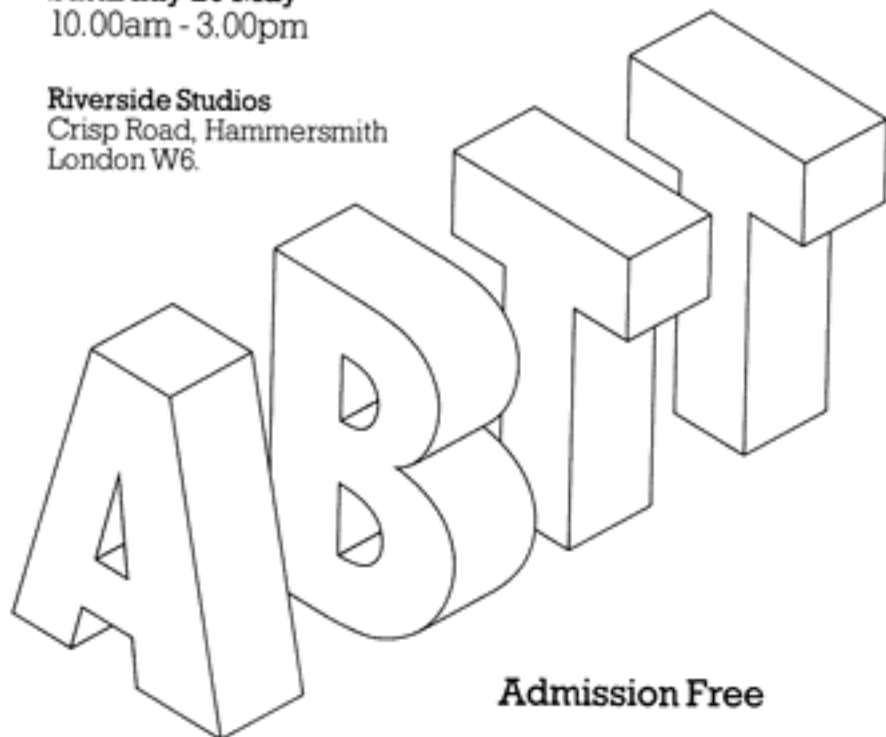
Friday 19 May  
10.00am - 7.00pm

Saturday 20 May  
10.00am - 3.00pm

Riverside Studios  
Crisp Road, Hammersmith  
London W6.

Registration forms are available from:

Association of British Theatre Technicians  
4 Great Pulteney Street,  
London W1R 3DF  
Tel: 01-434 3901



Admission Free

## ☀ DIRECT LIGHTING ☀

- ★ WE SPECIALISE IN SUPPLYING ALL YOUR LIGHTING REQUIREMENTS
- ★ P.A. SERVICE
- ★ TRUCKING SERVICE
- ★ TALK BACK FACILITY

WE OFFER A VERY PROMPT AND RELIABLE SERVICE FOR MUSICIANS OPERATED BY MUSICIANS

FIELDHOUSE LANE, THAMES INDUSTRIAL ESTATE  
MARLOW BUCKS Tel: (06284) 74974

## MUSIC AND FIREWORKS

### FROM THE BIG BANG!

Add impact and excitement to your next promotion, launch, campaign or event with the sound and splendour of The Big Bang.

- The War of the Worlds • 25 Years of Rock
- A Kind of Magic • Jean-Michel Jarre

Ring 058-285-2436 or write to

### FANTASTIC FIREWORKS LTD

PO Box 300, Redbourn, St. Albans, Herts AL3 7EE



## ABTT Lighting Control Forum for Manchester

Six of the most prominent world manufacturers of computer-based stage lighting control systems will take part in a seminar to be held at The Royal Northern College of Music on Thursday, 27th April. The forum will discuss such matters as the establishment of new systems to suit individual needs, how much equipment is necessary and not so much now it works, as to why? It will also ask if your preference is biased towards the broadly American or European philosophies. A panel of experts chaired by Philip Edwards will offer advice to operators, designers and purchasers of new equipment. (The event will be reported on by Graham Walne in the June edition of L+SI). Contact the ABTT on 01-434 3901 for details.

## Lynx Appointments

Lynx Lighting have recently announced that they have appointed Elektra Lite, a trading division of Celco Inc., based in Farmingdale, New York as their exclusive distributor for the U.S.A. Lynx have also appointed Phase Three Audio and Lighting, based in Toronto, as their distributors for Canada.

## April Launch for UK Sound

According to partners Tony Dates and Mark Burgin, April 1st is not April Fools day, but the official launch date of their new company, UK Sound, a wholly owned subsidiary of their other



## L+SI and the Grammys

Colours of the 31st Grammy Awards (see L+SI March) didn't arrive in time for inclusion for that issue, but to fill this small gap here are two we would have chosen: left is the orchestra set, and right Linda Ronstadt in performance.

business venture, Shuttlesound. The latter serves the pro-sound, concert sound, club/disco, studio, broadcast and audio visual industries.

UK Sound has been set up to concentrate its efforts in the area of hotels, conference centres, places of worship, auditoriums, civic centres, airports and transport industries. Some of the more unique products that will emanate from UK Sound are explosion-proof drivers, steam-proof projectors and underwater loudspeakers - products which are of particular interest to the oil rig industry, nuclear power plants and the swimming pool market. Chris Snell has been brought into UK Sound to spearhead the operation in terms of



both sales and product knowledge. For further information contact UK Sound on 01-874 2050.

## Spring Issue of 'Strandlight'

Strand Lighting has published another issue of their magazine Strandlight. Featured are illustrated articles on the new PALS remote controlled spotlights, coverage of Strand's current projects, the first year of operation for Lightboard M, the latest memory system, plus many other lighting features. Copies are free from Strand Lighting.

# The LSX - For Sale or Hire

The LSX Low Smoke Converter converts the smoke output of either the Le Maitre Powermist or Smoke Processor machines into a low-laying cloud.

The effect created is very similar to that of using dry ice, but removes the hassle of boiling water and cardice.

Cloud density, depth, and the area covered are all controllable by using the variable settings on the LSX in conjunction with the variable flow feature of the related smoke machine.

The LSX should be floor-standing, but with the converter and accompanying machine raised, a waterfall effect can be created.

Size: 84cm(W) x 69cm(D) x 69cm(H) Weight: 80kg  
Supply Fuse Rating: 13A

### For Sale . . .

RRP £1,499 (exc. VAT). Available from all major Le Maitre distributors. For details of your nearest distributor phone 01-686 9258.

### For Hire . . .

For hire rates and full details, phone Le Maitre Hire & Professional Services on 01-688 0440.

Le Maitre Lighting and Effects Ltd  
316 Purley Way, Croydon CR0 4XJ  
Telephone: 01-686 9258 Fax: 01-680 3743  
Telex: 883220 Maitre G

*Le Maitre*  
lighting and effects

# DESIGN

*DESIGN* vb. to plan and make something artistically.

*DESIGN* n. a coherent or purposeful pattern, as opposed to chaos.

## LIGHTING & STAGE TECHNOLOGY *redefined*

From one of the world's leading concert lighting companies comes a fully integrated range of lighting instruments, trussing, colour change and motor control systems.

Designed for international touring and permanent installation by people who know that you need precision control combined with rugged durability.

L. & S. D. colourchange and motor control systems are designed to provide the definitive industry standard for the creative control of colour and motion.



Worldwide dealer distribution:-  
Presentation Consultants Ltd.,  
168 Chiltern Drive, Surbiton,  
Surrey KT5 8LS, England.  
Telephone 01-390 4841.  
Facsimile 01-390 4938.  
Telex 892337 CELCO G.

## Light & Sound Design



'Colourmag' for PAR 64's and Lekos.



'Molemag' 8-lite unit colour scroller.



'Colourmag' 32-channel control desk.



32-channel motor control rack.



16-channel motor control desk.



8-channel motor control module.

## Rainbow Debuts

One of the first major contracts for the new Rainbow scroller distributed in the UK by M&M Lighting, is the nationwide Wayne Sleep tour which opened at the Chichester Theatre on March 13.

The scrollers are being hired from Concert Light Systems of Bradford, M&M Lighting's northern dealer, who have purchased the scrollers for rental. Paul Normandale of Concert Light Systems told L+SI: "Having assessed all the options, we felt the Rainbow would best suit our diverse range of hire services for the theatre, opera, ballet and rock 'n' roll. It is silent enough and fast enough to cover all our requirements."

The lighting designer for the Wayne Sleep tour, called 'Bits and Pieces' is Durham Marengi, who is using the scrollers for cross stage lighting at stage level on Sil 30 lanterns. After Chichester, the show continues around the country for another 38 weeks.

The Rainbow Scroller has also been given the distinction of being chosen to light the West End production of Madame Butterfly. Close to 70 scrollers will be in use at the Shaftesbury Theatre when the show opens there on April 11.

The Madame Butterfly production company are renting the Rainbow scrollers from White Light of London, who have purchased 100 Rainbow scrollers for use in their rental division. Technical details of the Rainbow scroller can be obtained from M&M Lighting on 01-722 4147.

## EMO Direct

E.M.O. Systems Ltd. have announced that the graphic equalisers formerly manufactured for Court Acoustic Sales Ltd. are now available direct from themselves.

Mike Gentle, managing director of the Durham-based company, told L+SI: "We have decided on this course of action in order to ensure continuity of supply for the many users of this product throughout the world."

The range of graphics which includes a twin channel 30 band, a single channel 30 band and a twin channel 15 band, remains unaltered. Like the company's popular range of stage and studio ancillaries, the graphics will be sold with the EMO badge. All enquiries should be directed to EMO Systems Ltd. at Durham Road, Ushaw Moor, Durham City, DH7 7LF. telephone: 091-373 0787.

## Evita Launches Community

A major 40 week national tour covering England and Ireland, of the Tim Rice and Andrew Lloyd Webber hit musical Evita, is the first theatre rig using Community professional loudspeaker systems in the UK.

Sound Designer Rick Clarke used a delivery system of Community RS327i and 325i speakers configured in central cluster and proscenium groupings. "I am very pleased with the vocal fidelity and pattern control that these 3 way cabinets display," he told L+SI. "The fibre glass horn loaded



Rodney Wayman watches the sign go up at Raper & Wayman's new premises.

baffles show that proper time alignment of components is essential to achieve clear sound." Other key products used are Community CS50B bass speakers, Rauch DVT 300S and 50S amplifiers, Sennheiser Diversity radio mics and a 40 input Soundcraft 8000 series console with V.C.A. control.

## EuroReps Wanted

Laser Creations are looking for European representatives for system sales, laser hire work and laser video projection hire events. Any interested companies should contact Lorraine Ludman, Laser Creations Ltd. 55 Merthyr terrace, London SW13 9DL. Telephone: 01-741 5747.

## Design-A-Stage from Star Hire

Contain-A-Stage 500 is a new concept of integrated mobile stage equipment, specially designed and built by Star Hire and now available on hire from them, together with master of ceremony services if required. Weighing around 15 tonnes and dimensioning 40 ft x 8ft 6" in collapsible mode, it has its own generator to supply power to electric and hydraulic services and lighting for after-dark rigging. The stage can be levelled and erected within two hours - principally by automatic process.

Fully erected, Contain-A-Stage 500 opens out to provide a fully weather proof curtained stage with a useable deck area of 36ft x 24ft. A roof clearance of 9 ft at the back rises to 16 ft at the front to provide a volume of 11,520 sq.ft. Further details on the stage's capabilities can be obtained from Star Hire on (0234) 772233.

## Moving On Up

Raper & Wayman, one of the country's leading suppliers of pro-audio, recording and sound reinforcement equipment is moving up the road in Haringey. Sales director Rodney Wayman told L+SI the reasons for the move: "Quite simply, we had outgrown our old premises. With only 1,600 sq ft to play with, we were short on everything - demonstration, showroom, workshop and office space. Even daylight was a precious commodity!"

Situated on an easily accessible industrial estate with ample free parking right outside, the modern airy building is spread over two floors. The ground floor, which includes the main sales and reception area, and a service/hire reception, is being split into two main areas from what used to be a single warehouse floor.

One section, incorporating a stock-storage area, is devoted to a greatly enlarged workshop for servicing and quality control - activities upon which Raper & Wayman say they place great emphasis; the other is being used initially as a despatch point and large-scale demonstration area for big PA systems. Full height drive-in access here means the easiest possible loading for heavy equipment.

"The building provides us with tremendous flexibility for future growth," said Rodney Wayman, "and something we're very keen on doing over the next few years is expanding the hire side of our business which is looked after by Steve Wacholder who joined us last year."

Over the next few months the first floor - which provides ample office space - will be transformed. A mezzanine is being laid over the workshop to provide a fully equipped, purpose-built, 1000 sq ft showroom cum demonstration area.

# STAGE LIGHTING

**STRAND  
SETTING THE  
INDUSTRY  
STANDARD  
WORLDWIDE**



**Minim F**  
500/300W Fresnel  
Spotlight

**Cantata 18/32**  
1200W Profile  
Spotlight

**Coda 500/3**  
500W Cyclorama  
Backlight

**Cadenza PC**  
2000W Prism Convex  
Spotlight



## A unique opportunity to see Amsterdam

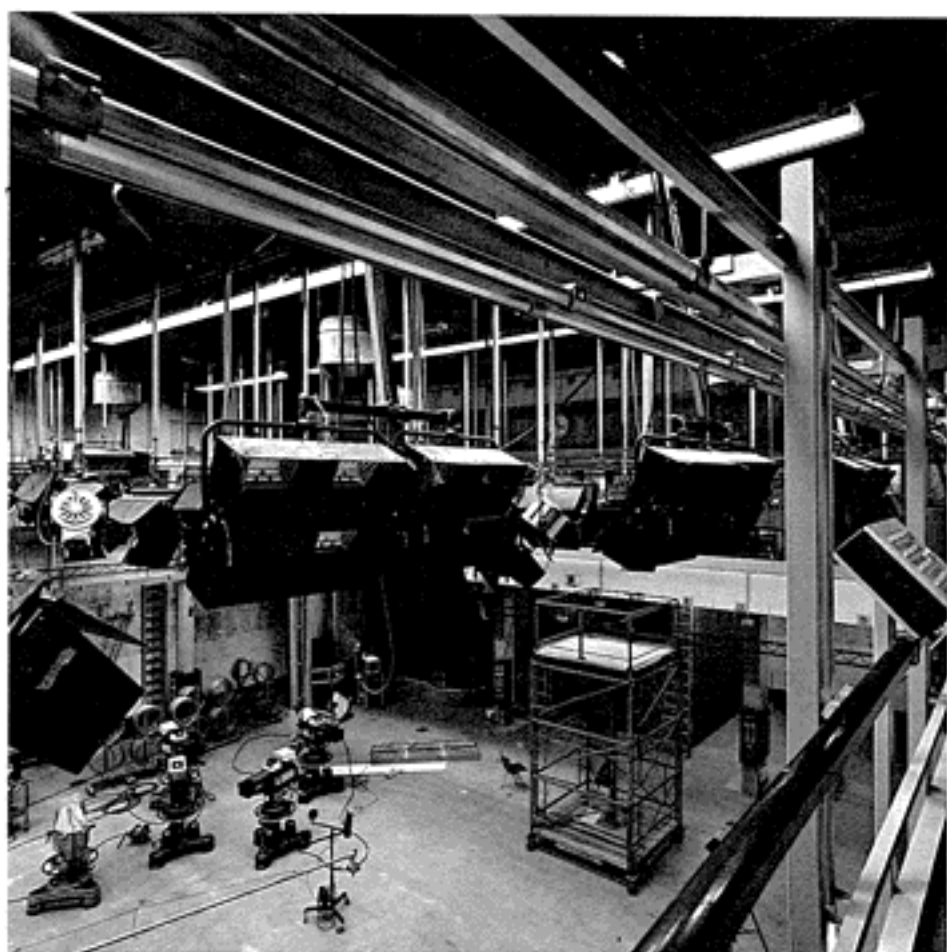
From 15-17 May, Showlight '89 takes place in Amsterdam and the nearby television studios of NOB in Hilversum. An international symposium on lighting for television, film, theatre and pop music, it offers an interesting lecture programme with demonstrations and a trade show.

The event opens in Amsterdam at the Theatre Museum, followed by a boat tour on the beautiful 17th century canals. The tour includes a visit to several theatres, ending with a reception hosted by the Mayor and Aldermen of Amsterdam. The city is also the location for the banquet on Tuesday evening. A restored ferry steamer from 1928 sails from the harbour for a three hours trip. On board, delegates can eat, talk, and enjoy the typical Dutch countryside in an informal atmosphere.

At the television studios of NOB in Hilversum, experts on lighting for television, film, theatre and pop music will lecture and demonstrate the latest in automation, miniature lamps, colour control, lasers, pyrotechnics and smoke effects. Contributions from the USA, West Germany, Hungary, Poland, Australia, India, the UK and the Netherlands will ensure the international flavour of the event. Lead speakers will include: Bill Klages, Hans Wolff, Tony Imi and Christoph Rudolph amongst others.

Showlight '89 also includes an exhibition area where companies can demonstrate some equipment from their catalogue. Companies attending are: ADB and GTE-Sylvania (Belgium), De Sisti (Italy), IF-Show Services (West Germany) Corne-Light, Erco, Flashlight, Osram, Philips, Rolight and Siemens (The Netherlands), Arri, CCT, DHA, Le Maitre, Lee Colostran, Roscolab, Strand, Theatre Craft, Optikinetics, Telestage, Thom EMI and Vari-Lite (UK). Lighting and Sound International will also be exhibiting.

For more information contact: Maureen Van Woudenberg, NOB PR-department, PO Box 10, 1200 JB Hilversum, The Netherlands. Phone: (0)35-775115 Fax: (0)35-774325, or in the UK: Anne Gibbins, Phone: 01-675 5211, Fax: 01-675 5449



One of the studios at NOB TV studio centre at Hilversum, The Netherlands - venue for Showlight 89.

## DLA acts on Lighting Safety

The domestic and contract lighting industry's trade body, the Decorative Lighting Association, has announced measures aimed at getting suppliers to improve lighting safety, following disclosures on the BBC's Watchdog programme. The programme revealed that, of a random sample of 54 domestic fittings bought at retail outlets, 30 had failed its consultant engineer's tests on legality and safety.

The DLA is mounting a double assault - on suppliers and retailers - to improve matters. It is again contacting all its member companies to stress the legal dangers of producing faulty fittings. "It is essential that suppliers distribute only those fittings which have passed the DLA Code of Practice Safety of Luminaires test, or fittings which meet the new DLA/BSI test requirements," DLA director, John Tengwall, told L+S. "A complex law suit resulting from an accident with a faulty fitting could put a company out of business."

The DLA Code of Practice is voluntary, as is the new DLA/BSI joint standards scheme, which was

launched in January at the 25th anniversary International Lightshow, but the new consumer laws and impending electrical safety regulations will make it highly risky for a supplier to make or assemble fittings which do not conform to one or other of the schemes, both based upon BS4533. Retailers too, will suffer for selling them on, says a DLA press release.

The DLA has also announced its intention to carry out checks on suppliers operating its Code of Practice, to ensure that quality control tests are made thoroughly and accurately. Firms not complying will receive a warning. If they ignore this, the DLA will refer the case to local Trading Standards Officers.

Also following Watchdog, many stores are already reviewing quality control systems and are tightening up on suppliers, and the DLA is urging all retailers to obtain written assurances from suppliers that fittings meet the Code of Practice requirements which are based upon BS4533. To help retailers, it is planning to stage a free fault-finding seminar and demonstration and advising them to check stock on delivery for basic assembly quality.



Galaxy 3  
The world's most sophisticated lighting control desk.

- Widest range of systems - Galaxy 3, Impact, Lightboard M, Gemini 2, Tempus, M24, Action 48, Act 6 to name but a few.
- Free lighting planning service.
- Extensive spares & service agency network.

**Strand Lighting**  
*75 Years of Brilliance*  
Strand Lighting Limited, Grant Way,  
Syon Lane, Isleworth, Middlesex TW7 5QD  
Telephone: 01-560 3171  
Telex: 27976 Fax: 01-568 2103

# & MEMORY LIGHTING CONTROLS

Write to us for your copy of the Strandbook detailing our full range of products.

# POWER DRIVE

## Just wind it up...

# THE TELEHOIST

16 par 64 cans...



a 65 kgs  
single  
lantern ...

a sound  
enclosure

Fast - 0'-15" in just  
30 seconds.  
No assembly needed.  
Easily transported by  
one person.

Ideal for the theatre  
or concert hall, in  
the studio or on  
location.

Accepts the complete  
Powderdrive range of  
lighting/audio  
fittings or a TV  
spigot.

## TELEPHONE, FAX OR WRITE

for an illustrated brochure and the address of your nearest stockist.  
Cerebrum Lighting (Sales & Hire) Ltd, 168 Chiltern Drive, Surbiton, Surrey KT5 8LS.  
Telephone: 01-390 0051/01-390 4841. Fax: 01-390 4938. Telex: 892357

## The best supporting act around



## Formula Sound at Granada Studios

Pictured above (from a postcard you can buy when you visit) is Formula Sound's special mock-up audio mixing console in situ in the Production Control room at the Granada Studio Tours complex in Manchester. Formula Sound also supplied the Theatre sound system, which comprises a 12 channel PM-80 mixer, 2 HH VX450 power amps, 2 HH VX200 power amps, 1 Formula Sound SE219 dual 19 band system equaliser, Beyer M400 microphones, 2 Teac cassette players and equipment rack with full patching facilities.

Four Tannoy P100 enclosures are flown in a central cluster over the stage. Foldback to stage was provided by 2 Tannoy Cougar wedge-shaped monitors. Control room monitoring was covered by JBL Control 1 loudspeakers. All the equipment was supplied by Formula Sound prior to the official opening of the Granada Studios last autumn.

Since that time, Formula have supplied sound systems to cover the background effects in the mock House of Commons set and the Giants Room, both systems comprising tape players and JBL Control 1's. The company has also recently supplied a portable trolley, which houses an 8 channel PM-80 mixer, HH power amps, a Teac cassette player, connection panel and space for a VCR machine. This is used in conjunction with a portable system incorporating JBL 4612 speakers and a fixed speaker system of Control 5 speakers in the Bonded foyer.

## FIRE-POLISHED OPTICAL GLASS ELEMENTS

### FOR DISCO, THEATRE & DISPLAY LIGHTING

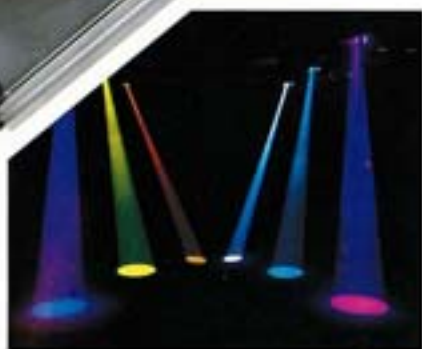
- SENSIBLE PRICES
- STANDARD PRODUCT LIST
- LOW TOOL COSTS
- DESIGN FLEXIBILITY



English Glass  
Technical Glass Components

English Glass Company  
Bodsworth Road  
Lancaster LA1 1JG  
England

Telephone: (0525) 871271  
Telex: 34442  
Fax: (0525) 212277



www.claypaky.com

# GOLDEN SCAN. The absolute winner!

- Extremely reliable! No servo motors! Stepper motors only!!!
- Superbly sophisticated
- Completely computer controlled
- Beautifully designed
- Fantastic, ultra-rapid stroboscopic effects
- Colour change: six dichroic filters
- Three gobo patterns
- Remote-controlled iris
- Standard or wide-angle lens
- Lamp: HMI 575 - very high brightness - 49.000 flux/lm. (Version HMI 1.200 - 110.000 flux/lm).

**This is a Clay Paky challenge! Should you find a better product... Buy it!!!**



**PULSAR** Pulsar Light of Cambridge  
Henley Road, Cambridge, CB1 3EA - Tel. 0223/66798 - Tx 81697

**CLAY PAKY** s.r.l.  
PROJECTORS AND LIGHT EFFECTS FOR DISCOTHEQUES  
Via Pascoli, 1 - PEDRENGO (Bergamo) Italy - Telefono 035/663965  
Tx 301589 - 301032 BG EXP1 MBOX CLAY - Fax Italy - (0)35-665976

**Sound Equipment Rental and Sales**  
including the 'Hackney Cab' speaker system  
and Yamaha PM 3000 mixing desk

**Sound Design and Engineering**  
**Specialist Radio Mic Applications**

West Works Telephone: 01-986 6111  
Chalgrove Road Telex: 265871 Attn: D05 2220  
London E9 6PB E-Mail: Hardware-UK



## PEOPLE



Clive Bradbury.



Graham Anderson.



Daryl Vaughan.

Exopus Limited have announced the appointment of **Clive Bradbury** as joint managing director. Formerly sales and marketing director of H4 Electronics, most recently he was in charge of sales and marketing for Celestion's pro-audio products.

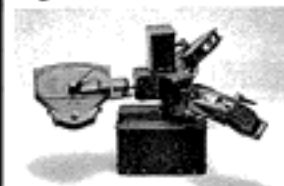
**Graham Anderson**, formerly managing director of Samuelson Lighting Ltd., has joined lighting equipment rental company AFM Lighting Limited to support its planned expansion into the TV and film markets.

Vari-Lite Europe Limited recently appointed **Daryl Vaughan**, formerly client liaison director at Samuelson Lighting, to the new post of head of promotion, with special responsibility for the TV and trade show sectors. The appointment coincides with Vari-Lite's planned expansion into Europe via authorised sub-distributors.

Audio Equipment Ltd. has announced that managing director **Barry Phillips** is shortly to leave the UK to establish a new distribution organisation throughout North America.

**John Watt** has left Central Television where he was head of lighting to pursue a freelance career in lighting direction, design and consultancy. He was until recently chairman of the Society of Television Lighting Directors and formerly with YTV.

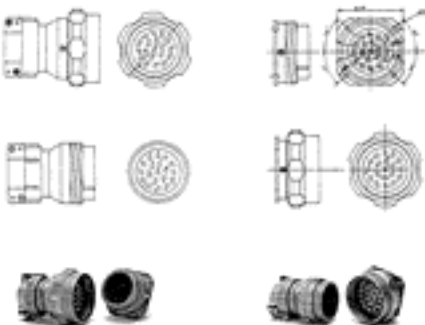
**NEW DISCO/EFFECT  
LIGHT GOOD QUALITY  
AND PRICE  
FREE VIDEO TAPE !**



**KUPO CO., LTD.**  
P. O. BOX 28-265  
Taipei Taiwan  
TELEX: 26295 KUPO  
FAX: 886-2-8341006



## 19 PIN CONNECTOR



**SPECIFICATION:**  
19 PIN CONNECTOR  
20AMP MAX. CONTACTS  
24K GOLD PLATE PIN (MALE & FEAMLE)  
HIGH QUALITY PLATE ALUMINIUM HOUSING  
SOCAPEX, COMPATIBLE



## SALE POINTS U.K.

IMPORTER

**Pulsar Light of Cambridge**  
Henley Road, Cambridge, CB1 3EA  
Tel. 0223/66798 - Tx 81697

SALE POINTS

### CEREBRUM LIGHTING

168 Chiltern Drive,  
SURBITON, SURREY KT5 8LS  
Tel: 01-390 0051

### AVITEC ELECTRONICS (UK) LTD

80/81 Wolsworth Road,  
HITCHIN, HERTS, SE4 9SX  
Tel. 0462-58961

### LUTON SOUND & LIGHTING

88 Wellington Street  
LUTON, LU1 5AA - Tel. 0582-411733

### BATMINK GLASTONBURY WAREHOUSE

Silver Street  
GLASTONBURY, SOMERSET, BA16 8BT  
Tel. 0458-33186

### DIAL SOUND & LIGHTING

Wharfedale Road  
EUROWAY TRADING ESTATE  
BRADFORD, BD4 6SG  
Tel. 0274-651600

### STARDREAM LTD

Party House  
MOWBRAY DRIVE, BLACKPOOL, FY3 7JR  
Tel. 0253-302602

### SOUND ELECTRONICS

201/215 Jesmond Road  
NEWCASTLE UPON TYNE, NE2 1LA  
Tel. 0912-814248

### NIGHT FLIGHT SOUND & LIGHTING

Torwood  
BOWLING, GLASGOW, G60 5AB  
Tel. 0389-79261

### DISCO LAB

86, Dungannon Road  
COALISLAND, CO. TYRONE, N.I.  
Tel. 08687-40237

### LIGHTING DIMENSIONS

Unit 15A, Parkmore Ind. Est.  
LONGMILE ROAD, DUBLIN 12, EIRE  
Tel. 0001-520677

### WM REYNOLDS LTD

Raphoe CO DONEGAL, EIRE  
Tel. 010-353-74-45179

### CLAY PAKY LTD

Via G. Pascoli, 1 - 24066 PEDRENGO (Bergamo) Italy  
Tel. 035/663965 - Fax: (0)35/665976  
Tlx. 301589 - 301032 BG EXP1 MBOX: CLAY



# ***Crystal Scan:*** ***the absolute No.2***



Computer BBC



Modulator IV



Control desk



Computer Control



Extremely reliable! No servo motors! Stepper motors only!!!  Superbly sophisticated  Completely computer controlled  Beautifully designed  Fantastic, ultra-rapid stroboscopic effects  Colours change: six dichroic filters  Standard or wide-angle lens  Manual optional attachments include beam reducers, iris diaphragm and gobo holder  Controls systems By means of controllers with analogue signal 0-10 V or via computer with digital signal RS 232/423  Lamp: (version 36 V - 400 W - Flux/lm 14500 / SN 500-440 W - Flux/lm 26000 / HMI 575-575 W - Flux/lm 49000 / HMI 1200-1200 W - Flux/lm 110.000).

***Seen the Golden Scan?***  
***Crystal Scan reaches the venues happy to settle for a close second.***



**PULSAR** Pulsar Light of Cambridge  
Henley Road, Cambridge, CB1 3EA - Tel. 0223/66798 - Tx 81697

**CLAY PAKY** srl  
PROJECTORS AND LIGHT EFFECTS FOR DISCOTHEQUES  
Via Pascoli, 1 - PEDRENGO (Bergamo) Italy - Telefono 035/663965  
Tx.301589 - 301032 BG EXP 1 MBGR. CLAY - Fax Italy - (035-665976)

Did you know  
that Coemar special  
effects lighting  
equipment is now  
available for

## TRADE HIRE

throughout the U.K.  
& Ireland?

For further information  
please contact Mike Wood on  
**(0604) 499331**



W. B. Lighting Ltd.,  
4 Tenter Road,  
Moulton Park Industrial Estate,  
Northampton NN3 1PZ  
Tel: (0604) 499331  
Telex: 31230  
Fax: (0604) 499446

# Designer Lighting for the Concept Musical

Just opened at London's Piccadilly Theatre, 'Metropolis' has already picked up rave reviews for its design and technical excitements. Julian Williams talked to lighting designer David Hersey during rehearsals.

If you were asked to put the name to a lighting man who exclusively designs stage lighting for a living, works on several productions at once, has his work in performance in many theatres at the same time all around the globe, and who made the gobo into a successful and refined product in the UK, you would most likely know who he is.

When you walk into David Hersey's new Vauxhall-based offices in London, you are immediately aware of considerable activity, with figures weaving in and out of a micro-network of office booths within a plush new blue/grey decor. Running above, from one end to the other, a central catwalk connects his personal office to the fray, adjoined to which are the demonstration and meeting areas.

David Hersey's current LD achievement is similarly set amongst machinery, with catwalks above, walkways in and out of gleaming pipes with puffing steam and drive shaft cogs. Taking up all the available space on a minimal stage, it inevitably requires careful illumination from the now usual non-

conventional lighting positions. Hersey's much credited lighting for 'Metropolis', which opened at the Piccadilly Theatre in London, in February, brings him back to the West End again, with a commercial production to add to the long-running *Cats*, *Les Miserables* and *Starlight Express*.

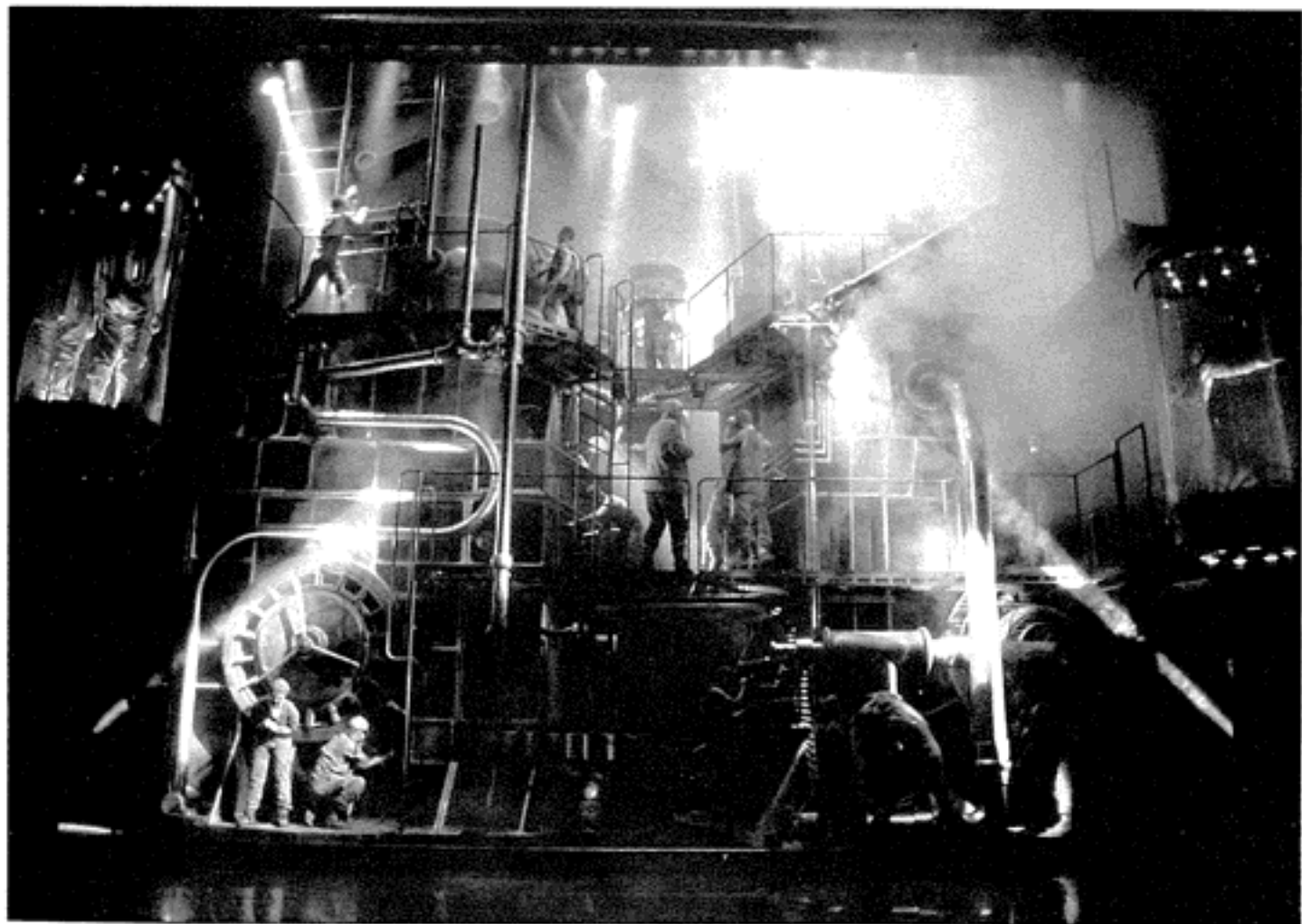
Keeping organised is the lighting designer's biggest problem, so when David Hersey lights a show these days, he takes his desk with him into the dress circle, complete with two Mac micros. Organisation is essential with the documentation required, and when shows are transferring and repeating in various parts of the world. As he told me: "If you don't do your homework and plot it immediately the show opens, it's too late. You never know when a show will pop up again."

During the long hours of the weeks he spends at the production desk of a show, he may have to work on several projects at the same time. During one of my visits to discuss his work on *Metropolis*, I had to wait my turn to interrupt his concentration, a situation which, to those who have worked with him,

will be very familiar.

During a pause in the technical procedures, he would be viewing his Mac screen, mousing some adjustments to the design of his multi rig for *Carmen* due in the summer, coupled with the interruption of a telephone call from an LD who is realising his design for the imminent opening of a production of *Cats* in Paris. When told by the director that no more lights are necessary for this particular *Metropolis* rehearsal for an hour, he works with his assistant to update the schedules of equipment for yet another show. There is a repeat production of *Happgood* in the US to deal with, and in between times, people from his office consult him on administrative questions.

Though *Metropolis* opened to mixed reviews, unusually, at a time when it is being said that the era of the 'high-tech' set is over, the critics raved about the 'astounding' and 'breathtaking' sets of Ralph Koltai, which themselves contain the drama. Albeit, this spectacular 'state-of-the-art' type presentation is in stark contrast to the original black



The machine room in the depths of *Metropolis*.



The Master of Metropolis' protégé-robot, Futura, personifying Maria, with a child from the workforce.



Stephen, John Freeman's son, surveying Metropolis for the real Maria.



A dance routine opens the second act, in Club of my Sons, where a giant mirror disc reflects the illuminated changing floor patterns.



The obliteration of Futura lying in the embers of the Furnace.



David Hersey takes his office with him into rehearsals for Metropolis.

and white Fritz Lang film of 1927.

With this in mind, I asked David Hersey to comment on how 'Metropolis' had turned out for him. He replied modestly: "It's actually turned out quite well and there's not that much there! Although it's a pretty interesting piece of work."

I asked him how he approaches the design for a show. "No matter what I do, my work is in response to what is going on, on stage. When it works really well is when it works on stage. I have a really hard time lighting something that's not good. When the director and actors are working well together, the work speaks for itself practically. You watch rehearsals and they know what they are doing. You respond to it and it becomes very clear what you have to do." I asked if he spent much time at the rehearsal stage. "I like to be there the minute they get to run anything," he said.

As much of David Hersey's work is repeated in many parts of the world, I asked how he managed to work on several shows at the same time. "Once a show goes to, say, America, it gets documented in a 'very grown up' kind of way, which is what we're trying to do now," he explained. "If the show is to move, you have to have a couple of people working on it whose job it is to document it." As in America, there will always be two or three assistants who are capable of moving it around.

David Hersey's DHA operation was conceived from ideas as a by-product of his lighting work. It started by marketing some of his special lighting equipment and effects from the shows he had lit. "Gradually it has grown up over the years into a manageable sized company," he explained. "I didn't even believe I could earn a living in lighting designing and needed something to fall back

on. There's a huge element of luck, I have been exceptionally fortunate in the number of commercially successful shows I've been able to do."

David Hersey is one of the UK's busiest lighting designers, regularly covering both legit and operatic productions along with 'big time' musicals, whilst maintaining his own company. He has clocked up more than 200 productions for many major theatre, opera and ballet companies, and I asked how he kept it all together.

"I am very blessed with the wonderful back-up staff I have. I've got real support here which is invaluable. I couldn't move around without it," he responded.

Getting back to Metropolis, David Hersey explained that using the Starlite moving light HTI source proved to be very interesting. "It was partly just to get some variety to be able to use these units, not as rock and roll 'wizz-



The laboratory where Futura is created, with Warren, the scientist, the Master and his assistant.

bang' units, but just for sheer quality of light-intense pockets of light. The colour of the HTI I found very interesting. It's a weapon I would like to see as part of the kit and you could always have a dozen on a show without it being impossible, as it's very expensive. It gives dynamism when you want it, which is very specific. They still have a way to go in terms of being 'smooth and subtle' and require a sympathetic operator in a theatrical situation," he explained.

His use of the Starlite units came into its own in the Destruction scene, when immense power and effect was required.

For this show, as is so often the case, Hersey was given the choice of a moving light rig or a conventional one. Eventually he was fortunate in having some good deals which allowed him, in the end, to have both!

Being one of the first in this country to utilise the moving light source on a commercial production in the original Starlight Express, David Hersey took a big chance in the use of the moving light, before such systems as the Vari\*Lite and Starlite were evaluated and took off. He admitted to early problems in the control of the drives and the plottings of these instruments, though they did achieve good colour control and movement.

Back to Metropolis again, he explained that positioning the rig was a problem. He had to use 'non-conventional' positions because of the tight fit in a small stage area. With the huge size of the 'Machines', which each weigh at least six tons, and The Module, which is lowered over the centre of the stage, there is no room for spot bars! There are illuminated transparent tubular elevator lifts, traversing up and down the prosc. and mounted on each side of the stage, thus restricting the use of the prosc. boom positions. This was overcome by a truss which was built onto the audience side of the prosc. with 'box towers' on both sides.

Nearly 350 dimmer channels are in use, controlled from a Strand Galaxy board in a circle box. Many of these are used to control the hardware associated with a luminaire, such as the light curtains' motors, and the 15 Pancans in use over the Machines. These require four channels a unit to cover the pan, tilt and colour, as well as the light output. Also, almost 50 dimmers are used to control the architectural strip lighting and red neon in the transparent patterned floor which comes into its own in a dance routine where a flown mirror disc reflects the floor image vertically into the audiences eye lines.

In addition to his 'trade-marked' lighting, with much traditional use of the gobo, light curtain, dark corners and 'brilliant white light', David Hersey was also called upon, in the latter period of the production, to additionally simulate the special effects, such as in the Laboratory scene. A laser was used as a symbolic effect when a robot named Futura is transformed into Maria, along with (3000 joule) strobe beacons, a mirrorball, fibre optics, neon and Arcline.

DHA animated disc effects are used when Maria is brought back to life by the scientist in the Laboratory scene. Careful simulation of progressive movement is created by variable speed rotators, revolving two gobos in opposite directions from above.

Also, the convincing process of the robot Futura burning in the oven took some planning to get right - in order to create several phases of heat, with a fire burning inside a furnace, including extract fan control. It is all controlled from the board for precision and continuity.

Currently, David Hersey's busy schedule in-



The Module.

all show photography Clive Barde.

cludes a varied selection of theatre work. He is preparing 'Happgood' in LA, 'Albert Herring' at the Opera House and 'Ghetto' at the National. A mega production of 'Carmen' at Earl's Court is being planned along with 'Miss Saigon' at the Lane. In between times, he will be working on a major project in Las Vegas.

David Hersey, who is a serious user of the 'toys' of stage lighting, has won various awards including two Tonys. He said simply that Metropolis was fun to do, just playing with the lights! What he predicts will be a 'show' is due to appear later in the year.

And that one will have a helicopter! . . .

### Metropolis

First performance at the Piccadilly Theatre, London on March 8th 1989.

Produced by Michael White and Metropolis Theatrical Productions Ltd.

Production designed by Ralph Koltai  
Lighting designed by David Hersey

Sound designed by Bobby Aitken for Autograph  
Directed by Jerome Savary  
Production electrician Bill Ward-Roper  
Lighting designer's assistant Alan Burrett

### Equipment:

Lighting equipment hire: Luff Light & Sound  
Gobos, animation discs, special effects, etc.: DHA  
Laser: Laser Creations  
Starlite units and control system: Tasco Communications Ltd.

For details of  
Advertising  
ring John Offord  
on 0323 642639

10	STABILITY
11	STABILITY
12	STABILITY
13	STABILITY
14	STABILITY
15	STABILITY
16	STABILITY
17	STABILITY
18	STABILITY
19	STABILITY
20	STABILITY
21	STABILITY
22	STABILITY
23	STABILITY
24	STABILITY
25	STABILITY
26	STABILITY
27	STABILITY
28	STABILITY
29	STABILITY
30	STABILITY
31	STABILITY
32	STABILITY
33	STABILITY
34	STABILITY
35	STABILITY
36	STABILITY
37	STABILITY
38	STABILITY
39	STABILITY
40	STABILITY
41	STABILITY
42	STABILITY
43	STABILITY
44	STABILITY
45	STABILITY
46	STABILITY
47	STABILITY
48	STABILITY
49	STABILITY
50	STABILITY
51	STABILITY
52	STABILITY
53	STABILITY
54	STABILITY
55	STABILITY
56	STABILITY
57	STABILITY
58	STABILITY
59	STABILITY
60	STABILITY
61	STABILITY
62	STABILITY
63	STABILITY
64	STABILITY
65	STABILITY
66	STABILITY
67	STABILITY
68	STABILITY
69	STABILITY
70	STABILITY
71	STABILITY
72	STABILITY
73	STABILITY
74	STABILITY
75	STABILITY
76	STABILITY
77	STABILITY
78	STABILITY
79	STABILITY
80	STABILITY
81	STABILITY
82	STABILITY
83	STABILITY
84	STABILITY
85	STABILITY
86	STABILITY
87	STABILITY
88	STABILITY
89	STABILITY
90	STABILITY
91	STABILITY
92	STABILITY
93	STABILITY
94	STABILITY
95	STABILITY
96	STABILITY
97	STABILITY
98	STABILITY
99	STABILITY
100	STABILITY

LAB EFFECTS

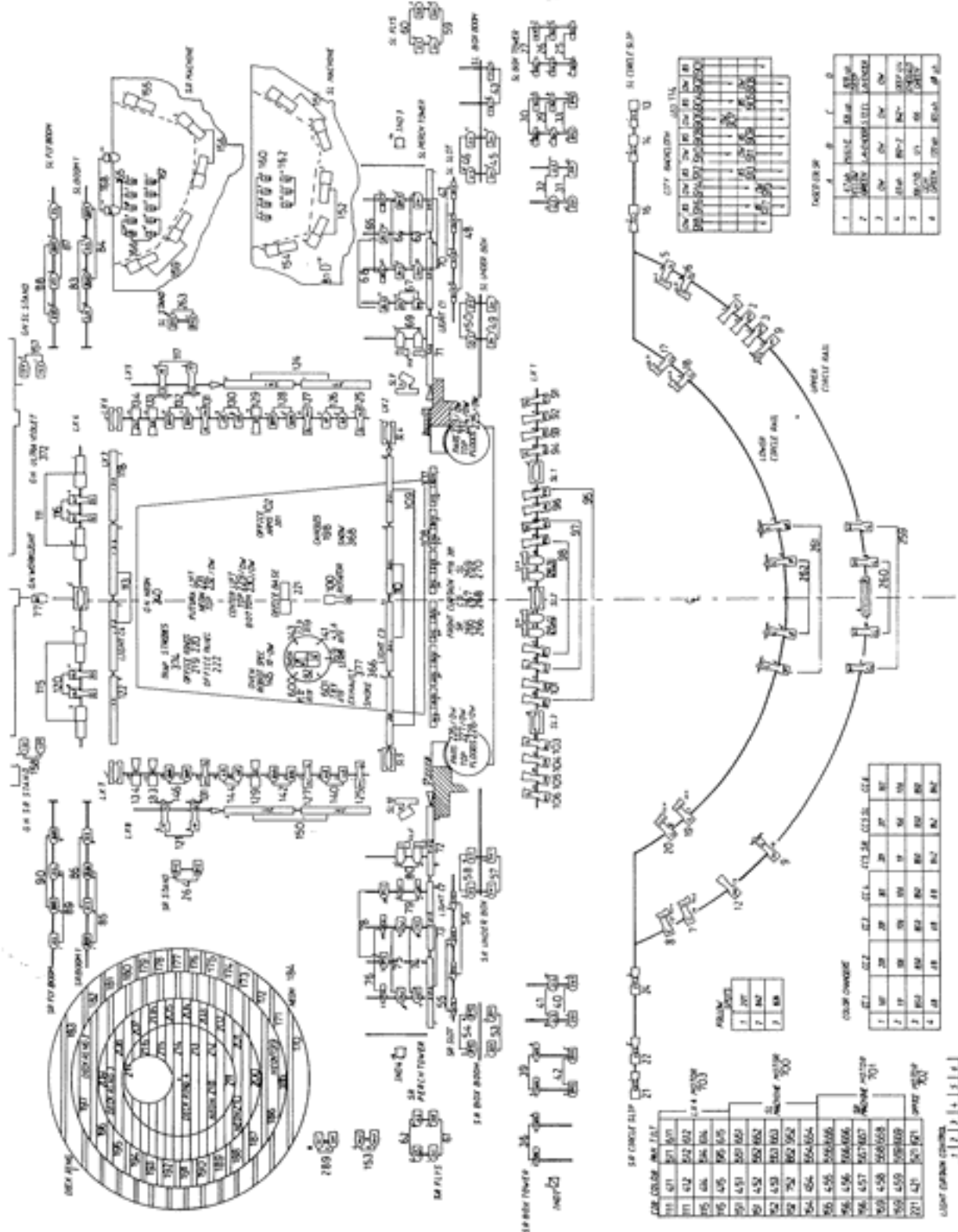
101	236	ALLOY 30	300
102	237	ALLOY 30	300
103	238	ALLOY 30	300
104	239	ALLOY 30	300
105	240	ALLOY 30	300
106	241	ALLOY 30	300
107	242	ALLOY 30	300
108	243	ALLOY 30	300
109	244	ALLOY 30	300
110	245	ALLOY 30	300
111	246	ALLOY 30	300
112	247	ALLOY 30	300
113	248	ALLOY 30	300
114	249	ALLOY 30	300
115	250	ALLOY 30	300
116	251	ALLOY 30	300
117	252	ALLOY 30	300
118	253	ALLOY 30	300
119	254	ALLOY 30	300
120	255	ALLOY 30	300
121	256	ALLOY 30	300
122	257	ALLOY 30	300
123	258	ALLOY 30	300
124	259	ALLOY 30	300
125	260	ALLOY 30	300
126	261	ALLOY 30	300
127	262	ALLOY 30	300
128	263	ALLOY 30	300
129	264	ALLOY 30	300
130	265	ALLOY 30	300

**DIA**

DEFENSE INTELLIGENCE AGENCY

METROPOLIS

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000





The real Maria returns to the workforce after her ordeal in the Laboratory.



Maria 'comes back to life' after being captured for the robot life-like copy by Futura. Note revolving gobo effects.



In the module with the Master, scientist, and Futura.



# NEW SPRING COLORS

**B**right blues, saturated violets, mellow ambers, more...

New Diffusion materials — in a perfect variety of weights and textures.

Write or call The Great American Market for your NEW swatchbook and the name of a dealer near you.

GamColor — fresh, clean color for every lighting application.

# GamColor



Deep dyed polyester color filters

GamColor is made in U.S.A.

**THE GREAT AMERICAN MARKET**

826 N. COLE AVENUE HOLLYWOOD CA 90038  
213/461-0200 • TWX 910 494 1233 • FAX 213/461-4308

**GAMCOLOR IS AVAILABLE FROM THESE FINE PROFESSIONAL DEALERS:**

**U.K.:** AC Lighting, Tel. 0494 39076, FAX 0494 461024. **SWITZERLAND:** Zilz Concerts AG, Tel. 071-22 75 45, FAX 071-22 75 44.  
**HOLLAND:** Corne-Light, Tel. 02 090 9898, FAX 02 095 1881. Flashlight, Tel. 030-62 58 14, FAX 030-62 59 34.  
**WEST GERMANY:** Alfred Haussmann Intl. Ltd., Tel. 4940 660896, FAX 4940 665071. Zilz Concerts GmbH, Tel. 221-58 30 31, FAX 221-58 43 99.  
**AUSTRALIA:** Concert Lighting Systems, Tel. 03-529-5019, FAX 03-529-2629. **HONG KONG:** Engineering Impact, Tel. 3-7110222, FAX 3-7642543. **NEW ZEALAND:** Spotlight Systems, Tel. 64 9-789354, FAX 64 9-780542.

# Le Maitre: Going to the Market

Le Maitre are well known for fireworks, pyrotechnics and smoke machines. They are also well known for Mick McManus (in particular) and Rick Wilson. John Offord asked them about their recent acquisitions and plans for group expansion.

In one of L+S's first company profiles, just three years ago, Roger St. Pierre talked to the 'Bright Sparks in Croydon', his apt pseudonym for the directors and all the other clever people at Le Maitre down on Purley Way. So why go back so soon for Le Maitre part two?

Well, a lot can happen within this industry in that space of time, and it generally does. And in Le Maitre's case developments have roused some nice little lines of industry takeover chat, like 'who's next on their shopping list?' and so on. So there seemed to be a reason or two and a good story line to follow up.

First, the facts, carrying on from part one, circa Spring 1986. A founder of the company with Rick Wilson in 1977, Martin Blake left during 1986, and the board of Le Maitre Holdings now consists of Rick Wilson, Mick McManus, Harold Berlinski, Dick Carrier and Rumi Sethna. The holding company has six wholly owned subsidiaries, apart from other interests, namely: Le Maitre Lighting and Effects, Le Maitre Hire and Professional Services based at their Purley Way shop, LSD (Light and Sound Distribution), Le Maitre Fireworks based in Peterborough, and two recently purchased companies, Icelectrics Limited and Jivelight Limited.

The first four have been established within the group for some time, but it was the recent acquisition of Icelectrics and Jivelight that set the industry tongues wagging. How many more were on the secret Mick McManus/Rick Wilson shopping list?

I asked Mick McManus. "We just envisage one or two more acquisitions of companies that fall within our programme, and from then on we will go from there," he said. "1990, as far as we are concerned, is our launch year. We intend to take ourselves to

the unlisted securities market, and then maybe on to a full listing. Who knows what will happen from there?"

Obviously this situation hasn't arisen by accident. What was the background? How had it come about?

"By design, of course. We saw what we could offer the industry, and we felt that we could strengthen ourselves within the group by getting the necessary parts that we needed. Icelectrics was the first company targeted, and Jivelight was an obvious one because they are a very tight outfit and very profitable. We are now consolidating and getting our act together, but if somebody came along to us and said, 'listen, we are interested in being taken over', then if the chemistry was right, we would obviously be interested."

In fact, Le Maitre's acquisition schemes aren't that recent, and the plans now being pursued were laid down back in 1986. "We got our accountant interested," explained Mick McManus, "and he told us that the only way forward was by acquisition of good companies. If the rest of the industry thinks we've been rushing in, it's a total fallacy. It has all been a very considered situation, and we have only acquired two companies, and only talked to two others."

"We have no great visions of taking the world over. Everybody may be saying it, but it's a bit like Terry Venables at Spurs. He hasn't actually bought many players, but when he does anything it gets shouted about in a blaze of publicity. We look at things, in our view, very sensibly. Icelectrics we saw as a natural vehicle for certain aspects of our operations and Jivelight fills a gap that LSD wasn't filling. There is no point in us making a bid for anything else if they are doing the same or something similar to us. We have

excellent capabilities in house, it's as simple as that."

"Right now we are consolidating," continued Mick McManus. "We're getting Icelectrics in order and consolidating Jivelight. It takes time and a real chunk out of your capitalisation. Another six months and we will have turned things around very nicely."

Mick McManus has his roots in the discotheque side of the business, and is probably the nearest thing our industry has to the theatres' actor manager. He's an extrovert; have no doubt. But the out-front image is the one usually on show at exhibitions, and can mislead people. In the office the same fire-power still comes over, but now it's down to commerce, pure and simple.

"You obviously like the entertainment business," I suggested as a sort of nonsensical lead-in. "I love the game," he responded. "I draw a really nice salary and I live quite well out of it. Maybe I should be paying Le Maitre! It's a fantastic business, and I'm lucky to be here. I know Rick has the same opinion, and so do most people I know in the industry."

## Le Maitre: the components and the people

Le Maitre Lighting is the company responsible for pyrotechnic distribution, and all smoke-related products. It is headed up by Rodney Clark. "I have the highest regard for him," said Mick McManus. "Peter Brooks (Zero 88 Lighting) once said to me that if we ever got fed up with Rodney to let him know! To me, that is testimony alone. He's not highly excitable like Rick or me - he's calm and collected. He gives everything a lot of thought and he's a great ambassador. He's worth his weight in gold to us."

Le Maitre Hire and Professional Services lives a couple of blocks away at 354 Purley Way. "It came about initially so that we could keep people away from the factory, and started out as a retail operation," explained Mick McManus, "but the hire business has also come out of it."

LSD or Light and Sound Distribution, is run by another industry extrovert, Dick Carrier. "I don't know what it is, but the man has something," said McManus. "He certainly has energy, and he's unparalleled in that quarter! The company deals with peoples' needs as they arise. It's a matter of holding the right stock at the right time, and it's nearly all British manufactured equipment."

To a lot of people, fireworks are Le Maitre, and Le Maitre is fireworks. "The operation based at Peterborough was born out of necessity," explained Mick McManus. "We didn't want a firework factory. It was expensive to set up, and it was unprofitable in its early years. The suppliers we were using couldn't keep pace with either our requirements or our pricing policy."

"So it came about because we couldn't rely on other people producing the goods we wanted. Since Wilf Scott joined the company after Martin Blake's departure we have



Typical Le Maitre: fireworks at Wembley for Nelson Mandela.

followed this direction. In my opinion Wilf is the best firework designer in the country, and nowadays we don't look on firework displays as just around November 5th. We are looking at product launches, special days throughout the year, Independence days, and so on. We looked at filling the diary right across the year.

"On top of that, and on the back of Wilf's expertise, we have become much more of a production company in many respects. We've looked after product launches for Estée Lauder, Porsche Cars, and many others. We are 'in the frame', and can offer advice, and we have an artistic staff. Having said that, it's not easy. But Wilf Scott makes it a lot easier, as does Rodney Clarke. They work closely together for obvious reasons, although they're running two different companies.

"Icelectrics has been slow to get off the ground," continued Mick McManus. "Technology has grown up, and I don't feel Ice products have grown up fast enough to compete. Basically, we intend to turn it into more of an electronics company. We will get rid of products that don't fit into the programme, and also introduce new products. We have taken on Mick Galloway, and I think he will be a big strength. He understands our philosophy. We won't turn it round overnight, but I'm convinced we'll soon get it into shape."

"Jivelight was a natural progression as far as we were concerned. It slotted nicely in with LSD, simple because it had the market we didn't have - the overseas connection, most particularly with France and Spain. It means we now have an arm of the organisation to link in overseas imports. The only change will be where Jivelight sold a smoke machine that wasn't manufactured by us, in the future they will."

#### Le Maitre: the products

The first products manufactured by Le Maitre were the Pyroflash system and the Peasouper machine, in 1977. They then ventured into mirror balls, and on to the famous Bullet Beam, scanning pinspots and finally fully rotational pinspots. "Everyone jumped on the bandwagon," said Rick Wilson, "and we make none of them now apart from the Pyroflash and Peasouper."

I asked Rick Wilson how particular pro-



Rumi Sethna and Dick Carrier.



Theatrical pyrotechnics for a car launch at Blackpool Opera House.

ducts had come about. "They usually just develop from what people want. There are very few really new products - most of them are variations on an original idea. Martin Blake's Peasouper was one of the very few innovative new ideas, and the Pyroflash system was another. The actual block of the Minimist was yet another - and we were stupid not to patent it! It was a completely revolutionary design, and all our current machines are still based on that old design, although we've altered and improved it since then."

Technical director of Lighting and Effects is Dave Rofley, and R&D is his full brief. "He stepped into the void left by Martin Blake, and we've developed a lot of products since then," explained Rick Wilson.

Le Maitre's latest major product was the launch of their LSX 'low smoke' machine at the 1988 PLASA Show at Olympia. "The LSX was born out of a dissatisfaction with dry ice," said Rick Wilson. "Although there is nothing to replace dry ice as an effect, it is obviously messy and has a lot of problems you could do without. I think the first time we saw anything of the like was when Avitec had a machine on their stand at Rimini about four or five years ago. It was the germ of an idea. If you cool ordinary smoke from an ordinary smoke machine enough, it will give you a fairly good effect. The trick was that you need to cool an awful lot of smoke very quickly and it needs to be maintained."

"We beavered away at it, and we even wondered whether it was a viable concept because of the amount of money it was going to cost. With the advent of various small machines in Italy we became interested,



Rick Wilson.



Dave Rofley.



Mick McManus.



Another shipment of specially designed smoke machines being prepared for an industrial order. Much of Le Maitre's business is destined for areas outside the entertainment industry.

but we also didn't feel there was a market for an enormous machine. We felt there would be a big market for a portable machine for theatres and discotheques and for touring bands if it could be done right.

"So we went on a crash development programme, and I have to say we were extremely lucky. Sometimes you can develop something very quickly, and sometimes it takes for ever. The LSX just fell into place, very, very, simply. It came beautifully right very quickly, all inside about six weeks. It is already better than it was, and a mark two version is now in full production. If anybody wants one, they can have one.

"Sales of the LSX are phenomenal, and without exception everyone has said what a fabulous machine it is. It's selling exactly where we targeted it: to clubs and theatres, hire companies and television, including the BBC. We never envisaged it as a great big machine that would be the be all and end all machine. It was aimed at the transportable market, and at a sensible price."

#### Le Maitre: sales

"We're distributor only, and we've never compromised on that," detailed Rick Wilson. "We started off that way in 1977, and decided that we would always back our distributors to the hilt. We've always felt that the distributor network is an extremely important part of the discotheque industry because they are the people who do most of



The latest: Le Maitre's LSX low smoke converter.

the work as far as marketing your product is concerned. Unless our distributors let us down then that's how it's likely to stay."

"We have to keep an eye on what goes on, where, and how," he explained. Rodney Clarke and Dick Carrier look after themselves, and Dave Winfield of Jivelight is excellent at what he does. Icelectrics will need some massaging, and we want to bring it to the forefront of the electronics field. Its products are fabulous, but because of their design they tend to be difficult to manufacture. So we've already redesigned many of the products, and where they were analogue they are now digital. They will be a lot easier to put together, and I think it will be a whole different ball game.

"With fireworks, our two main spheres are the production of theatrical pyrotechnics and the displays themselves plus many small peripheral shows like car launches. The turnover in this area has actually doubled this year. It's big stuff!

"We will have a couple of product surprises at the PLASA Show, but our long term aspirations may well see us move away from the lighting and sound industry. We have very big plans in Europe. We are allied to the biggest firework company on the Continent, and there is talk at the moment of great things happening. We might even start manufacturing in Europe very shortly, not only theatrical pyrotechnics, but also on the fireworks side. Finalisation of this is very close."

#### Viewing the Industry

Mick McManus: "I think the industry has changed dramatically, and I often have this conversation. There are more professional people about now, and I also think the field has broadened. We are now talking about leisure orientated entertainment, and that's what it's all about. We hope to fill the needs of the industry as they are required, and as fashions change - just like anyone else."

Rick Wilson: "My own views have modified substantially. When I was on the PLASA committee I was at loggerheads with it, but I would say that I was wrong and they were right. I would agree that the way forward was the way that they have progressed. They've aimed more 'up market' and more towards the theatre market. In the old days Hugh Leslie (then of Donmar) used to come round to the PLASA exhibition and he told me he came for a good laugh. Now he comes round because he needs to. That's the big difference. Speaking mainly for the main manufacturers, we are now accepted, whereas we used to be the laughing stock of the theatre industry. And we are certainly here to stay."



Le Maitre's Smoke Processor.

#### More big ideas

The Le Maitre group as good as doubled its turnover last year, and reckons it can do the same again in 1989. And that will see the annual figures jump well over the £5m mark.

Jumps of this level have to be boosted by special efforts, and no secret is made of moves around the world to hype up the activity. "It's no secret that Rick and I went to the States last year to look for a bigger market share," said Mick McManus. "In the past it hasn't bothered us, because we haven't been able to make enough for the British and European markets. Now we are able to produce more, we can come up with the sort of numbers America requires."

And there are moves to set up manufacturing on the African continent which will have a link with the agriculture industry. "We have got various patented devices on the smoke side that will also fit very well into the agricultural scene," said Rick Wilson.

Back to the UK, I asked Rick Wilson if they intended pulling all their operations together under one roof. "In the short term, the bits will stay as they are, but I'm sure in the long term we'll get most of them together," he explained. "But we haven't finished yet. There are a couple of further avenues we want to explore, and then we will consolidate. After that, away we go, and hopefully to the market."

"Yes, next year, late next year, depending on the economic climate, and providing our accountant tells us the figures are stacking up," confirmed Mick McManus. "But we can only do it if we're performing."



Mortar tubes being prepared for a firework display order.

# TAKE A CLOSER LOOK...

And see, up close, the advances that make Vari-Lite the leader in automated lighting system technology. Advances incorporated in the Series 200™ - a system that redefines automated lighting.

The Series 200 is an extension of Vari-Lite's fully integrated technology. A more powerful and sophisticated console has been created. And two new "intelligent" luminaires - the VL2 spot and the VL3 wash.

## VL2™ SPOT LUMINAIRE

Take a closer look... at the VL2's Dichro-Wheel™ colour changing system. It can access any of over 120 different hues from soft pastels to deeply saturated pure colours in a fraction of a second.

The unique internal "pattern/gobo" system has 9 standard patterns and, with the exclusive Vacu-Dep™ process, you can create your own designs.

With exceptional control, the VL2's precision iris provides a continuously variable beam diameter and the beam can be focused to a soft or hard edge.

## VL3™ WASH LUMINAIRE

Take a closer look... at the VL3's Dichro-Tune™ colour tuning system. Gradually dial through the spectrum to achieve the precise colour you desire - a virtually unlimited palette.

With a custom-designed tungsten source, the VL3 provides you with spreads ranging from a collimated ACL-type beam to the coverage of an MFL PAR lamp. When diffused by an internal set of glass panels, the VL3 produces a Fresnel-like beam with an extremely soft edge.

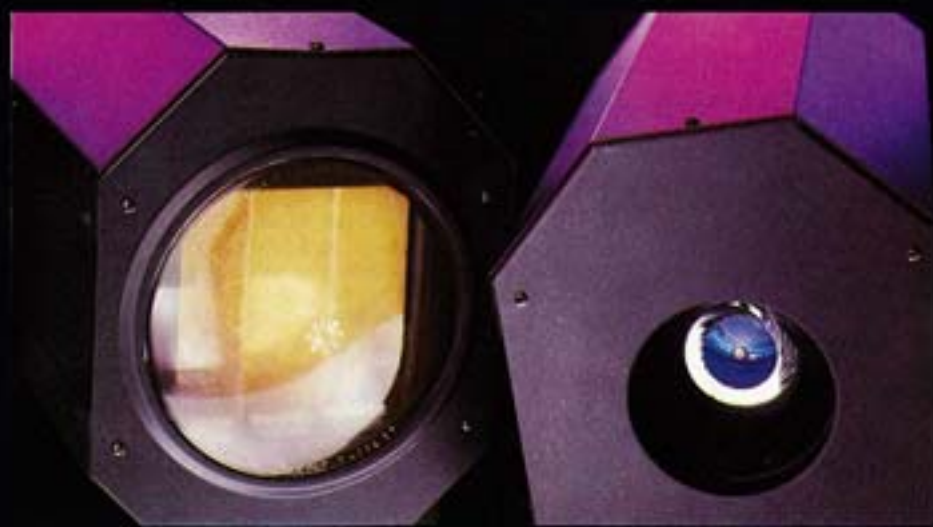
## ARTISAN™ CONTROL CONSOLE

Take a closer look... the luminaires are linked to the Artisan control console with a bi-directional high-speed digital communication link that provides instantaneous response to manual operation or pre-programmed cues. The console can access 1000 individual instruments and 80 group presets.

And the location and operational status of each luminaire is displayed on the built-in touch-sensitive screen.

So take a closer look... at our brochure giving full details of the VARI-LITE Series 200™ system, available from the address below.

Alternatively, call Daryl Vaughan or David March and ask for a demonstration.



## VARI-LITE™

The Automated Lighting Company

Vari-Lite Europe Limited,  
112 Cricklewood Lane,  
London NW2 2DP.

Telephone: (01) 450 8955  
Fax: (01) 450 7921

Dallas, London, Los Angeles, Madrid, New York,  
Orlando, Paris, Sydney, Tokyo, Toronto.

VARI-LITE™ products and services are protected by one or more of the following patents and other pending patent applications worldwide:  
U.S. Pat. Nos. 4,709,311 4,701,833 4,688,161 4,602,301 4,392,187  
4,095,139 Australian Pat. No. 546,433 Canadian Pat. No.  
1,181,795 European Pat. No. 0,060,068 German Pat. No.  
P. 32 74 291.6-08 and Spanish Pat. No. 548,328.  
Made under U.S. Patent Number 3,845,351.

Specifications are subject to change without notice.

# Fiesta Launch to Lights and Movement

Ford's UK dealers witnessed a special feature of the largest number of Vari\*Lite's ever run off a single console when they attended the recent Fiesta launch at the new London Arena in Docklands. John Offord retrieved the background story from Richard Knight.

I'd heard a few rumours about this 'show', but it was a private event and kept under wraps. And you couldn't buy a ticket. But it had all the elements of many major public entertainment events: lead names at the helm, massive expenditure and all the latest in lighting, rigging, sound and co-ordination of control. And all for a seven minute 'reveal' that would send Ford's dealers back to their showrooms singing the praises of the presentation and, hopefully, the car too.

What really set this show apart from so many others was the fact that everything moved. No less than 16 10 metre square screens and 192 Vari\*Lite's were called into spontaneous action - the biggest rig this side of Genesis.

The presentation was the concept of Gary Withers of Imagination and lighting designer Andrew Bridge. Withers' proposal was that the show should be based around automated lighting, instead of adding it in as 'window dressing'. "The lighting came first, both in terms of design and budget," said the man behind the programming of the Vari\*Lite's, Richard Knight.

He now takes up the story. "Vari\*Lite's were created essentially for the rock and roll industry, prior to this show their use in industrial theatre was more or less limited to 16 or 32. The request to Vari-Lite Europe for 192 caused an international stir. Some parts even had to be flown from their HQ in Dallas.

"Vari-Lite's management were very helpful," continued Richard Knight and supplied an excellent crew headed by Tom Nulty. "One outcome of this particular show is the possibility of 'Nulty' becoming a household name (if you live in a house full of lighting trigs), but more of that later."

The other key player was Steve Colley of Arrow Rigging, who was responsible for the moving screens.

The design, as developed by Gary Withers and Andrew Bridge, centred around the sequential movement of 16 screens, in four rows of four, suspended from 7.5 tonnes of trussing from the auditorium ceiling. Twelve of the screens carried 16 Vari\*Lite's attached to the trussing and run off one Artisan control console. In addition, some 400 custom

gobos were specified to produce additional effects. Each screen was moved by four motors controlled by a unique computer system, developed by Steve Colley. In all, some 82 motors were used throughout the show, either alone or in sync.

It turned out that it wasn't only the brief that was unique. This was to be the first show in the new London Arena in Docklands. In fact, the venue was not due to be completed until April and the get-in date was continually postponed. What's more, the Vari\*Lite's had to be hung in a very special way; in-between the cords of the Teletage trussing so that the upper enclosure did not project beyond the cords, thus spoiling the lines of the frames. The solution was Knult plates.

Knult plates were spontaneously invented by Tom Nulty and Richard Knight (hence Nulty's possible chance at lighting immortality). "We used a pair on each Vari\*Lite," explained Knight, "thus producing a four point hang. This was important as the screens were to perform a great deal of movement." In response to further questioning, he added



Ford's UK dealers witness the biggest-ever 'private' Vari\*Lite show at the new London Arena in Docklands.



192 Vari'lites, 400 custom gobos, and 16 10 metre square screens helped launch the latest Ford Fiesta.



that it's also possible to use Knult plates as singles and hang the 'lites' diamond fashion between truss cords, producing a two point hang.

Rehearsals for the show were held over four days in an aerodrome hanger in Essex, complete with cars and transporters. Richard Knight remembers it as a "cold, but exciting" experience, during which a menu of Vari\*Lite 'looks' were programmed for later adaptation on site. "You can imagine my relief," he said, "when we finally got on site and I found that what I had pre-programmed actually worked."

On-site, the programming continued, aided and abetted by Andrew Bridge who was otherwise occupied lighting Andrew Lloyd Webber's new musical 'Aspects of Love'.

"Andy was invaluable," continued Richard Knight, "both as another pair of eyes and as an inspiration. He could move around and see the effects from the audience's viewpoint, and has a complete vernacular of onomatopaeic terms to describe tempii and effects. Terms like: 'big & bold', 'chunker', 'breaks into twinkles' and 'flyover whoosh!'"

Working to recorded music, the pre-programmed sequences and looks were broken into 'big bold space users', 'screen looks' and 'car/transporter looks'. Knight worked in rotation with Steve Colley and his rigging team from Arrow. "When I programme, they stop working on the rig. When I break after three hours, they do tech work up in the air," he explained.

He has a great deal of respect for the riggers, particularly J.T. and Ian, the Vari\*Lite riggers known collectively as 'The Dangerous Brothers'. They performed all the high altitude work changing bulbs and replacing broken units.



The new London Arena in Docklands.

"It was very much a team effort, and everybody was pleased with the end result, although I must admit that one of my fondest memories was when the techs broke into wild cheering one night around 3.00 am when the screens and Lites performed a really great sequence," Knight said.

"The end result was enjoyed and applauded by everyone who saw the show. The Vari\*Lites proved to be more reliable than conventional lighting systems, and from the point both of reliability and effectiveness, the choice of them by Withers and Bridge was heartily endorsed. They were not the entire show: there was neon on the back wall, assorted aircraft lights and upstage dazzlers - they all looked terrific. But they were the add-ons, the window dressing. The 'show' was the automated lites and the moving screens," emphasised Richard Knight.

#### Equipment

212 VL2 Vari\*Lite luminaires consisting of 192 active and 20 spares.

3 consoles. One active, one back-up, one for on-site technical workshop.

8 150' console control cables

5 ACS racks

3 bucking transformers

3 test racks

28 repeater boxes

59 100' trunk runs

13 60' trunk runs

2 50' trunk runs

37 30' trunk runs

33 50' lamp runs

101 20' lamp runs

101 12' lamp runs

89 6' lamp runs

3 100' 3 phase mains runs

3 30' 3 phase mains runs

8 10' 3 phase mains runs

3 200 amp 3 phase mains disconnects

Vari\*Lite Europe personnel:

Operator/consultant: Richard Knight

Crew chief: Tom Nulty

Full time crew: Aiden McCabe, Mark Payne,

John Teahan, Marco Van Beek.

Additional crew: Mark Cunniffe, Bruce Ramus.

$$C = \pi d$$

(Archimedes: 250 B.C.)

$$I = E/R$$

(Ohm: 1827 A.D.)

$$F = M.a$$

(Newton: 1687 A.D.)

$$E = mc^2$$

(Einstein: 1905 A.D.)

led to new possibilities in life

$$4 \times 2 = 1u$$

(Citronic: 1988 A.D.)

can do the same for you.



## SPX5-41

the revolutionary new Dual Four-way State Variable Crossover  
from

**CITRONIC**

**PRO AUDIO**

SUCCESS BREEDING SUCCESS

Citronic Limited  
Bowerhill, Melksham SN12 6UB  
Wiltshire, England  
Telephone (0225) 705600  
Telex 444131  
Fax (0225) 709639



# Travelling Light.



## QM 500-TD

Avolites QM 500-TD, the theatre board with an impeccable pedigree.

Developed from the original "QM" the benchmark for touring boards, combining state of the art technology with craftsman construction.

Technology you can trust from the winner of the "Performance Award for Lighting Equipment Manufacturer of the Year, 1988"

Avolites QM 500-TD "the" theatre board.

**AVOLITES PRODUCTION COMPANY LTD.**  
184 Park Avenue, London NW10 7XL.  
Telephone: 01-965 8522. Telex: 24652 SPOTOW G.  
Fax: 01-965 0290.



**AVOLITES INC.**  
9700 Owensmouth Avenue, Unit B, Chatsworth CA 91311.  
Tel: (818) 709 1116. EMAIL IMC 506 OLLETT-US.  
Fax: (818) 709 0153.

# Avolites America

John Offord visits Avolites Inc. in California and gets an industry view from the 'other side'. President Clive Standley and vice-president Dick Ollett provide most of the words.

Based in West London, Avolites Production Co. Ltd. established its US operation in 1983. It's small and tucked away at Chatsworth, one of the far-flung bits of suburban growth on the north-west edge of the Los Angeles conurbation. But its size has nothing to do with its degree of importance to the Avolites set-up. Apart from the all-important servicing of its clients in the States, and an involvement with the heart of the touring music industry, Avolites Inc. USA plays a part when it comes to making decisions on the design and production of control equipment.

President of the US operation is Clive Standley, and vice-president, Dick Ollett. Together with a small and skilled staff they have the job of keeping the Avo flag flying at the sharp end of American operation and linking the UK with much of the origination of major concert touring productions that set out from the States on their world-wide junkets.

Clive Standley has been in LA for four years. I asked him about the differences he had encountered within the industry, when comparing the US to the UK.

"I found that there's an attitude of 'we're all in the entertainment industry together' much more than I ever noticed in England. Here there are certain organisations that are a forum for the expression of ideas and for the laying down of certain industry standards. Up to the time I left England, I certainly never knew anything that existed on that level over there. Companies here are certainly more friendly with each other and there is much more inter-company business. On the other hand, there are also companies undercutting each other, which we hear about because we're in the middle! However, I found people very friendly and there is certainly a noticeable freshness of approach."

Dick Ollett left the UK 10 years ago and went to America as 'one of the first wave of European roadies'. "I found myself in a situation over here where the equipment was anything but portable and the US market suddenly went wild for the English way of doing things. By now they have absorbed this methodology with a high degree of panache, in so far as you can go into almost any town in the States to obtain equipment, both for theatre and rock and roll. De facto standards that have evolved have been kept to and far more so than in England, although I admit I haven't been back for some time. I find it strange that a country as large and diverse as this should be as concentrated in its efforts and direction, rather than England."

Carrying on with comparisons, I asked how British lighting crews rate. Dick Ollett: "British crews are used over here because you can pay nickels and dimes for them before they realise the rate of pay over here is really far more!" Clive Standley (on a more serious note): "The fact is that English crews have to deal with a lot more variety than their American counterparts. American crews are used to a more standardised range of equipment, whereas British crews are more adaptable, having had to cope with touring such places as Spain and Italy, for instance." Dick Ollett: "A good soldier with a bit of European touring experience is a very



Clive Standley (left) and Dick Ollett.

valuable person over here."

"I think the basis for the 'English invasion' is the fact that because the environment in which you have to tour in England is so demanding, systems developed to cater for that demand," explained Clive Standley. "Obviously, if it works well in Europe, then it's going to work extremely well in America. In the small section of the entertainment business that is the music touring industry, British equipment such as Avolites control and Thomas trussing is used in a major way. However, US companies are now much more aware of the competition certainly having the same level of technology and they are now much more compatible than they ever were. We are fortunate in that now the industry standards have been set,

our equipment is one of those 'standards'."

But there are 'standards' and 'standards' and the sophisticated intermingling of equipment raises further questions.

Dick Ollett: "Nowadays people think of equipment less in terms of European or US equipment, but more in terms of Socapex connections or DMX. DMX originated over here and Socapex over there. As time goes by we'll see much more integration of systems."

Clive Standley: "Interlinking is a very important factor. Over here we're very aware of the need and organisations such as the USITT (United States Institute for Theatre Technology) are getting to grips with it and various sections of the industry are in collusion. This is something I can't really see hap-

pening in England. Although the USITT is basically a theatre-orientated organisation, it is making a great effort to include other areas such as ours and to get feedback from us. There is a great sense of the 'entertainment community' over here and we are at least working towards some sort of sensible technology, rather than everyone going off in their own direction.

"We are now a much bigger part of the overall industry and the industry itself is becoming a lot less fragmented. There is now much more crossover between rock and roll, theatre, television and video and we are being asked to interface with a variety of different things that we were never asked to interface with before, because we are now becoming much more recognised."

Dick Ollett: "Thinking way back to early rock and roll, a lot of our best talent has obviously moved on with the times. The sort of person who was following rock and roll tours around is now very often doing much bigger things - working for CBS or on Broadway, for instance. But the best that came from rock and roll, he obviously takes with him, so this has also given some cross-fertilisation. Which area is pulling which I've no idea. Maybe it's a bit of both. Certainly things are getting much more standardised right across the industry."

Clive Standley: "I think it's very important we don't get USITT standards and ABTT standards. They must start working together because we are so closely linked and the industry is now international."

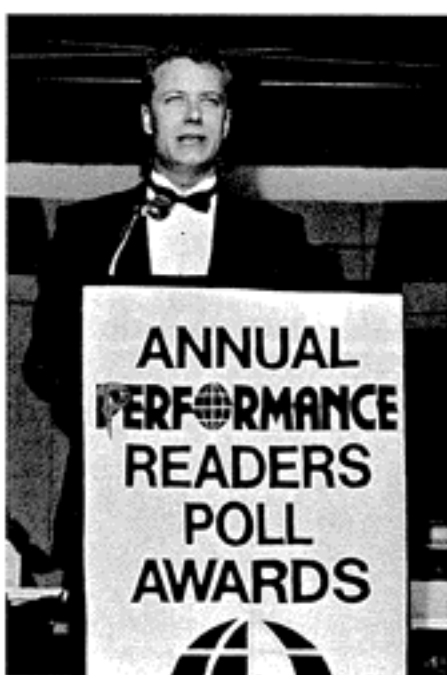
Dick Ollett: "That's right. The industry is world-wide. Nobody in their right minds would want to use three different systems (say) for the Far East, Europe and America when they could use the same. Obviously it's neither practical nor cost effective."

I asked Clive Standley about some of the specific problems that the company encounters and the key areas that need addressing.

"The biggest one is obviously the control interface problem," he explained. "We have traditionally used analogue control in our industry and now we're moving onto digital protocols. At the moment we continually have to deal with: 'is it analogue, is it AMX 192 or is it DMX 512?'. We have just been asked to do a job for a TV awards show at Disney Studios in Burbank utilising analogue controlled Gel Jet colour changers which we are supplying, and they want to use a Light Palette console which outputs AMX 192. They are considering converting AMX 192 to DMX 512 to analogue to get things together. There is obviously something wrong here!"

"But this comes up constantly and the reason for it is that manufacturers are initiating their own standards. It may have been OK five years ago, but it isn't OK any more. Nowadays, users are much more aware of all the different varieties of control and they don't want to be involved in interfacing AMX, DMX or whatever."

Dick Ollett: "I think an attempt has been to increase the level of abstraction. In the old days it was, for example, multicore, which might be 30 ways which controlled 30 dimmers. Now I think the concept is to control dimmers. It doesn't matter if it goes down a multicore dimmer or not and DMX fits rather well into that. It has meant that people can look at a show conceptually. The original DMX can handle lighting and colour changers, but moving lights it certainly can't. The resolution of DMX is not enough. There are always ways to expand it to suit, but technical considerations are possibly such



February 1989: Clive Standley receives the Performance magazine's 1988 readers' poll award for lighting manufacturer of the year.

photo: Bob George

that we might have to use a different media transmission because the band-width on DMX is not wide enough. But, as long as we keep to the abstractions, and as long as standards develop, and develop the abstract concept and not a specific one, then I think we'll keep going in the right direction.

The next development will possibly be midi, which is coming along big. I know a lot of people have trouble working out why an intrinsically sound-orientated signal should be applied to a lighting console, but a lot of performers and lighting designers don't see this differentiation. They see information which is within time and it has relevance. We've yet to come to full agreement on how that's going to be done. Put two technicians together and it is going to take a long time! But I think it's probably going to happen.

"Nobody should have to push a button if the information to push that button is already intrinsic in the information we have. In many situations there exists an SMPTE or midi signal. If you're trying to isolate a kick drum, for instance, so that you can turn your red light on, and the guy at the other end has to remember to push his finger at the right time, sometimes he gets it wrong. But with a relevant signal doing it, it would always be in synchronisation."

Clive Standley: "I think the same thing is happening now in the world of moving lights. Different manufacturers are using their own protocols again, and certainly the time is going to come when we are going to need to interface with each other. There just seems to be a syndrome where many people in new technology will work in their own direction. It is bound to be better if we could talk to each other."

"We're in the business of control and there are people out there who are making fixtures that need to be far more closely related to control than they ever did in the past. At the moment we have to use various different black boxes to interface with each other. It would obviously make better sense to have this all incorporated into the one unit. But we can't do that until we agree on standards!"

Back to Avolites itself, the company is known world-wide for its control systems

and most directly with the music touring industry. These days however, and particularly in America, there are many other areas where products can be sold.

Clive Standley: "We are moving into many different areas, particularly at the smaller end of the market. There is a huge market here in schools, colleges and churches. They're all very aware of the sophisticated technology that exists and are very keen to be a part of it. Many churches over here are financially strong and some of them have huge 'auditoriums' with multi-million dollar facilities that they are very interested in making the most of. They are often presenting their 'message' in an 'entertaining' fashion. In fact, some of them have a new production every week."

"At the top end, we are moving much more into the television area. We've just supplied CBS in Los Angeles with a system of colour changers, for instance, and we are also actively promoting our new Precept series of control consoles. They are proving extremely popular and again offering the traditional Avolites 'hands on' approach coupled with sophisticated memory technology. Precept is proving extremely popular with everybody from religious institutions through to smaller scale self-funded rock bands."

Avolites' success at the top end of the touring business is a fact that can almost go by without getting a mention, with the QM appearing on many an equipment list in the 'On Tour' section of this magazine, for instance. It's a story that runs and runs.

One of their unsung heroes is the Rolacue series of memory consoles, designed for small to medium applications. "It has been very successful in the middle section of the market where many different operators are going to have to use it," explains Clive Standley. "It comes into its own where production companies have a great variety of different operators who need to be able to learn a board very quickly, yet still require the power that Rolacue can offer. You can get results without having to invest a great deal of money or spend too much time reading manuals. I can teach anybody everything about a Rolacue in around 15 minutes."

Dick Ollett: "A lot of production companies have a Rolacue for when they split up a system into a smaller production. It's easier to have a Rolacue for some situations, rather than a QM, both physically and weight-wise. Also you can expect to get a good result in the minimum amount of time."

Avolites' new compact QM that offers 180 channels of DMX 512 output control complete with soft patch and integral screen is aimed at the less 'hands on' areas such as theatre and industrial presentations. "Alternatively," said Dick Ollett "the lighting designer can design a show in rehearsal and then take the show on the road on the 180 saving a lot of time, money and space. It also protects the integrity of the show, with the operator far less likely to bring up the wrong lights. It's a nice little board, for sure."

The Avolites operation at Chatsworth is a sales, service and rental operation. Clive Standley: "Obviously service has always been of utmost importance to Avolites and its customers, and with most of our business concerned with the touring industry, it's very important that we are able to jump on any problems extremely quickly if they happen to arise. We've recently opened a new service operation on the East Coast at Newark in New Jersey and this has improved our



Avolites' QM 500-TD theatre board.

ability in this direction considerably.

"We have a rental stock of every item we sell, basically as a buffer for the production companies, our major clients. So, if they wish to do a larger tour than they have the facilities to provide for, they can rely on us to be able to back them up. We also handle from here a part of the advertising campaign and the creative work involved. I also handle sales for both North and South America and it is from the South that we are now beginning to get some very good enquiries. I think that the large multi-talent shows that have been there recently have had the effect of promoting our equipment for us."

Another operation carried out at Chatsworth is the testing of all equipment shipped in from England. "Obviously, all new

equipment is tested extensively in the UK, but the hardest part of its life is often its flight from England to Los Angeles by common carrier," said Clive Standley. "The hardest part of any equipment's life is often its first two months of existence," joined in Dick Ollett. "Any flaws usually show up in the first part of the equipment's life and we are ideally placed to check out the products after their journey from the UK."

As reported in our February issue, Avolites was the subject of a recent buy-out, and the company is now a member of the UEI plc group. I wondered how this might affect the US operation and asked Clive Standley for his comments.

"We're very excited about the recent changes and developments and I am sure

our joining forces with the UEI group, who are world-leading high technology companies, will give us a very solid base on which to progress. There is also the potential for some exciting crossover technology from such people as Quantel and Solid State Logic, for instance. It goes without saying that we will be continuing to produce more and more high technology products for the industry in the future."

## FIBRE OPTIC Lighting

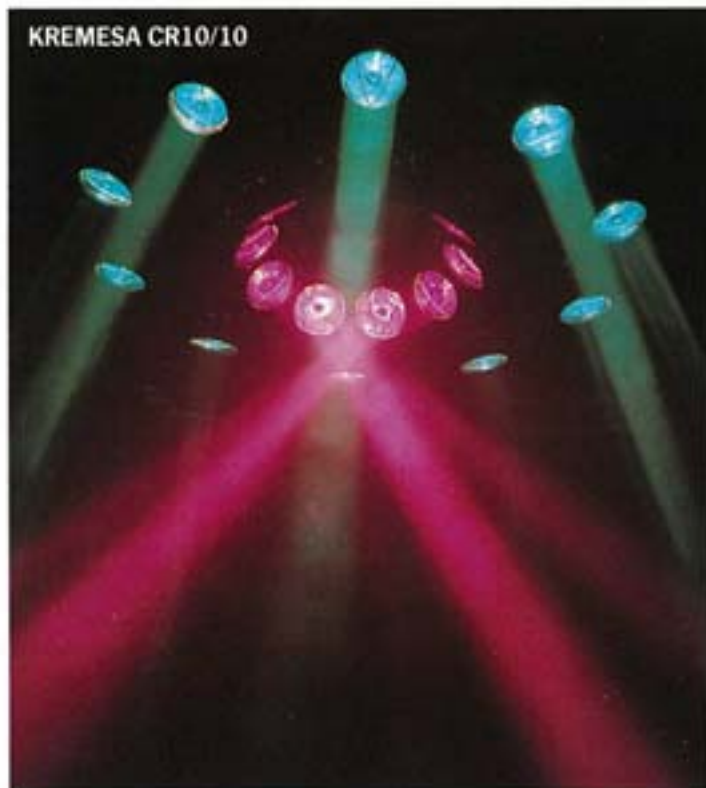
We are specialist manufacturers & suppliers of all fibre optic lighting materials - Glass & Polymer fibre harnesses - light sources - colour changers - edge light interfaces - theatre curtain washers - spot, ball & bullet lenses - optic conduit - Par Startube & Star Rod - ceiling fittings.

Our Chiswick showroom has examples of our products, also mirrors, starcloths and displays from subtle backgrounds to fibre optic fireworks. Leaflets available. (visitors by appointment)

Trade & Export call PAUL RAYMOND  
Par Opti Projects Ltd.  
Unit 9 The Bell Ind. Est.  
Cunnington St.  
Chiswick Park  
London W4 5EP  
Tel: 01-995 5179



Tlx. 93371E PAROP G  
Fax: 01-994 1102



KREMESA CR10/10

*"One should always  
circulate at  
parties."*

**The Kremesa CR10/10 moves in the best circles, and is a welcome guest at the most illustrious venues. Join the exclusive set and order your 10/10 Limited Edition now!**

**Specifications:** Contra-directional spin, twin lamp circuits (each with 10 x GE4405 12v 30w PAR 36 lamps). Lamp heads fully adjustable.

**Diameter:** 1220mm, Drop: 480mm

**The Kremesa CR10/10 Limited Edition - available exclusively from Avitec and their distributors.**

# AVITEC

THE ATMOSPHERE CREATORS

The AVITEC Group - Europe's largest club lighting & sound equipment distributors.

AVITEC Electronics (UK) Limited, 80/81 Walsworth Road, Hitchin, Herts SG4 9SX. Tel: Hitchin (0462) 58961. Fax: (0462) 31019. Tlx 825682 AVITEC G.

# THE CAPTIVE AUDIENCE TECHNIQUE

— by AVITEC —

**Step One** Call the friendly Avitec team or your local installer to discuss your Dotscanner installation.

**Step Two** Switch on and captivate your dancers with the unique cage of beams.

**Step Three** Rotate the beams, select a colour and scan around the room.

**Step Four** Watch the stunned reaction and enjoy one of the most cost effective moving beam effects on the market.

## NISEL DOTSCANNER

### SPECIFICATIONS:

Ceiling mounting. Length 800mm. 36v 400w quartz lamp.

Scanned mirror moves approximately 45 degrees in x and y axis, independently addressable.

Semaphore colour change (four colours or white).

Dot gobo effect beam with approximately 30 degree spread.

Beam rotation automatic with inbuilt microphone or variable speed via controller included.

240 volt operation requires nine switched channels for independent control of all functions. Additional units will run in synchrony by simply paralleling the switched channels.

# AVITEC

THE ATMOSPHERE CREATORS

The AVITEC Group — Europe's largest club lighting & sound equipment distributors.

AVITEC Electronics (UK) Limited, 80/81 Watworth Road, Hitchin, Herts SG4 9SX. Tel: Hitchin (0462) 58961. Fax: (0462) 31019. Tlx: 825482 AVITEC G.



*We've all been  
waiting for  
something  
new...*



Cogent light is like no disco or concert light technology you've ever seen • ColorRay™ cogent light creates sharp, dazzling high-resolution beams that

*Cogent light-  
a totally  
new  
technology...*

*move with laser-like speed and change colour in an instant • It creates breath-taking planes, cones, tunnels, pulsating waves, and sheets of luminosity that shimmer and*

# ColorRay™

from



## lightfactor sales

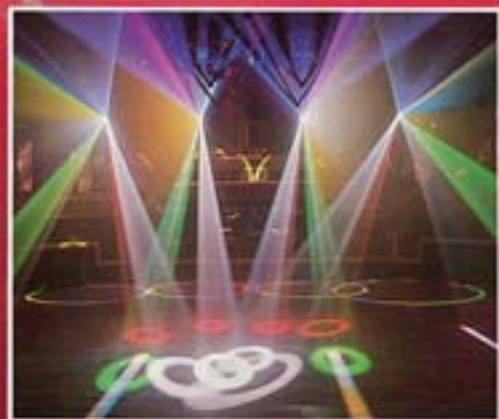
*Where your ideas take shape*



Director and Beamer

...ce floor with concert-quality brilliance and excitement. And because new Cogent light is created by state-of-the-art fiberoptic technology instead of lasers, you can





Multiple beam and scanned effects



In four colours — plus white



safely immerse any audience in spectacular ColorRay effects — for a unique pulse-pounding experience. • Yet a versatile ColorRay coherent light system with compu

*Shouldn't you  
experience it  
before your  
competitors?*

ColorRay™ by LaserMedia Inc.

available from



**lightfactor sales**

*Where your ideas take shape*

11 Fairway Drive, Fairway Trading Estate  
Greenford, Middlesex, UB6 8PW

Telephone: 01-575 5566  
Fax: 01-575 8678



color, software, light source and four remote high speed optical beamers actually costs less than conventional lighting. ColorRay. The first cogent light.

# PLASA News

## Major Success for PLASA's first Legal Seminar

With society's increasing orientation towards leisure, the last decade has also witnessed a remarkable growth in the lighting and sound industry. And everyone expects this trend to continue, possibly with an added stimulus by the approach of '1992'. In our industry, many of what were once one- or two-man operations have developed to become major manufacturing and sales operations.

However, in some cases, business practices have stayed the same, without any significant alterations taking place. With this in mind, and also looking to the future, PLASA asked Alex Carter-Silk, solicitor and legal adviser to the Association, to conduct a legal seminar at which members of the industry could be informed about and discuss current law and practice.

Any ambivalence about the usefulness of such a seminar was soon dispelled, as Alex Carter-Silk took to the floor and commenced what turned out to be a most thought-provoking and informative day.

The morning session kicked off with a discussion on the terms of offer and acceptance in the formation of a contract. As Alex Carter-Silk made clear, it is imperative that companies understand the minutiae of contractual law, otherwise they may find themselves in a loss-making contract that is legally binding, despite protestations that the consequences may be disastrous.

One important point that emerged from the



PLASA's first legal seminar in action: legal adviser Alex Carter-Silk (centre) with barristers Stephen Zollner (left) and Christopher Makey.

early stages of the seminar was that companies should always endeavour to pitch the formality of the contract against the possible commercial loss, and in every instance make both the terms of offer and the terms of acceptance clear. This being

done, there should be no problems. Every step taken to remove an ambiguity can save thousands in costs. 90 per cent of lawyer's cases are a result of inconsistencies being allowed to remain during the drawing up of a contract, Alex Carter-Silk

### LIGHTING EQUIPMENT SALE (All Fully Reconditioned)

- 40 x Par 64 Lanterns - £10.00 per lantern
- 2 x Ultra Arc Follow Spots c/w stand, lamp, etc. - £850.00 ea.
- 2 x 60 way Avo Dimmer Racks - £9,000.00 ea.
- 1 x 72 way Alderham Rack - £1,500.00
- 2 x 60 way Alderham Desks - Matrix, Chase, etc. - £850.00 ea.
- 1 x 48 way Alderham Desk - Matrix, etc. - £500.00

Contact Rob Samuel at R.D.E. on 01 403 1300  
for further details

### Laser Grafix

Are one of the key players worldwide in the state of the art laser display.

**We have immediate vacancies for:**

Experienced Lighting Technicians who enjoy extensive travel throughout the UK and overseas.

We will train you in this exciting new industry as Laser Rigger/Operator technicians.

We offer highly attractive salary packages for people with drive and enthusiasm.

If you want an exciting career in 1989 contact:  
Sarah Wiseman, our Personnel Manager on  
(0763) 248846, or write enclosing a C.V., to:

Laser Grafix Limited,  
Unit 15, Orchard Road, Royston, Herts SG8 5HD

LASER GRAFIX - THE CREATIVE FORCE IN LASERS

### Electrician Supervisor + Despatch Supervisor

The successful applicants reporting to the Equipment Manager will be required to co-ordinate the running of existing and expanding departments.

These challenging positions which offer career opportunities would suit applicants with knowledge of theatrical lighting or related industry. Previous supervisory experience is desirable.

An attractive remuneration package will be offered to the successful applicants.

Please forward a detailed C.V. to:

**The Equipment Manager**  
Theatre Projects Services Ltd.  
8-34 Blundell Street,  
LONDON N7 9BW

AN EAGLE TRUST PLC COMPANY



THEATRE  
PROJECTS

**JANDS**

**ESP 24-36**  
LIGHTING CONTROL CONSOLE

*As creative as you are!*



- 24 or 36 channels with full manual facilities
- Up to 288 Level conscious Scenes in banks of 12
- Up to 12 Chasers, each with 1 to 24 steps
- Output Hold for swapping scene banks
- Easy to operate programming controls with display
- Analog and Digital Outputs

U.K. & EUROPE  
A.C. LIGHTING Ltd  
Unit 4, Spearmast Industrial Park,  
Lane End Road, SANDS,  
High Wycombe, Bucks HP12 4JG  
Ph (0494) 446000 Fax (0494) 46 1024

U.S. WEST COAST  
T.M.B. ASSOCIATES  
3416 W. Burbank Blvd  
Burbank, Ca 91505  
Ph (818) 842 9652 Fax (818) 842 1064

INTERNATIONAL  
DISTRIBUTOR ENQUIRIES  
JANDS ELECTRONICS Pty Ltd  
578 Princes Highway  
St Peters, NSW 2044 AUSTRALIA  
Ph 61-2-516 3622 Fax 61-2-517 1045



Alex Carter-Silk launches the legal seminar at the Crest Hotel, South Mimms.

informed the meeting.

As a means to illustrate the various pitfalls that can be strayed towards by those in business, the weekly law reports relating to the case of the M/S Aswan Engineering Establishment Co. v Lupidine Ltd were brought to the delegate's attention. The case study contained every problem that could possibly arise in contractual law. The spur for the law proceedings were plastic buckets that had melted on a dockside in Kuwait, spilling their valuable contents! The details of the case are too convoluted to mention here, but the action did provide a useful reference point from which to examine the law in relation to business contracts in general.

Following this, Christopher Makey, one of the barristers assisting at the seminar, went point by point through various sections of the 1979 Sale of Goods Act, the 1982 Supply of Goods and Services Act, the Unfair Contract Terms Act of 1977, and the 1967 Misrepresentation Act; though the process was somewhat lengthy it did serve to highlight some of the more complex areas of these Acts. Having established the groundwork, it was then possible to move on to the terms of the contract, their implications and how and when they apply.

Members in attendance were advised to always include the words 'subject to formal contract' in any correspondence entered into during the formulation of a contract. As Alex Carter-silk stressed, it is vital not to omit crucial terms from a contract, tender, quotation or similar documents. The rule is simple - attention to detail is one of the bywords for business satisfaction.

The lighting and sound industry is now pushing the boundaries of its operations ever further, and whereas misunderstood contracts may have been amicably rectified in the past, the guarantee that they will be so in the future no longer stands, believed Alex Carter-Silk. As the industry begins to embrace wider applications for the use of sound and lighting equipment, personal ties may become eroded, and the need for a thorough working knowledge of the law becomes that much more important.

Forewarned is forearmed, and the seminar progressed to a discussion of the varying forms of misrepresentation that can occur, and to what extent they can be considered fraudulent, negligent or even innocent.

The role of agents was next under the microscope and as Christopher Makey explained: 'When agents speak with forked tongue - lawyer take wigwag.' Wary of being evicted from their wigwags, the delegates, to a man, moved a little closer. Interest was considerably heightened as the seminar moved on to areas of dispute, and the appropriate time at which to involve a lawyer. At this point, the panel then outlined some of the ways in which companies, with the application of a little forethought, could defend themselves from possible attack.

The perils of going to court and all the accompanying unpleasantness of receivership and bankruptcy were also covered in detail. The costs of defending a claim, plus the hidden costs of spending a few days in court, should always be kept in mind, emphasised Stephen Zollner. When a company takes legal action, its chances of winning are based on a balance of probabilities - evidence, and as much as possible, is vital. The problem areas arise with claims between £10,000 and £50,000 where quite often the costs outweigh any advantage gained.

Stephen Zollner concluded the formal part of the seminar by examining liquidated damages, standard terms and conditions, and the role of the Trade Association as a potential resolver of disputes.

It would have been gratifying to have seen more companies represented at the seminar, nevertheless, a good cross-section of members were in attendance. Response to the seminar was excellent, and there was a general consensus that the issues tackled had been presented clearly, informatively and entertainingly. Even if the Association was referred to in one instance as PLASMA, it was totally in keeping with the informality of the day!

Many delegates felt that the provision of a legal seminar was a further step towards a more professional industry and it was clear that they also saw this as the type of service PLASMA should be providing for the industry. Particularly welcome was the time allocated for questions at the end of each session, where people were able to discuss areas of the law which had particular reference to their own line of business.

Though members might have arrived at 9am aware of only the tip of the iceberg on many legal matters, by 5pm they had had their heads ducked beneath the icy waters and examined a great deal of the background on contracts in particular, and hopefully there will be much less danger of future shipwrecks! As the original idea had been to take the day to day working knowledge of those in business and build on it, then the seminar more than served its purpose.

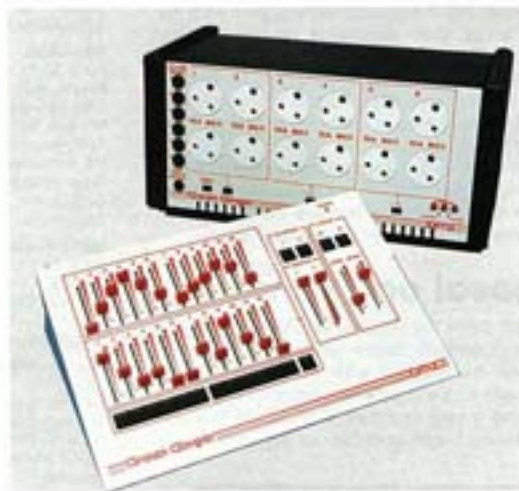
A great many ambiguities still remain and there is plenty of ground left uncovered that will no doubt provide the grist for future debates. The major revelation for one delegate had been, as he reflected resignedly, that 'justice' had possibly become an outmoded term in commerce.

Ruth Rossington

*new generation*

**Green Ginger**

*equipment for a new generation*



**DMX dimmers & desks**

*the new technology for control*



**Integral fader dimmer**

*for use with or without a separate control desk*

*stage lighting controls to highest safety standards*

*used by professionals*

**Lytamoda**

Lytamoda Limited — makers of Green Ginger

3 Dawson Road, Mount Farm, Milton Keynes MK1 1LH

telephone (0908) 644366

## PLASA Show Seminars: Programme Plans Take Shape

The first series of PLASA Show seminars looks set to provide a highly interesting programme, with subjects ranging from Moving Lights and Projection Techniques through to Touring Technology, and Club Design. A special seminar aimed at DJs will be held on the opening day of the Show (Sunday 10th September).

Each seminar will concentrate on a specific topic and will have a 'panel' format with invited participants opening the debate with papers on their specialist areas, then expanding on this foundation to develop a broader range of discussion. This will give delegates the opportunity to directly question some of the major names in the lighting, sound and installation industries, organiser Tim Chapman told L+S.

The seminars will have a truly international flavour with a number of overseas contributors taking the floor. A comprehensive list of confirmed speakers will appear in next month's issue.

## Proposal on Terms

A proposal from the recent PLASA legal seminar was that standard terms and conditions be established and lodged with the PLASA office. PLASA hopes that a charter covering all aspects of lighting and sound application will help towards the continuing professionalism of the industry.

# Exhibition Diary 1989

### SIEL 89

April 9-12, 1989.  
Porte de Versailles, Paris, France.  
Organised by Bernard Becker Promotion,  
161 Boulevard Lefebvre, 75015 Paris.  
Telephone: (1) 45.33.74.50

### Pub, Club and Leisure Show

April 11-13, 1989.  
Olympia 2, London.  
Angex Ltd., Europa House, St. Matthew Street,  
London SW1P 2JT.  
Telephone: 01-222 9341.

### SIB/MAGIS

April 10-13, 1989.  
Rimini, Italy.  
Ente Autonomo Fiera Di Rimini,  
PO Box 300, 47037 Rimini, Italy.  
Telephone: 0541782000.  
UK enquiries: PLASA general secretary,  
Tony Andrew, 7 Highlight House, St. Leonards Road,  
Eastbourne, East Sussex BN21 3JH.  
Telephone: (0323) 410335.

### USITT Conference & Stage Expo

April 12-15, 1989.  
Calgary, Canada.  
National Office: 330 West 42 Street, Suite 1702,  
New York, NY 10036.  
Telephone: (212) 563 5551.

### Epo Musica, Madrid

May 17-20, 1989.  
Madrid, Spain.  
Organised by IFEMA (Institution Ferial de Madrid),  
Avda de Portugal, s/n Casa de Campo,  
28011 Madrid T101.  
Telephone: 470 10 14.

### Audio Visual 89

May 8-11, 1989.  
Wembley Conference Centre, London.  
Organised by emap Maclaren Exhibitions Ltd.,  
840 Brighton Road, Purley, Surrey CR2 2BH.  
Telephone: 01-660 8008.  
Contact: David Copeman.

### Showlight 89

May 15-17, 1989.  
Hilversum Studios, Amsterdam, Holland.  
Organised by The National Illumination Committee CB  
in association with Netherlands Broadcasting Svs.,  
NOB, PR Department, Postbus 10, 1200 JB Hilversum,  
Netherlands.  
Contact: Maureen van Woudenberg.  
Telephone: 035-775115.

### ABTT Trade Show

May 18-20, 1989.  
Riverside Studios, Hammersmith, London.  
Enquiries: ABTT, 4 Great Pulteney Street, London  
W1R 3DF.  
Telephone: 01-434 3901.

### NOTT 89

May 28 - June 2  
Copenhagen, Denmark.  
Union of Theatre Technicians in Denmark  
Telephone: (1) 245808.

### APRS Show

June 7-9, 1989.  
Olympia 2, London.  
Enquiries: APRS, 163a High Street, Rickmansworth,  
Herts WD3 1AY.  
Telephone: (0923) 772907.

### Musika 89 Moscow

July 18-25, 1989.  
Enquiries: Glahé International Group Ltd.,  
Tel: (0787) 226086.  
(Also Tony Andrew, PLASA general secretary,  
0323 410335).

### PLASA Light & Sound Show '89

September 10-13, 1989.  
Olympia 2, London.  
Exhibition Organiser: David Street,  
3D Services, 10 Barley Mow Passage,  
London W4 4PH.  
Telephone: 01-994 6477.  
Association Enquiries: PLASA general secretary,  
Tony Andrew, 7 Highlight House, St. Leonards Rd.,  
Eastbourne, East Sussex BN21 3JH.  
Telephone: (0323) 410335.

### ABTT NORTH

October 26-28, 1989.  
Oldham College, Oldham.  
Enquiries: Mr D.W. Cusworth, 4a Merton Road,  
Handforth, Wilmslow, Cheshire SK9 3HB.  
Telephone: (0625) 523391.

### Lighting Dimensions International 89

November 17-19, 1989.  
Nashville, Tennessee.  
Enquiries: Patricia Mackay or Jackie Tien,  
Lighting Dimensions, 135 Fifth Avenue, New York,  
NY 10010, USA.  
Telephone: (212) 677 5997.

## New PLASA Members

### Kelsey Acoustics Ltd

28 Powis Terrace, London W11 1JH.  
Tel: 01-727 1046  
Fax: 01-243 0211  
Contact: Richard Vickers

### London Microphone Centre

Unit 10, Acton Vale Industrial Park,  
Cowley Road, London W3 7QE.  
Tel: 01-749 7887  
Fax: 01-749 9875  
Contact: Paul Hinkly

### Norman Gray, Chartered Designer

Failand House, 22 Newbridge Road,  
Bath, Avon BA1 3JZ.  
Tel: (0225) 312716  
Contact: Norman Gray

### Teledyne Acoustic Research

High Street, Houghton Regis, Dunstable,  
Bedfordshire LU5 5JQ.  
Tel: (0582) 867777  
Fax: (0582) 866627 Telex: 825467  
Contact: Simon Spears

### UL Universal Lasers Ltd

3 Newton Street, Grantham,  
Lincolnshire NG31 6HA.  
Tel: (0476) 73006  
Fax: (0476) 73060  
Contact: Manoochehr Kamani

Lighting + Sound International  
looks forward to seeing you  
at: SIEL, SIB/MAGIS,  
SHOWLIGHT, ABTT, NOTT,  
PLASA SHOW (of course!)  
and LDI 89 (Nashville).




**32, 34 AVON TRADING ESTATE,  
AVONMORE ROAD,  
LONDON W14 8TS**

**TRADE COUNTER**

Immediate Delivery in London Area.  
Large range in stock including  
G.E., Thorn, Philips, Lee, Rosco,  
Chris James, Socapex, Neutrix,  
Duraplug, Thomas, Strand, CCI,  
Rosco, Le Maître

**TELEPHONE:  
01-603 9831  
OR  
01-602 7932**



MANUFACTURED  
BY

**Doughty Engineering Limited**  
Crow Arch Lane, Ringwood, Hants BH24 1NZ  
Telephone: (0425) 478961 Fax: (0425) 474481

# MUSHROOM LIGHTING

Lighting Sales and Hire to the  
Entertainment, Conference, Exhibition and Leisure Industries  
Trussing Sales and Hire

Agents for Clay Paky Golden Scans, Teatro, Slick, Astralloy, Optikinetics,  
System Freestyle, Stanz Lighting Jack, Ultra-Light, Star Frames, MLP.

SPECIALIST DISTRIBUTION & DESIGN SERVICE

MUSHROOM LIGHTING

76 Tenter Road, Moulton Park Industrial Estate, Northampton NN3 1AX.  
Tel: (0604) 494866/494991. Telex: Mushroom 311165 CHACOM G Fax: (0604) 491118



## Light & Sound Show

10-13 September

Olympia 2 London

Britain's major international lighting and sound event for 1989.

If you are involved with equipment used in discotheques, clubs, theatres, leisure complexes, opera houses, symphonic halls or presentation areas then you can't afford to miss the Light & Sound Show '89.

Please send me more information about:

Exhibiting in the 89 Light & Sound Show

Visiting the Show

To David Street  
3D Services  
10 Barley Mow Passage  
Chiswick London W4 4PH  
Telephone 01-994 6477  
International +44 1 994 6477  
Facsimile 01-994 1533

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Postcode \_\_\_\_\_

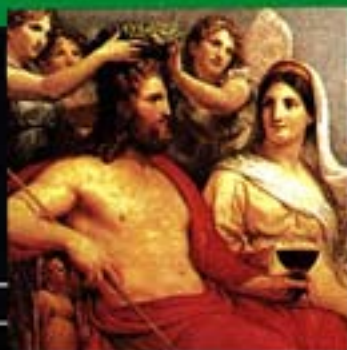
Tel No. \_\_\_\_\_

Sponsored by

**PLASA**

# jupiter. the ultimate.

Jupiter was the Mythical Ruler of the Gods.  
But today Jupiter is no myth  
- stunning power, sharp colours and clean,  
accurate movements  
make the Coemar Jupiter  
the unrivalled King of the Discoteque.



Jupiter  
in a famous painting  
by Andrea Appiani.

Programmable controller,  
90 memory banks and 8 programmes  
with 60 steps each.  
Possibility of using  
external memories with the same  
capacity as the internal one.



Cassette-wheel for 12 colours.

Cassette-wheel for 12 gobos from a selection of over 100 patterns.

Wheels with automatic reset to home position by means of optical sensors.

Microstep stepper motors controlled by microprocessors.

Programmable chase with 8 speeds.

Programmable movements with 8 speeds of the high quality reflector.

Independent general blackout.

Individual blackout for each lantern.

High definition autofocus zoom objective.

Programmable angle from 10° to 20°.

Thermal sensors automatically control the internal temperature.

Safety device for lamp exchange.

Remote ignition of the lamps via controller.

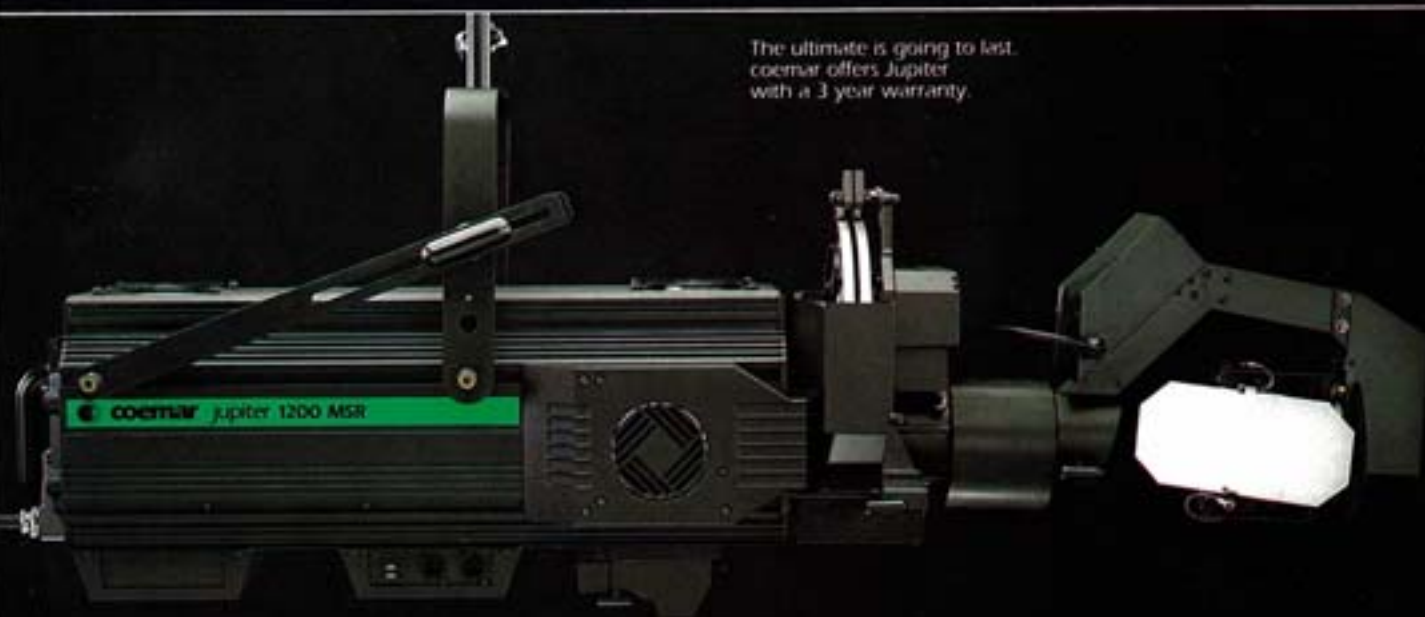
Programmable mechanical dimmer  
for light intensity from zero to maximum.

New lamps of exceptional brightness:

700W MSR 56.000 lumen 5600°K, 1200W MSR 110.000 lumen 5600°K.

Extremely easy installation.

The ultimate is going to last.  
coemar offers Jupiter  
with a 3 year warranty.



w.b.lighting  
4 tenter road, moulton park  
northampton nn3 1pz  
phone (0604) 49.93.31  
telex 312320  
teleafax (0604) 49.94.46

coemar spa  
42042 castelgoffredo (mn)  
via inghilterra  
telefono (0376) 77.93.36  
telex 301590  
teleafax (0376) 78.06.57

professional projectors  
for lighting effects

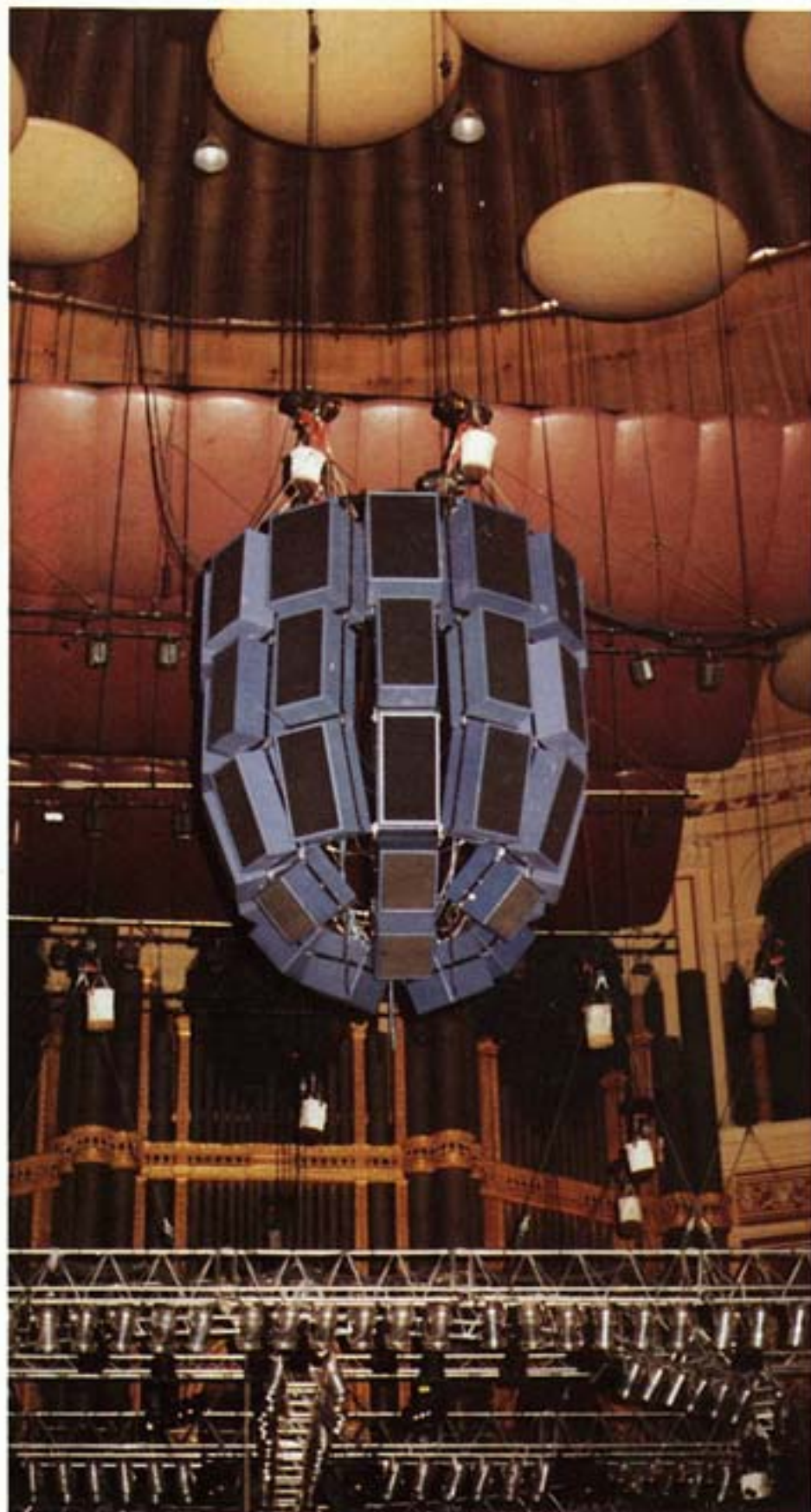


coemar



# Flying Again: The Disco Mix Champs

David Neale reports from this year's Disco Mix Club's mixing finals and awards at the Royal Albert Hall.



The Disco Mix Turbosound cluster comprising TSE-111, TSE-211 and TSE-11 enclosures.

In the subway between South Kensington and the Royal Albert Hall, an early morning busker prepares to entertain the passing commuters. Next to his guitar case, there is a small amplifier the size of a biscuit tin. Further up Exhibition Road, another sound system is being prepared, but this one is slightly larger. A mere two tons of speakers, two tons of amplifiers, desk, etc. . .

The annual Disco Mix Club mixing finals and awards were back in town. This year's Championships were being televised by the BBC - a measure of the increasing significance and growth of the event over the past few years. Six weeks before the event, the first production meeting was held; a group of professionals got together to discuss the various problems that might arise and ways in which they might be resolved. Though the planning session was of vital importance, the tone was relaxed and the approach somewhat 'laid back'.

A second meeting took place soon after the BBC screening of the B.P.I. Awards, an event to go down in the annals of history as one of the most badly organised and poorly coordinated television awards ceremonies. The Disco Mix Club were anxious that their own awards should not fall victim to similar mishaps.

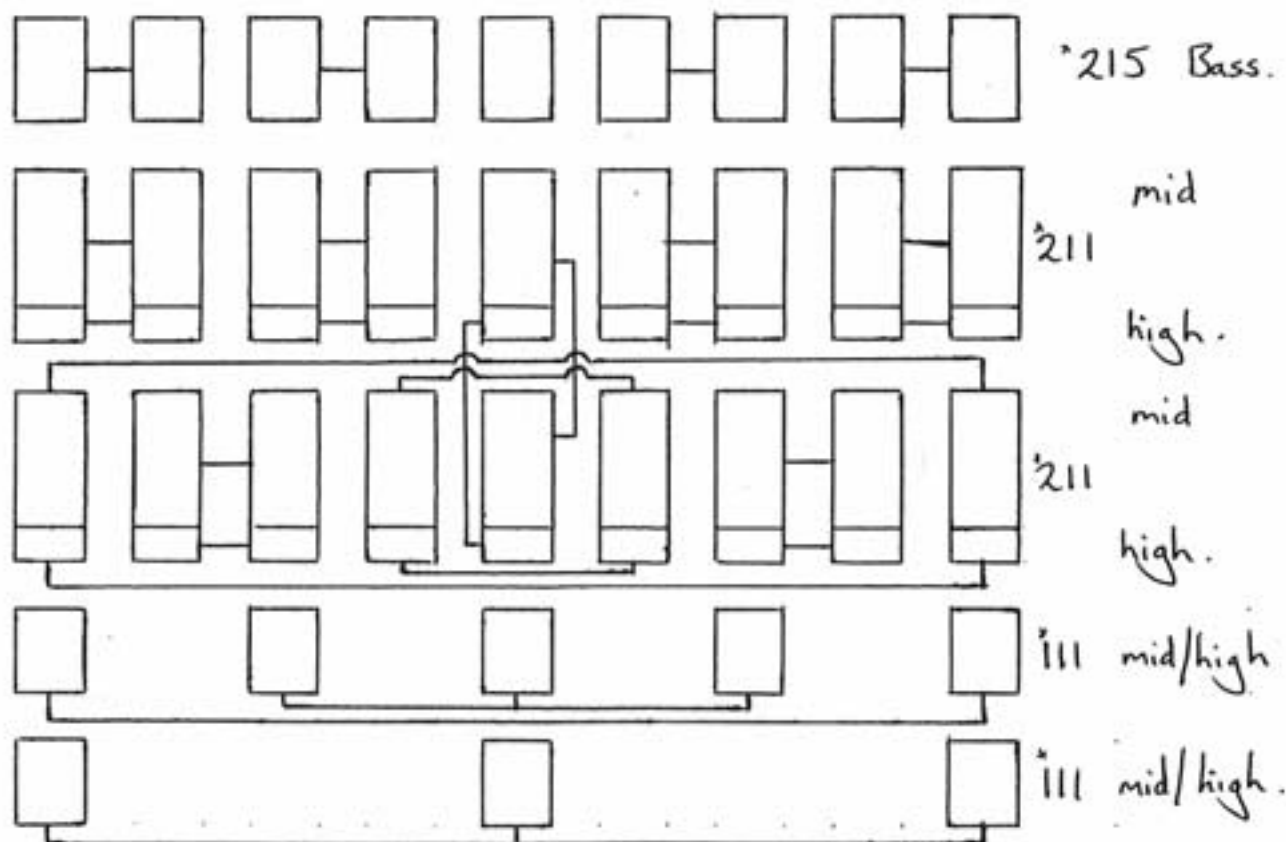
The plan was for the production team to go into the Royal Albert Hall early on Monday 13th March to enable them to construct the special stage set and erect the lighting rig over the stage. Electromusic, Turbosound's London agents, were handling the sound installation, and put part of the system into the Royal Albert Hall on Monday, ready to commence the building of the sound cluster on Tuesday morning.

**Tuesday Morning, 8am:** The hall is now a hive of activity with sound, lighting, video and laser technicians working away to be later added to by the television crew. An event such as this presents certain difficulties which must be ironed out at the production meetings. I spoke to Chris Hey of Electromusic about the problems involved in an operation of this nature: "Normally, if you're installing a sound rig for a live concert, the sound comes first, and you can ensure good positions for the sound equipment. In this case we had the T.V. production people wanting things done their way and as a sound man, I had to fight for my corner."

The team now begin to build the cluster and this year they are using a slightly different configuration, bringing in the TSE 211 CABS. The final cabinets are being off-loaded from the huge lorry and carried down a ramp to the Hall floor, the only method of getting the equipment in.

**Tuesday, 10.30am:** The cluster quickly takes shape as layers of cabinets are hooked together. By the mid morning it is built and suspended two or three feet from the Hall floor. Various members of the sound production team clamber over the rig putting final touches to it prior to the sound check.

LOOKING OUT FROM INSIDE



Turbosound Sound Cluster, Royal Albert Hall, March 14th 1989  
Disco Mix World Championships

The sound system is using the same feed as the BBC, so they now wait for the go ahead.

Simon Fryer of R.D.E., the overall production manager, now begins to enquire when the sound cluster will be raised to its operating position of 50 feet above the floor. At last, and not a moment too soon for Simon, the rig begins to ascend. Sound checks are carried out at various levels of the Hall.

**Noon:** Finalists for the competition begin to arrive and it is John Adelike's job to handle

the disco mixers. Each contestant, during the finals, will be using his own mixer posing a further problem for the sound team. Suitable leads, standard and non-standard have to be supplied to facilitate the variations in equipment. Language also proves to be something of a problem. Contestants have come to London from all over the world to compete and communication is difficult. The deadline for the sound system to be operational is 2pm, at which time the rehearsals are scheduled to commence.

The Disco Mix annual event has truly come

of age, and Tony and Christine Prince and their team at Disco Mix, must now come to terms with the fact that the three day festival put on for their members is now in danger of being hi-jacked by the media. It will be more and more difficult to keep it a family affair.

Needless to say, the evening was a tremendous success for all concerned and when it had finally ended, Disco Mix Club hosted a party for all the people involved over the past few days. The sound and lighting teams bravely turned down tempting invites to further parties, in order to begin the long and



Early morning get-in at the Royal Albert Hall.



John Newsham at work on the cluster.



Inside the cluster, looking up.

THE MOST ADVANCED SPECIAL EFFECTS SMOKE MACHINE IN THE WORLD

# HEAVY FOG™



For many years people wishing to create an effect of low lying fog clinging to the floor are only too familiar with the problems of doing so. Invariably it entails a long journey to the chemical company for supply of dry ice, carrying special storage containers and by the time you have returned 25% of the dry ice has evaporated, also by the time you are ready to use it, you probably just have enough for the show and that's after you have spent an hour or so boiling 100 gallons of water!

JEM are pleased to announce the demise of dry ice CO<sub>2</sub> — dry ice is a thing of the past, just a bad memory. From October 1988 JEM will be in full production of HEAVY FOG, the most advanced special effects smoke/fog machine in the world.

HEAVY FOG has taken three years and over 20,000 hours of development and has revolutionised smoke/fog effects throughout the leisure industry. HEAVY FOG is not just a machine that simulates a dry ice (look-a-like) effect, it is vastly superior in every way, and is capable of producing a vast range of special effects.

JEM's Research and Development Department has developed a very specialised low temperature heating plant capable of temperatures below -30° combined with a high power industrial fog generator. HEAVY FOG has an enormous output and is able to throw a layer of fog to cover a floor 11,000 square feet (1021.90 square metres), 1 inch (2.54 cm) off the floor to 6 feet (1.83 metre) high in the air, and at the touch of a button can produce normal smoke effects.

JEM have also developed three special water-based Fog Fluids.

- A1 Quick dispensing
- B2 Medium dispensing
- C3 Long lasting

HEAVY FOG fluid is completely dry and will not leave any residue. HEAVY FOG can also produce fog and smoke continuously without stopping to recharge. To enable HEAVY FOG to produce both effects simply fill one fluid tank with standard 20 FOG LIQUID and the other with HEAVY FOG FLUID. HEAVY FOG costs less than half the cost of dry ice CO<sub>2</sub> to run.

Do not be fooled by poor imitations. HEAVY FOG machines are manufactured by JEM PROTECHNICS & SPECIAL EFFECTS CO. LTD. HEAVY FOG is a Trade Mark of JEM PROTECHNICS & SPECIAL EFFECTS CO. LTD.



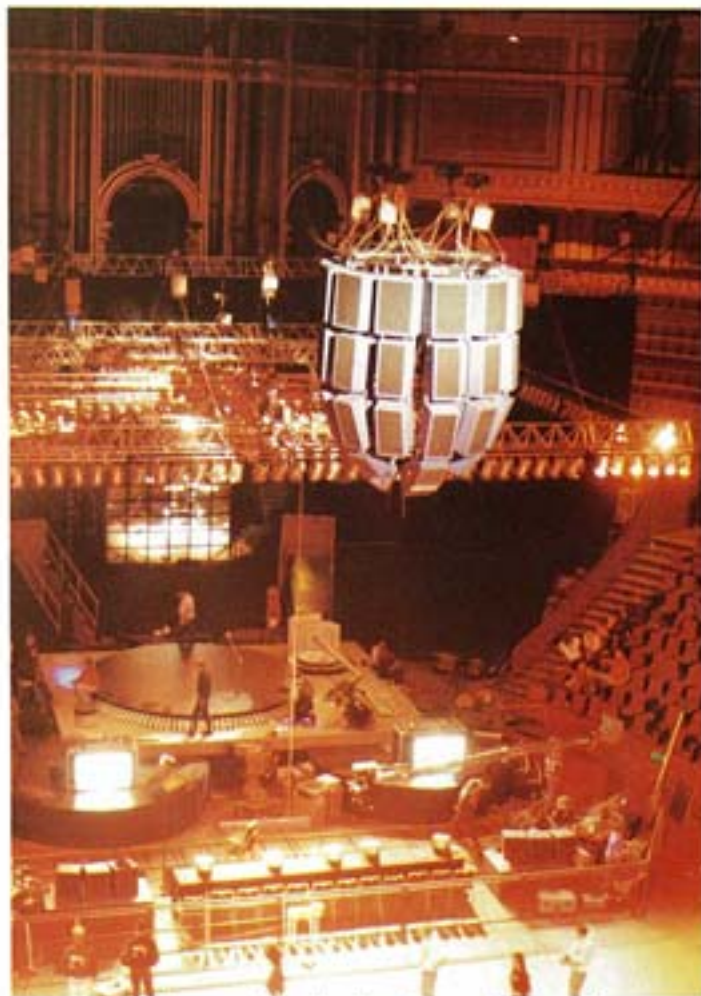
The controller has a comprehensive range of controls which include variable smoke/fog output, joy stick control, horizontal and vertical scans for the creation of special fog effects, and six pre-set special effects: Wave, Sea, Cloud, Waterfall, Volcano, Curtain. To vary the height of fog simply adjust the fog/smoke output level control and move the joy stick forward or back ward depending on the desired height of fog. All effects can be achieved manually or automatically.

As an optional extra a 5-way ducting system is available and comes complete with 5 x 100mm x 5 metre lengths and front ducting adaptor. Also pictured, rear duct adaptor to which 400 mm ducting can be fitted.



ILLUSTRATED RIGHT: 5 WAY DUCTING SYSTEM  
Comes complete with 5 x 100mm x 5 metre lengths and front duct adaptor.  
Also pictured, rear duct adaptor to which 400mm ducting can be fitted.  
Both duct systems use optional extra.





The Turbosound cluster positioned at the optimum point to provide coverage to the seated areas and the balconies. The TSE-111 floor system is sited on top of the TSW-124 sub-bass enclosures.



Close-up of the cluster at ground level.



Setting up the works in the arena of the Royal Albert Hall. Mixer was a Yamaha PM 2000 and amps Crest 8001's.



tiring process of breaking down. Electromusic finally pulled away from the Royal Albert Hall at 3am on Wednesday morning.

**Credits** Chris Hey, Electromusic  
John Newsham, Turbosound  
Mark Hornsby, Stage Mixing  
John Adelike, Disco Mixers  
Nevil Stanbury, Tape Machines

**Lighting:** Light Angles  
Supplied by R.D.E. Production Services  
Lighting Designer: Richard Dale  
Crew Boss: ATOM

1 x 40' Circular Telestage truss  
34 x 8' Telestage truss  
30 x 1cwt Verlinde motors  
1 x 60 way Avo rolacue  
1 x 30 way Avo rolacue  
2 x 60 way Avo racks  
1 x 48 way Avo racks  
2 x Lycian truss spots  
2 x Long throw Paris  
4 x Lee Baby 5k's  
12 x Lee Baby 2k's  
22 x 6 lamp Bars par 2  
8 x 6 lamp Bars par 5  
20 x 6 lamp Ray lites  
72 x single Par 1 house lights  
4 x ZR 40 smoke machines

**Lasers** from Laser Hire Ltd.  
1 x Magnum, Twin head, Twin Colour  
Innova 70 4W Argon Laser System  
6 x Cyrolight II's controlled from  
the Cyclops Control System  
2 x Coloursweep HTI's controlled  
from Mentor Control System  
All systems operated by Mike Kinsella of  
Laser Hire Ltd on behalf of Laser Systems Ltd.

**Computers** by Future Software Systems.  
1 x Amiga 500 computer using Limelight soft-  
ware for messages/ambient graphics  
1 x Amiga 2000 computer  
1 x Panasonic WJMX 10 vision mixer  
3 x Panasonic preview monitors

PRE



ON



DIR



1-2

3-4

4

5

6

AUX 1



## FORTY AUX SENDS FROM OUR SMALL CONSOLE, AND EACH AT THE TOUCH OF A BUTTON.

To endow our new Q Series console with the flexibility and performance needed for progressive sound reinforcement techniques we had to come up with a few new ideas.

Live performance mixes are becoming increasingly complex but creativity is often shackled by a lack of sends for individual effects.

So we've provided an independent direct output from each input channel which can, at the touch of a button, be routed via the Aux 1 control to provide a dedicated, controllable effects send.

This means, for instance, that a 40 input console can provide 40 individual sends in addition to 6 auxiliary buses – more than enough for the most demanding of situations.

And in solving one problem we've opened up a whole new range of possibilities.

Like creating a sound reinforcement console that can be used for multi-track recording.

This is because the Q Series matrix versions also feature 8 conventional effects returns as well as a 3 band parametric EQ section.

And when 4 input modules are replaced with 4 effects return modules, a 36/8/2 mixer can provide up to 36 individual tape sends, 8 group sends, 24 track return monitoring and 6 auxiliary send buses.

At the touch of a button you can find out more about the new Q Series. Simply dial the appropriate number below to receive a copy of our brochure.

**DIDA**   
**SOUND THINKING**



Theatre Projects Services Ltd is unique. From under one roof in London, lighting, sound and audio-visual systems, each tailored to a specific and detailed brief, are despatched to every corner of the globe. Each project is different, so we reject off-the-peg economy, for the power of flexibility.

Theatre Projects Services is not an equipment distributor, so no manufacturer can oblige us to specify, or rent anything but the right tools for the job.

Our own experienced team of designers and engineers, familiar and confident with the vast range of equipment available to them, will escort your project from concept to spectacular finale.

So you see, for over two decades, with a client list that ranges from West End theatres to Multi-national organisations, the emphasis has always been, not on the Theatre, nor the Projects, but the Service.

If you are responsible for organising a conference, product launch or any form of theatrical event, contact us now, either by telephoning, or writing for our brochure.

THEATRE PROJECTS SERVICES LTD.,  
8-34 BLUNDELL STREET, LONDON N7 9EW  
Tel: 01-609-2121 Fax: 01-609-8897 Telex: 265451 MONREF G (Attn. SQQ 906)  
E. Mail: 87:SQQ 906

An Eagle Trust Plc company 

THEATRE  
PROJECTS

The manufacturers of

**Astralite**  
**Quatralite**  
**Minilite**  
**Bilite**



**Astralloy**  
GROUP HOLDINGS LTD

Unit 1 Manor Road Leeds LS11 5PZ  
Telephone 0532 465331 Fax 0532 421342  
Telex 557063 AGHLTD G

# Theatre Underground

Deep inside Somerset's Mendip Hills theatrical things are happening. L+SI asked Eurolight's Nick Mobsby to outline the new lighting system at Wookey Hole Caves.

During August 1988 Madame Tussauds' audio visual department manager Phil Pyke and their senior lighting designer Steve Wentworth contacted Eurolight about a new lighting scheme for Wookey Caves in Somerset.

The caves have long been a major tourist attraction as well as a major centre for pot holers and geologists. In fact in the 1920's they were illuminated by the rather precarious method of throwing paraffin against the rocks and setting light to it! Over the past 30 years the caves have been lit with simple waterproof bulkhead-type fittings, usually at a low level.

Wookey Hole Caves are part of the Madame Tussauds group attractions and their staff were asked to produce a scheme which made the caves significantly more interesting, with added excitement and drama that would generally improve the atmosphere for visitors.

Steve Wentworth visited the caves on numerous occasions and joined tour parties to learn about the points of interest as explained by the guides. He soon realised that the guides add a lot of personal comments about the caves which adds great interest. It also meant that any new scheme must allow them considerable flexibility of presentation.

Steve elected to use a combination of theatre lighting and waterproof equipment, but the problem with the caves is considerable in terms of installing equipment. They are very wet with running water, lakes, and a river, and there is constant dripping water in most areas. The caves are also at a relatively low temperature with an average temperature of around 9 degrees, and a high level of humidity. He therefore had to be very careful in choosing locations for the theatre equipment to keep it as dry as possible.

He elected to use fittings from the Strand Cantata and Prelude ranges, motorised effects discs and gobos, Bega waterproof fittings, 1000 watt waterproof floodlights, low voltage fittings, Par 64 cans and underwater fittings for use in the pools and lakes. In the final cave Steve designed a system using low voltage motorised Colibri units with colour changers. Madame Tussauds' electronics wizard Mark Hogan then designed and made a computerised control system to run the Colibri units. Built into it is a digital sound store allowing music to be played in the cave as a finale to the tour.

Having worked out that a total of 240 separate circuits would be required, Phil Pyke then arranged for a local electrical contractor to install a considerable amount of marine waterproof cable to run from a central point in each cave out to strategically located waterproof socket boxes. Steve and his staff then installed all of the light fittings, running waterproof cables back to the socket boxes. This took some 10 weeks, as fittings had to be fixed to the hard rock surfaces.

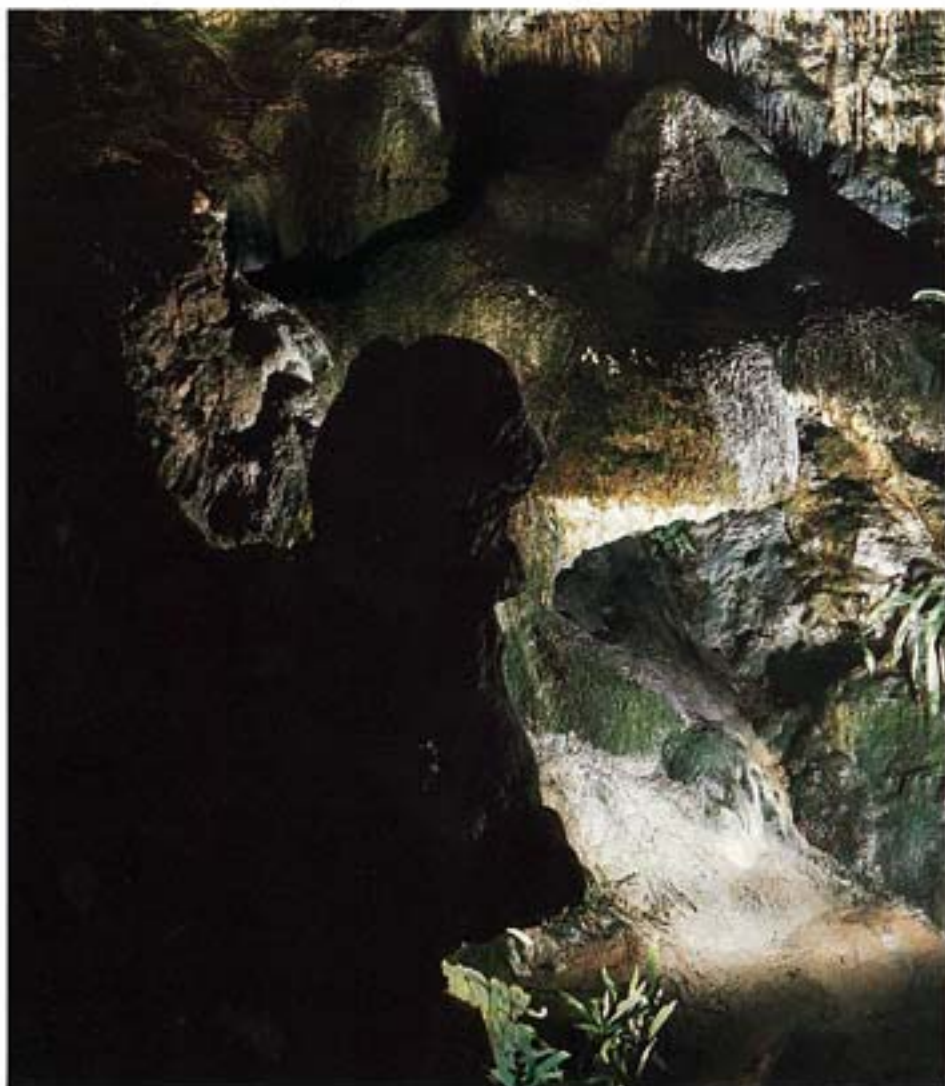
Eurolight were asked to provide a system that could control the light fittings in pre-

programmed sequences initially to be controlled from fixed push button control points. After Steve Wentworth's research with the guides it was realised that they could not be restricted to standing in one location. The final solution to the problem was to design an infra red system that would allow the guides to select different lighting states to correspond with their talks and explanations. This would also allow them to run sequences faster or slower depending on the number of parties touring the caves at any one time.

To cope with Steve's requirements of being able to record up to 12 presets for each of the cave areas, Eurolight used their Smart computerised control system. This offers 12 faders per page of storage with a possibility to record 120 cues in total. The unit offers automatic and manual dipless crossfades as well as loops and chase capability. The system was modified to accept an infra red signal to enable any of the 12 cues to be selected in any sequence and replayed in the recorded fade in and fade out time. The facility was produced by using software

'macro keys' that are programmed to instruct the main crossfade playback to fade from any cue in and out of sequence. With the system delay in and delay out times cues can be linked together to run automatically from one start command. Steve used this facility in a number of caves. The guide simply selects lighting state 1, and over a time sequence programmed by Steve, different areas of the caves are illuminated.

With as many as 10 guides taking parties through the caves at one time, it was vital that all the infra red transmitters and receivers operated at the correct frequency. Thus each guide had an identical hand-held transmitter with 12 selection buttons to correspond to the 12 lighting states in each cave. So, as the guides walk through the caves, they can run any sequence of cues or single lighting state programmed by Steve. As some of the caves are well defined, Steve designed the lighting pictures so that when a party leaves one cave and walks to the next, the guide selects a base preset which just provides sufficient light for the next party following on. The infra red receivers are hid-



Inside the Mendips at Wookey Hole: the Witches Cave, chamber 1.



Between chambers 1 and 2, Wookey Hole Caves.

den around each cave allowing as great a receiving angle as possible. This allows the guides to select lighting states at both the entrance and exit points of each cave.

In order to control the light sources, dimmer cabinets were provided. It was decided, to reduce cabling problems to a minimum, that dimmers would be located within each cave. As the caves are very damp, Eurolight provided some heavily modified Green

Ginger wallracks. To cope with the humidity and condensation, thermostatically controlled heaters were fitted within the dimmer and control cabinets. These switch on automatically when the temperature drops below 12 degrees. This usually occurs at night when the equipment is not in use and ensures that the cabinets are kept dry and free of damp.

Three areas are equipped with static

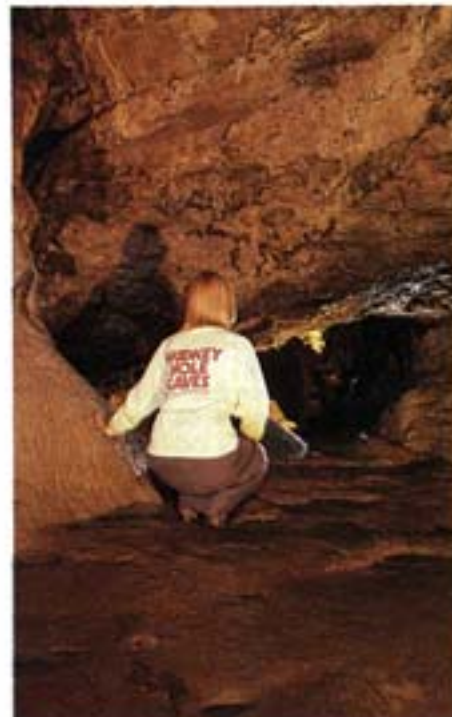
lighting state controlled from Green Ginger 102F dimmer packs with integral local 6 fader plus master control. These are housed in metal cabinets with heaters and remain on during public access. Two areas have 6 channels and one area has 12 channels of dimming. In the other five areas wallrack cabinets are used. A total of five cabinets with 96 channels of 10 Amp dimming and 18 non dim contactor circuits are provided.



The Eurolight infra red controller.



A Wallrack unit as used at Wookey Hole.



Chamber 2 showing problems of installation.



*From Philips the innovators  
in Theatre lamps...*



### **The 2nd Generation TII(19) 1kW Theatre Lamp**

*A lamp specifically designed with the filament coils more resistant to knocks and vibration than ever before.*

*Indeed, its extra strength means that it's now even better suited to the demands of the theatre, including the rigours of hire-stock. So you'll get the most from your 1kW lanterns.*

*The tried and tested bi-plane construction has been perfected so the lamp still generates more light in the beam but is now even more robust.*

*The Philips 2nd Generation Bi-Plane, being the latest in theatre technology, is destined for a remarkable stage career.*

*For more information please complete and return the coupon.*



Philips Lighting, City House,  
420-430 London Road, Croydon CR9 3DR.  
Telephone: 01-689 2166 Telex: 946443  
Please send me further details on the Philips  
2nd Generation of TII(19) Theatre Lamp.

Name

Position

Company

Address

Postcode  Tel

**Philips Lighting**



**PHILIPS**

LSC/2/89

# eurolight

Offer the Entertainment Industry the very best of:

- Computerised and Manual Lighting Control Desks
- Analogue and Digital Portable or Permanent Dimmers
- Control and Load Patch Panels (custom and modular)
- Stage Management Desks and Systems
- Ring Intercom Beltpacks and Talkback Stations
- Paging and Show/Line Relay System
- Standard and Custom Built Internally Wired Bars
- Custom Designed Schemes for All Types of Buildings
- Full Installation Support Worldwide
- Worldwide Turnkey Project Capabilities

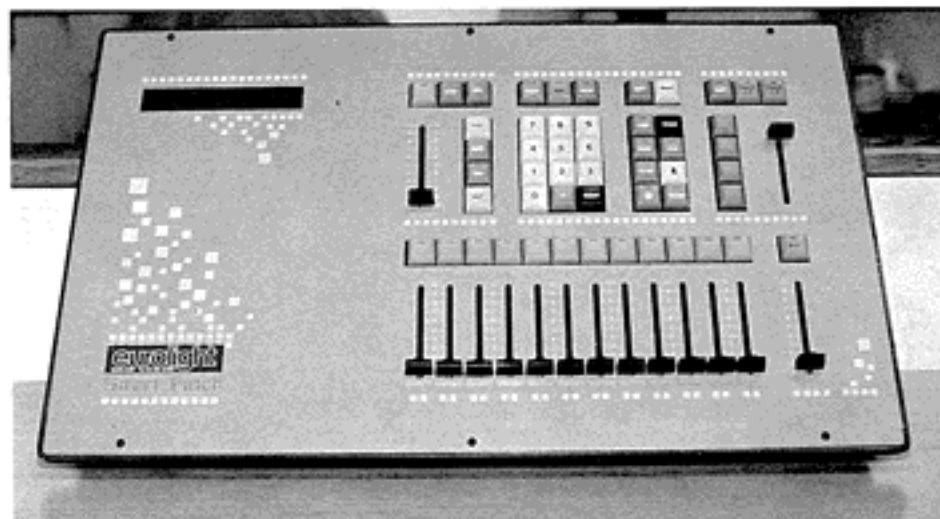
For further details and sales literature please contact:

## EUROLIGHT LTD.

Unit 8, Maple Industrial Estate, Feltham, Middlesex TW13 7AW

Tel: 01-751 6400 Fax: 01-751 3334

EXPORT DISTRIBUTORS REQUIRED IN SOME COUNTRIES



Eurolight's 'Smart' control desk as used at Wookey Hole.

To comply with electrical regulations, and also to protect the electrical installation with fittings underwater and within wet areas, all circuits are protected by means of residual current circuit breakers. These are fitted on the incoming supply to the dimmer modules, protecting all the cabling and fittings from possible electrical faults. The dimmers are powered from a single phase supply in each area which is derived from a 300 Amp three phase supply. Due to the lengths of the cable runs from the cave electrical distribution system to the dimmer cabinets, the electrical contractor was forced to run in 95 and 50mm sized cables. This often involved drilling through rock, to keep the cables invisible to the public.

The wallrack dimmers cabinets contain Eurolight DMX 512 standard demultiplexers

which decode the Smart computer output into analogue signals to control the dimmer channels.

In terms of practical consideration, the whole project used some 6 kilometres of waterproof mains cable for dimmer supplies, some 25 computerised systems controlling all the different lighting systems and a significant quantity of masonry drills to fix equipment and fittings to the rock surfaces!

The results are quite stunning, with areas of natural rock not previously illuminated springing to life with colour and shape. The guides can still explain the caves and the history in their own personal way, with the lighting under their direct control at all times. One major advantage with the new system design is that Madame Tussauds' staff can obviously refocus lights, change colours and

reprogramme the system from time to time ensuring that the caves are made as exciting as possible to the visiting public.

As great care has been taken by all concerned to hide and disguise equipment, the public are not aware of the significant amount of fittings, cabling and equipment installed - and that makes the whole effect so much more exciting.

One interesting point noted after the system had been operational for some weeks was that the temperature in one of the caves had increased by one degree due to the increased heat output from the light fittings!

### Equipment Used

- 5 x Eurolight Smart computers
- 6 x Eurolight 24 channel DMX decoders
- 10 x Eurolight infra red receivers
- 6 x modified Green Ginger Wallrack dimmers
- 4 x modified Green Ginger Micropack 102F dimmer packs
- 8 x Eurolight electrical distribution cabinets
- 1 x Pulsar 4 channel modulator
- 16 x Colibri motorised fittings with colour changers
- 1 x Madame Tussaud designed Colibri controller and sound store
- 13 x Strand Prelude 16/30 profiles
- 2 x Strand Prelude 28/40 profiles
- 5 x Strand Cantata 26/44 profiles
- 8 x Thomas Par 64 cans
- 38 x Bega Par 56 units
- 50 x Nightscaping Cameo fittings
- 24 x Nightscaping Spacelighter fittings
- 6 x Nightscaping Dolphin underwater fittings
- 10 x 500 watt floodlights

# Lanterns Lead the Lamps

Martin Christidis asks: 'Why so many new lamps in 1988?'  
The CP and T - latest numbers reviewed.

During the last few years, there have been few significant new lamp\* types introduced into the Theatre and Studio range - most additions being variations of existing types, perhaps with different bases. But there has been nothing fundamentally new.

Nothing fundamentally new, that is, until 1988, when we saw the introduction of two new T Class Lamps, the T29 and the T30 and CP Lamps starting at CP90 through to CP95! The reason for this spate of new lamps was the result of lateral thinking by the lantern manufacturers, because this time the new concepts certainly came from their side of the lamp and lantern relationship.

Previously, improvements in the performance of lamps resulted from new technologies developed by the lamp manufacturers, the first step being the introduction of Halide Gases and the first generation of Halogen Lamps. This was followed by the introduction of Quartz envelopes for the lamps, thus reducing their size and improving the efficiency of the Halogen cycle.

In former times, tungsten lamps would always blacken with use as tungsten, in the form of vapour evaporated from the hot filament, condensed onto the cooler surface of the glass bulb. As the tungsten filament evaporated away, so it became thinner and more fragile and eventually burnt out completely.

Introduction of Halides into the fill gas produced the first generation of 'tungsten halogen' lamps. The halide would combine with the evaporated tungsten, but, instead of condensing would dissociate back into tungsten and halogen gas when the atoms came into contact with the hot filament. The tungsten would then return to the filament to extend its life, and the halogen would be released to perform the re-generative cycle once more.

With the introduction of Quartz envelopes, lamps became much smaller because quartz will withstand much higher temperatures and can therefore be much closer to the filament. Being stronger than glass, it also permitted higher gas fill pressures and this further reduced the dissipation of tungsten from the filament. This allowed for either an increase in the life of a lamp or an increase in its light output (lumens/watt).

Once Quartz Halogen lamps had become established the next development was to reduce the overall area of 'grid' filaments, thus increasing the efficiency of the optics of lanterns. In other words, the closer the filament approaches a point source, the more the light is actually gathered by the optical system and emitted from the lantern.

To achieve this, Bi-plane lamps were introduced, their construction permitting closer apparent spacing of the filament coils then allowed with a mono-plane format. This resulted in a reduction of the grid area of about 25%, permitting thereby an increase in light output from the lantern in a similar proportion.

\*Lamp makers all refer to their glass or quartz finished product as a lamp, whereas the end users may refer to them as bulbs, bubbles or lamps. As a lamp maker, I shall call them lamps!

## The New Range

The logic behind Strand Lighting's decision to upgrade to a 1200W lamp, the T29, was a result of most theatre circuits being rated at 2.5kW. Hence, with two existing 1 kW lanterns in parallel, only 80% of the available circuit power was being utilised. So by increasing the lamp rating to 1200 watts a combined load of 2400 watts was still below the maximum, but with a gain of at least 20% in the light output.

Having decided upon a wattage, the question arose of whether to try to make the lamp the same physical size as a conventional T11/T19 or whether to make it longer.

Following temperature and performance tests on 1200W lamps of a variety of different Light Centre Lengths, the decision was made to extend the light centre length by 12mm. Not to have made any change at all would have resulted in lamps overheating with a consequent reduction in life. This increase of 12mm means that critical components of the T29 Lamp are actually cooler

than those of a T11/T19 in most lanterns, although the lamp has a 20% higher rating.

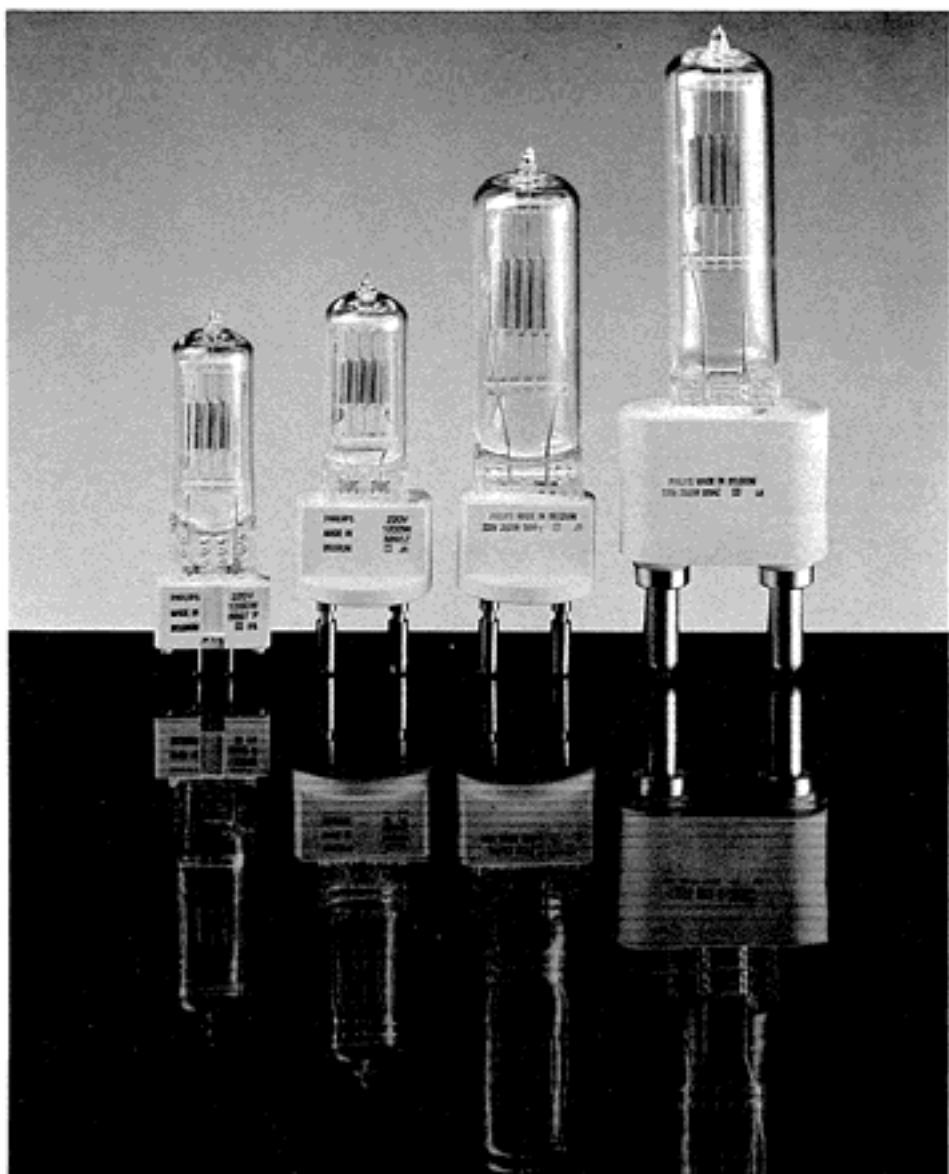
Parallel to the development of the lamp Strand were developing their new range of lanterns based on the T29 and these are now well known as the Cantata range. At the same time, CCT designed a replacement lamp tray to accept either the T29 or by simple adjustment, the T11/T19 and this may now be retrofitted into their 1kW Silhouette and Starlette range of lanterns.

## CP 90

The logical sequel to the T29 followed shortly with the introduction of a 1200W CP Lamp, the CP 90, a lamp of identical physical dimensions but burning at 3200K as required for film and television lighting where colour temperature is important.

## CP 91

Following the success of the 1200W lamp in the market place, the logical progression was then to introduce a 2.5kW lamp to



T29 CP 93 CP 91 CP 94  
(CP 90 looks identical)

replace the 2kW lamp. This would then permit maximum utilisation of a 2.5kW dimmer or with two lamps in parallel, maximum use of a 5kW circuit.

Until now 2kW theatre lanterns have been based on the CP43 (72) a 2kW lamp on a GY16 base, however the same temperature and overheating problems obviously would apply if one attempted to increase this lamp to 2.5kW. So again, the decision was made to extend the light centre length but also to upgrade to a new lamp base, the G22, usually associated with studio lanterns rather than theatre types. Consequently CCT introduced at the April ABTT Exhibition two new lanterns, incorporating the new 2.5kW CP91. With lantern manufacturers now designing products for world-wide sale, the need obviously arises for lamps to be available in a variety of voltages including 110v for the USA.

However, when they are redesigned at this low voltage, whilst their wattage obviously remains the same, the reduced operating voltage results in a doubling of their current flow.

To accommodate this increase, the 'G22' base with its large diameter pins was selected. Previously, the GY16 base was the norm for the 2kW CP43/CP72 widely used in the theatre.

#### CP 92

To complement the 2.5kW CP91, a 2kW lamp, the CP92 was introduced by Thorn with the same physical size as the former lamp but obviously a lower rating. The life is identical to the CP91 at 400 hours, but the lower wattage gives greater flexibility in some applications where a lower power is required.

#### CP 93

1989 has seen, not only the introduction of new lamp types, but also several totally new lantern ranges from manufacturers hitherto not associated with theatre lantern design.

A philosophy adopted by Teatro in Italy was to combine the benefits of the larger G22 bases as used on Studio Lamps (i.e. ease of removal and improved heat dissipation) with the lower wattage theatre lamps. Hence a 1200 watt lamp on a G22 base has been developed by Philips for use in their latest lanterns.

This combination is of course very familiar



Strand Lighting developed the Cantata range based on the T29 lamp.



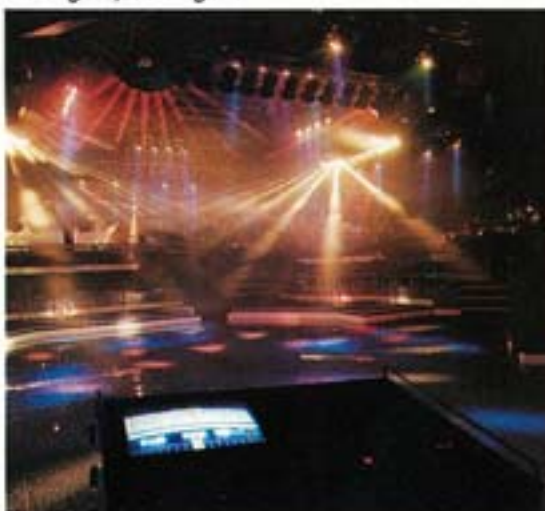
The Teatro Tratto 'G' range of zoom profiles, fresnels and PCs uses a G22 lamp base for either the 1000 watt T30, the 1000 watt CP71 or the new 1200 watt CP93 without the need to change the height of the lampholder. Shown here is the Tratto G fresnel with the G22 lampholder and focusing system in detail.

OSKA  
VOTED LIGHTING  
CONTROLLER OF THE YEAR

# OSKA

## winning performances

*Zhivago's, Darlington*



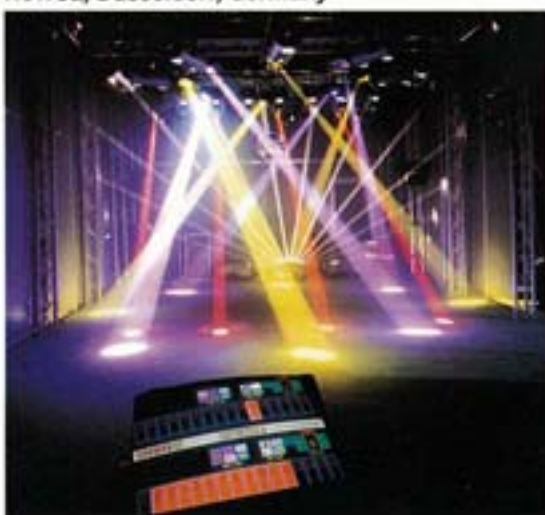
*Camden Palace, London*



*Fallows, Liverpool*



*Nowea, Dusseldorf, Germany*



OSKA is the ultimate lighting board.

Speed is the essence of its power – speed in learning, speed in programming and speed in action. Its touch-sensitive colour monitor translates the skill of the operator into instant lighting action. Handling 256 lighting channels including Golden Scans and other intelligent moving lights, it knocks spots off any other lighting controller.

OSKA is used by operators throughout the world who

depend on a powerful control system to make the most of their lightshow.

OSKA has initiated a new era in total lighting control, by integrating a complete lightshow under the control of one skilled operator.

Find out more about what OSKA can do for your performance by contacting your nearest Pulsar distributor.

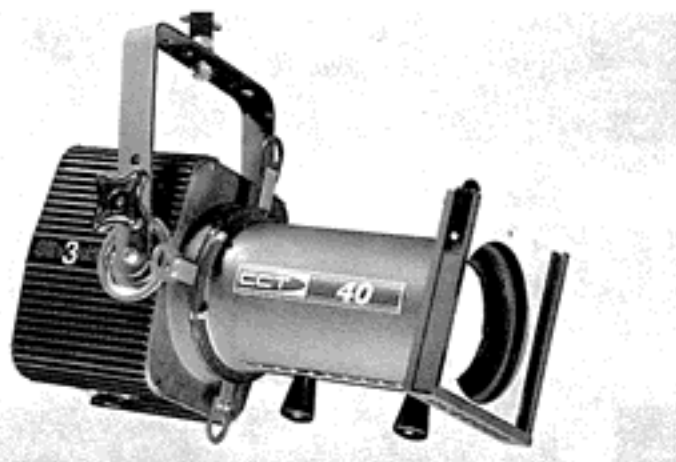
**PULSAR**  
LIGHTING FOR EFFECT

Pulsar France Sarl,  
10 Avenue du Fresno,  
14760 Bretteville sur Odon, France,  
Tel: 31 741001 Telex 171237

Pulsar Light of Cambridge Ltd.,  
Henley Road, Cambridge CB1 3EA,  
Tel: 0223 66798 Telex 81697 PULSARG  
Fax (0223) 460708

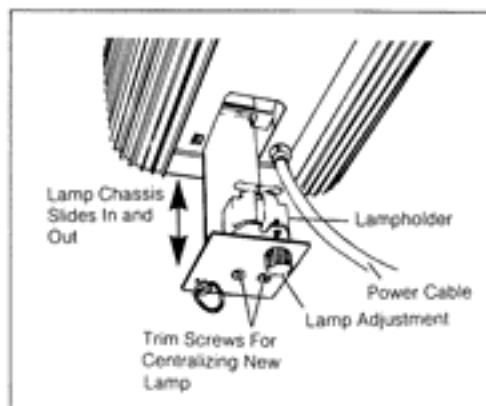
Pulsar GmbH,  
AM Vorort 23,  
D-4630 Bochum 7, West Germany,  
Tel: 0234 28171 Telex 825593





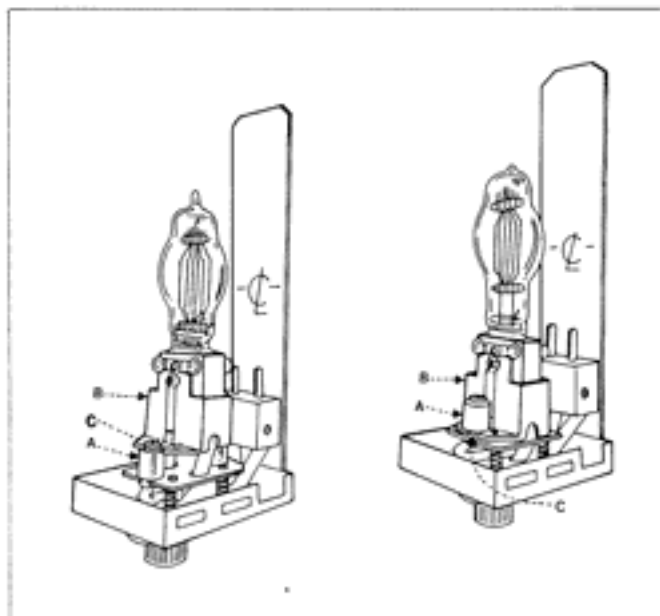
## Silhouette Adaptability

CCT's Silhouette profile spotlight range has great adaptability. Its four lamphouses (1000W, 1000/1200W, 2000W, 2500W) together with five zoom and 2 non-zoom interchangeable lens tubes offers a spotlight to suit every need.

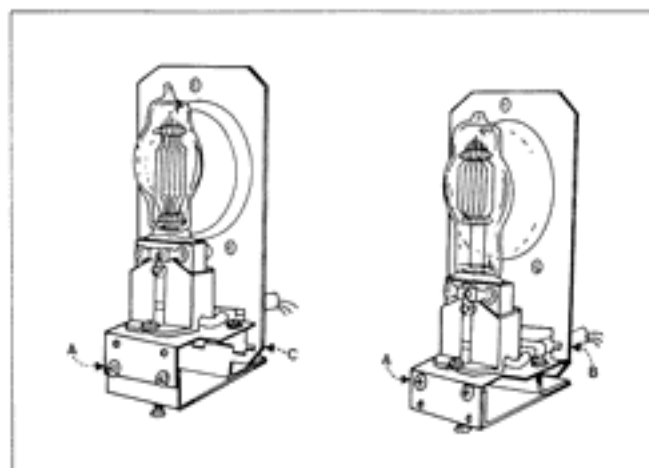


Plug-in lamptrey for CCT Silhouette 1000/1200W profile spotlight ensures safe lamp adjustment or replacement.

Silhouette 3 from CCT. The latest version of its famous profile spotlight designed for user adjustment to fit either 1000W or 1200W lamps.



Latest Silhouette plug-in lamptrey from CCT. It is fitted as standard in Silhouette 3 and can be easily adjusted for 1000W lamp (A) or 1200W lamp (B). The new tray is also available as an accessory for updating earlier MK2 Silhouettes.



The latest Starlette fresnel and pebble convex spots from CCT are fitted with user adjustable lamptreys for 1000W or 1200W lamps. The new tray is also available as an update for earlier Starlette spotlights.

since outwardly the lamp looks identical to a CP40/71, the 1kW C.P. on a G22 base. The light centre lengths are in fact the same and the lamps may be interchangeable giving existing CP40 users the opportunity to upgrade to a 1.2kW in suitable equipment.

On this occasion, it proved unnecessary to increase the light centre length with the increase in wattage since the larger G22 base has better heat dissipation, thus maintaining the pinch temperature at acceptable levels.

### CP 94

Having introduced the P93 concept, Philips then developed, for Teatro, the CP94, a 2500 watt lamp on a G38 base, identical in size with the 2kW CP41/73. By adopting the same light centre length as the 2kW CP41/73, further flexibility is achieved since lanterns designed for the 2.5kW rating may also be operated at 2kW if desired, by fitting a CP41.

### CP 95

So far all of the lamps that we have considered have been single ended base down. The CP95 however is a new Par 64 from Thorn in an extra wide flood version. The sequential numbering CP60, 61, 62 of narrow spot, spot and flood lamps is not maintained with the extra wide CP95, since these CP & T numbers are issued by the Lighting In-

dustry Federation in a sequential order and not in product groupings.

### T 30

This lamp combines an existing light centre length of 63.5mm associated with the 1kW CP40 (71), on its G22 base, but with a 1kW T Class filament construction. What this means is that there now exists a long life T Class lamp suitable for Studio Lanterns taking CP40/70 or the latest G22 base theatre lanterns already discussed.

From the foregoing, I am sure that you will agree that 1988 saw the introduction of a range of new lamp types giving very much greater flexibility in lighting level and the

utilisation of available power and improved handling - all features which the practitioners of lighting have been requesting for many years.

However, this list is only definitive at the moment of writing. Lamp manufacturers are continuously developing their products in response to the demands of a voluble market but any new introductions yet to come can only improve the scope available to lighting designers and electricians and so will, I am sure, be warmly accepted.

### Martin Christidis

The author is market manager, studio and theatre lamps, Philips Lighting Limited.

## SUMMARY

LIF No.	Watts	Base	Life (Hrs)	LCL (mms)
T29	1200	GX 9.5	400	67
T30	1000	G 22	750	63.5
CP90	1200	GX 9.5	200	67
CP91	2500	G 22	400	90
CP92	2000	G 22	400	90
CP93	1200	G 22	200	63.5
CP94	2500	G 38	400	127
CP95	1000	PAR 64	300	-

# tratto 1000-1200



fireproof cable

stirrups mounted  
in upper or lower rail

easy access for  
lens maintenance

automatic  
electrical safety

diecast ventilated  
gate and shutter assembly

optical quality lenses  
achieve maximum light output

diecast lens carriers  
mounted on two rigid rails

## Designer Light

**Tratto 1200 G - G22 lamp base/1000 or 1200w lamp**  
**No need to move the lamp base!!**

Look closely into Teatro stage spotlights: quality isn't just skin deep. You'll see diecast components that are inherently strong and lightweight; a power switch which automatically isolates the lampholder for safe lamp replacement; thermally-insulated handles; special fireproof cable. Elegant design at a light price. Available from:

Action Lighting  
BEMCO Ltd  
Dial Sound & Lighting  
Mushroom Lighting  
W.B. Lighting

2 West Point Trading Estate, Alliance Road, London W3 0RA  
Wandsworth Bridge, London SW18 1TN  
Unit 4G, Wharfedale Rd, Euroway Ind. Est., Bradford, BD4 6SG  
76 Tenter Road, Moulton Park Ind. Est., Northampton NN3 1PZ  
4 Tenter Road, Moulton Park Ind. Est., Northampton NN3 1PZ



# TEATRO

Creative Lighting

TEATRO srl - 46042 Castel Goffredo (MN) Italy  
tel. 0376/780702 - fax. 301590 1  
fax. 0376/780888



# King Disco Light

*A reliable & professional manufacturer of STAGE & DISCO lighting and CONTROL equipment. The complete lighting range is shown in colour catalogue, available on request.*



**CUSTOMER DESIGN MOST WELCOME!!!**



**Please contact:**

**KING DISCO LIGHT CO., LTD.**

No. 18-6, Shao Ping Ding, Tamsui, Taipei Hsien, Taiwan, R.O.C.  
TEL: (886)-2-6232504 FAX: (886)-2-6215492



# EQUIPMENT *News*

## Lytemode's Lytemaster

Lytemode's new dimming control allows the level of lighting channels to be programmed into the controller memory as a scene. This balance of lighting may then be recalled at the touch of a button. Associated with each scene is a fade rate, and the change between scenes may be instantaneous or slow and gentle over a period of up to two hours. A time clock is available that automates the scene changing of the system or a group of systems.

Lytemaster is a modular system which can grow and expand after the installation of basic units. This 'building block' approach means that you only have to purchase the units with the functions that are required, making it ideally suitable for venues from the smallest restaurant through to the largest banqueting suite. The system is also cost effective, say Lytemode, in that they increase lamp life and enable reduced power consumption.

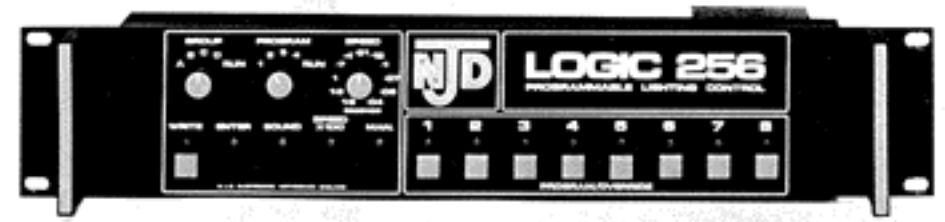
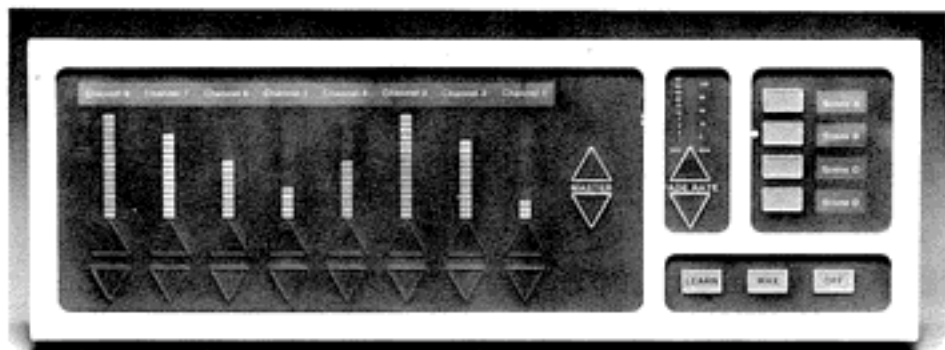
Since the introduction last year of their Lytemaster programmable lighting controls, Lytemode's product range has grown and developed to provide systems which address a wide range of applications. "We believe that we can now present the most cost effective and reliable approach to architectural lighting control available," said a Lytemode spokesman.

To obtain a Lytemaster brochure, which fully details the whole range including associated dimmers, contact Lytemode Limited at 3 Dawson Road, Mount Farm, Milton Keynes MK1 1LH telephone (0908) 644366.

## Logic 256 from NJD

Now available from stock, NJD's Logic 256 eight channel user programmable light controller was originally launched at the 1988 PLASA Show. Utilising CMOS memory technology, the Logic 256 allows the user to programme up to 16 different programmes of lighting, and each programme is 16 steps long. They are selected on rotary switches as four groups (A,B,C and D) of four programmes (numbered 1 to 4).

Programming is accomplished by selecting the required programmes on the switches and turning on the 'write' switch. Each step is then programmed by setting the required combination of outputs on the 'program/override' switches and pressing



Pictured above are Lytemode's Lytemaster dimming control and NJD's Logic 256 8 channel controller.

'enter'. The 256 automatically moves to the next step in the sequence after the data has been entered. The outputs are then selected for step 2, and stored by pressing 'enter', and the process repeated until all 16 steps have been programmed.

Once programmed, the Logic 256 can control any type of lighting using standard slave packs such as NJD's SP-6000. To play back the stored programmes you simply select the required programme on the rotary switches and set the speed; the X100 switch allowing the unit to be used in an environment where only occasional changes in lighting are required. Alternatively the 'sound' switch allows the lighting to change with the bass beat of the music.

The 'Manual' switch turns off the memory, allowing direct control using the 'program/override' switches, and the 'Run' positions allows the 256 to run through all four programmes in one group, or through all 16 programmes. The unit has an internal battery so that programmes are retained even after the mains power has been disconnected.

For further information contact NJD Electronics Limited, 10 Ascot Industrial Estate, Lenton Street, Sandiacre, Nottingham telephone (0602) 394122.

New Equipment information is always welcomed by L+S's editor (for magazine address see page 5)

	<b>marquee</b> <b>AUDIO</b> PROFESSIONAL SALES AND SYSTEMS	
		<b>Soundcraft</b>
<b>MARQUEE AUDIO</b> SHEPPERTON STUDIO CENTRE STUDIOS RD. SHEPPERTON, MIDDLESEX TW17 0DQ Tel 0932 566777 Fax 0932 566989		

# PYROFLASH



- ▶ 2-way, 6-way and professional systems
- ▶ Full range of pyrotechnic effects including 'specials' and 'one-offs' to your requirements
- ▶ Colour brochure available from:

**LeMaitre**  
*lighting and effects*

316 Purley Way, Croydon,  
Surrey CR0 4XJ.  
Telephone: 01-686 9258.  
Telex: 883220 Maitre G.  
Facsimile: 01-680 3743.



## Altec Lansing 1700B

When configured with the company's 1781A programmable input modules, the Altec Lansing 1700B mixer/amplifier system becomes a powerful six channel mixer. The mainframe may also be operated on its own as a mixer or, as a channel expander for the Altec Lansing 1700 mixer/power amplifier series.

Six ports which can be utilised as inputs or outputs are a major feature of the 1700B. Other facilities include a compressor/limiter, low and high frequency shelving equalisers, muting, remote volume control capability, and a tone generator that produces four different sounds. The 1781A input modules accept either mic or line level signals through a wide variety of connections.

For further information contact UK Sound, Unit 15, Osiers Estate, Osiers Road, London SW18 1EJ telephone 01-874 2050.




## Permanent Playback

The Permanent Playback message system from 360 Systems has no moving parts, and will faithfully reproduce audio directly from EPROM digital memory chips, say the manufacturers. Any message, sound or piece of music up to 1½ minutes in length may be stored in EPROMS on a single plug-in reproducer card. Unlimited playing time is achieved by cascading additional cards in series.

360 Systems claim that Permanent Playback is not affected by temperature changes, dust, vibration or humidity and has already proved it will provide exactly the same degree of audio clarity, seven years after installation, with no routine maintenance whatsoever.

For further details contact UK Sound, Unit 15, Osiers Estate, Osiers Road, London SW18 1EJ telephone 01-874 2050.

**UNUSUAL  
RIGGING  
LTD**



**RIGGING FOR CONCERT THEATRE  
COMMERCIAL FILM T.V. & VIDEO  
PRESENTATION.**

4 Dalston Gardens, Stanmore  
Middlesex HA7 1DA

**01-206 2733**

Fax: 01-206 1432      Telex 945470 Rigglin G

## Prewired from Astralloy

Astralloy's Astralite and new Quatralite and Blite trussing systems can now all be supplied prewired for lighting and other electrical equipment up to a maximum of six channels per tube. The separate components in each section are connected using a flying lead with plug and socket, which means the benefits of prewiring are retained even when a design is broken down and re-used in a different format.

To house the power outlet, Astralloy use high quality cast aluminium boxes, and since most formats of connector (be they 13A, 15A or C-form) can be incorporated into the prewired trusses, these must be specified when ordering. Astralloy are currently fitting Socapex connectors but expect to be offering Harting types in the near future.

Astralloy are based at Unit 1, Manor Road, Leeds LS11 5PZ telephone (0532) 465331.

## Floodlighting Range Extended

Crompton Lighting of Doncaster, a Hawker Siddeley company, has announced that it has extended its range of Guardian floodlighting to include high pressure sodium and metal halide lamps.

The range now meets many of the requirements for security, exterior industrial and public general lighting, as well as sports and trading areas. For further information contact Crompton Parkinson HQ on Northampton (0604) 30201.



## Three New EV Mics

The PL50-N/D cardioid, the PL60-N/D supercardioid, and the PL70-N/D hypercardioid are three new dynamic microphones from Electrovoice utilising the neodymium technology EV pioneered three years ago. To further reduce noise, both the PL60 and PL70 incorporate a humbucking coil to cancel hum from lighting and other sources.

The low frequency response of all three models is extended by positioning the microphone closer to a sound source. At this point the Electrovoice's proximity effect takes over and the effect increases as the working distance decreases to provide the kind of up-close bass boost or proximity effect sought after by entertainers, say distributors Shuttlesound. (Information 01-871 0966).

**FOR SPEEDY INFORMATION  
TO LIGHTING + SOUND  
Telefax (0323) 646905**

## SCOTT SOUND SYSTEMS

**SPECIAL DEALS FOR DEALERS**



## Scott Sound Systems

Distributed by:  
Smithfield Electronics  
1 West Street, Hooe, Chester CH2 3PU  
Tel: (0244) 349062

## LIGHTING

## HIRE DESIGN ENGINEERS

Unit 3 St. Margarets Business Centre  
Drummond Place Moor Mead Road  
Twickenham Middlesex TW1 1JN

**01-891 4755**

## For professional sound advice

Wigwam is a highly experienced company offering services and facilities which would normally only be found in London using the best equipment in the world.

### Sound Sales

We carry some of the largest stocks of equipment north of Watford. Northern agents for H.M. Electronics Power Amplifiers, Brook Siren Systems Control Equipment and Klark Teknik's Effects.

### Accessories

Design and manufacture Multiway Cabling Systems or alternatively we can supply you with the components direct from stock.

### Permanent Installations

Custom designed systems for theatres, concert halls, discotheques etc.

### Sound Hire - Specialist Studio Effects

Everything from a digital reverb to a two channel mixer - 1987 Hire Catalogue available.

### Touring Services

Complete service provided for U.K. and International venues for audiences of 20-50,000.

### Associated Services

Lighting, Transport and speedy customs arrangements.

THE PEOPLE BEHIND THE  
PEOPLE BEHIND THE SOUND



**Wigwam**  
ACOUSTICS LIMITED.

St Annes House, Ryecroft Avenue,  
Heywood, Lancashire, OL10 1QB  
Tel: Mike Spratt, Chris Hill  
or Simon Campbell  
on:  
0706-624547/68766  
FAX: 0706 65565

 Meyer  
Sound Dealers

# MORE CONTROL



JBL Control 10

There's the sound: big, forward, solid - the classic JBL voicing of the Control 1 and Control 5 now made even more revealing through the latest driver and enclosure technology.

The Control 10 is a compact three-way monitor featuring the latest generation 25 mm pure titanium dome tweeter combined with powerful 300 mm and 125 mm cone drivers, all critically matched for broad dispersion and high power handling. Its enclosure is molded from high impact styrene, extensively cross-braced and damped for minimal cabinet resonances.

There's the sheer versatility: rugged and portable, the Control 10 adapts to a wide range of monitoring applications. It's easily wall or stand mountable with accessory hardware. It's small enough to place at the mixing desk. And because it's magnetically shielded, the Control 10 won't interfere with video monitors or desk metering.

The corners are rounded and trimmed with rubber stripping to protect supporting furniture. The anthracite gray finish is scratch resistant, and a wire mesh grille guards the drivers from accidental damage. There's even a convenient carrying handle.

Control 10 loudspeakers are ideal utility systems, durable enough to serve in small sound reinforcement and discotheque as well as monitoring applications.

The Control 10 - the latest in the JBL Control Series. It gives you more control.



JBL



# ON TOUR

Carlona Forcer

## Louise Stickland lighting designer

## Chris Ingram sound engineer

This month I talked to sound engineer, Chris Ingram, as well as lighting designer, Louise Stickland. Louise, who is based at Chameleon, is currently touring with The Blow Monkeys in Europe. She has recently finished a tour with The Pasadenas which is where she first worked alongside Chris. They are both young professionals who would like to see sound and lighting people working closer together to achieve maximum creativity.

Louise requested that the article be presented in two parts: her designs for The Blow Monkeys and an interview with her and Chris about the recent Pasadenas tour and attitudes in the business today. That's how it goes! And, by the way, it's strong stuff.

Louise Stickland was at Sussex University studying for a history degree when she started to work part time in the campus theatre. Having discovered her interest in lights, she then started working as stage crew in Brighton, where she met many people from the lighting world. On campus, she managed to get a small lighting rig together with the girl who ran the local disco and Andy Watson, who now works for Vari-Lite. They worked on some 'quite decent' gigs, including some reggae concerts at the Brixton Academy. After gaining her degree, Louise was fortunate to get a job working in Chameleon's warehouse and has been working for them ever since.

Louise worked in the warehouse for one-and-a-half years before going on her first tour with King in Japan. Pete Barnes had designed the rig, but she was able to 'operate it as she liked'. She then went on to design for The Jesus and Mary Chain (which proved to be a challenge as the band are not keen on lights), Black, Bonnie Tyler and The Pasadenas. Chameleon getting the contract for The Blow Monkeys tour was a dream realised for Louise, as she had been wanting to light them for two years. Unfortunately, her boss Pete Barnes had the job!

"When I met Robert, the lead singer, in production he told me that he wanted the show to look as unorthodox as possible, as he's into surrealism at the moment," explained Louise. "I could have hugged him, as I'm really into doing weird things using different colours and asymmetrical rigs. Robert liked my suggestion of not using follow spots, as we both agreed that it would make the show look a lot classier. Much of the rig is focussed on Robert, but he's not an egotist - in production he said that he didn't mind if the rest of the band were in semi-darkness. He provides a good focal point for lights particularly when you haven't got follow spots. I asked him to stand in and work with the lights, which he is prepared to do as he is very approachable. Obviously, he hasn't seen the show from out front, but he said that he can feel when the lights are right and when the timing is excellent.

"I try to combine theatrical lights with rock 'n' roll, and I think that there is room for more 'intelligent' lights in the business. It's easy to put up a pre-rigged truss and flash a few lights for rock 'n' roll. I think that some of the oldest and simplest ideas are the most effective, like the use of human gel jets. A lot of the stuff that Lawrence Parks has done has been with traditional techniques and the effect is brilliant. But then Chameleon have a

more 'arty' reputation - even though they've looked after Motorhead! Unfortunately, many of the more conventional people in production and management can be freaked out by something unusual!

"The Blow Monkeys are a very serious political band, and that's another aspect you have to bear in mind when you're doing the lights. They are a band with a message and if they are singing a serious song, you shouldn't be flashing lights about which can detract from the words.

"There are a lot of cues in the show, about 500; some of which I obviously use twice. I've made things more complicated for myself than I need to, but I really care about this show and I'm putting a great deal of effort into it. I think that's it harder to do a cue show than flashing lights. I have to know the words to most of the songs for my cueing, especially when using slides. It's vital that I'm not distracted when operating the board. Fortunately, as I'm not using follow spots, I only have to wear headphones when cueing the slides.

"I believe that it's important to have a good relationship with the sound monitor, because you've got your floor lights all over his stage. Also with the out-front sound engineer, so you can work on effects with him. It's important for me to hear certain things through the mix, like the cymbals, as I often change on either them or the saxophone.

"Robert and I chose the slides from the artwork of their current album, and they are really quite surreal. I've had to use front projection with an ordinary carousel projector, so the slides are a little dim. As a result, I have to keep the lights at a low level. Sometimes we use them at a bit of an angle, so you get some distortion - which can look great. I try to create an ambience on stage with slides, which is something you can do with The Blow Monkeys and it is something which they appreciate. Occasionally, when you approach people and say that you want to create an 'atmosphere' and provide drama, they look at you as if you were from another planet. This was a problem that I came up against on the last tour where the group involved just wanted the lights flashed on and off, which I find very boring. Although, on the other hand, I do flash them for one of The Blow Monkeys' numbers 'Wait', but after seven theatrical and moody sets, it then has maximum impact. On a small rig, as soon as you start flashing lights on the first number, you've lost it. On a small rig, you've got to continually think of things that are visually stimulating and different.

"My ambition is to work for arty-type acts with fairly large budgets, and I would love the chance to use Vari-Lites. Chris and I have a bet on as to who will get to Maddison Square Gardens first! I would also like the chance to do Simple Minds as well as Tanita Tikaram, because she is very much my style of lighting. I could do a brilliant show for her! I have a lot of respect for Abby Rosen, as she has taught me an awful lot. Her lighting and attitude is brilliant and she is a very diplomatic person. The chance to discuss with another woman in the business is confidence boosting. Getting paid a great deal of money is not the most important thing to me at the moment. I would rather do a tour which doesn't pay quite so well, but which I get personal satisfaction from."

After seeing The Blow Monkeys show at the University of East Anglia, I arranged another interview with Louise and her friend, Chris Ingram, who works for Electrotec in London. Chris, at the age of 20, is probably one of the youngest sound engineers in the country. Originally he was at Kingston Polytechnic studying for a degree, whilst working for the Poly's technical services to earn extra cash. Chris went on to work for a PA company, PSS, humping boxes. Because they were a small company, he got into engineering at an early stage.

Eventually, he gave up his degree course and

got hold of a full time job at John Henrys setting up the rehearsal rooms. One of the PA personnel, Bob Lopez, soon recognised that Chris knew what he was doing and persuaded John to let him go out with the rigs. At John Henrys, Chris met many important people, but when he was offered The Pasadenas tour, he had to make the decision to leave. He is now working for Electrotec, a large American company who have a base in England, in order to offer the same equipment, same cabinets, same desks and same effects on both sides of the Atlantic. He works on a freelance basis repairing equipment for them when he's not away on tour.

Louise and Chris first met in Russia where she was doing the dimmers for Big Country, and Chris was working on power and monitors for the Russian support band. Shortly afterwards, they worked together on The Pasadenas, Chris on monitors and Louise designing the lights. At the beginning of the tour, Chris would complain a lot about the number of floorlights Louise had all around his wedges and monitors, but differences resolved, by the end of the tour they were firm friends. They were the two youngest people on the tour, and with most of the others being well over 30, the age gap caused a great deal of conflict! Louise and Chris feel that they were criticised for both their lack of experience and their wish to experiment with new ideas.

**Louise:** "The older people were generally very inflexible. They thought that because you were young, you must be a spoilt brat or an upstart. They won't listen to your way of doing things even if it is better than the way they've been doing things for 20 years. On The Pasadenas tour we were dealing with people whose only way of articulating themselves was at full volume. There was an awful lot of shouting and accompanying high stress levels. There was so much tension, it was difficult to relax and it's particularly important for the engineers to be relaxed during the show.

"I was lucky to have my two bosses, Colin and Pete, back me up all the way and give me moral support, but Chris didn't really have anybody. It's really unfair to have to work under those conditions. At the end of the tour I was absolutely devastated as I had put so much into it and I feel I really cared about the show, unfortunately, I was continually being put down. As I haven't travelled up and down the M1 in transit vans and slept in the back of three tonners for fifteen years prior to my career taking off, it's not considered good that I am a lighting designer already. The reason why Chris and I are here because we are good at it - otherwise people wouldn't keep employing us.

**Chris:** "If you've only been in the business for two years, you're not going to have a list of people that you've worked with as long as your arm. If you have, it proves that you're not very good as no-one has seen fit to keep you on. I've just heard that I'm going to America this summer with The Outfield doing monitors which is something that I've been after for quite a while. Their manager was surprised when told my age, especially as I've done quite well for myself. I've looked after a couple of shows for Sinae O' Connor, I've rigged on All About Eve and Aswad and I did the soul set at the Mandela gig, where I was interviewed by the BBC for being the youngest engineer. When I was working in John Henrys' rehearsal rooms, I worked with people like Prince, Mick Jagger and Terence Trent D'Arby. Although I'm mainly a monitor man, I do the front sound for a couple of bands called Wild Frontiers and Wings of Fire.

"The Pasadenas tour was the worst tour that I've ever been on. I went straight to it from doing All About Eve where I was rigging the monitor system, which was a very relaxed and easy tour. It got to the stage on The Pasadenas tour where I walked out on one gig because I had had enough. I realise that wasn't very professional, but it is dif-

difficult to do your job properly when you are constantly being wound up."

**Louise:** "The saddest thing is that we both started the tour with such enthusiasm and we ended up completely demoralised. It's really bad when it gets you down that much, but it seems that many people have to go through it. There's an element that regard giving you a hard time as an initiation test and I think it's pointless."

**Chris:** "The intimidation would even follow you on to the bus after a show when all you wanted to do was relax."

**Louise:** I've been told that these attitudes are gradually fading out, and that the older generation are 'dying off' - but I feel that they are still very much in evidence. It sounds really unconstructive to 'slag people off' because they've been around for a long time and they obviously do know a lot, but, on the other hand, this attitude still persists. They come from an era where you could shout and get things done. Now the standards are much higher, you have to be much more technically qualified. You can't get a job these days because you're a mate of the band. People coming into the business are doing so on technical merit.

"Chris and I have our whole careers stretching out in front of us, while for some, their careers are nearly over. Some people resent the fact that you have a future, particularly if they have been grafting for years and have been getting nowhere."

**Chris:** "We started with computerised desks, digital effects and so on where a much higher level of technology is involved. They started in the days of minimal equipment and stereotyped roadies. Louise was surprised this afternoon to find me repairing desks which have been out all year on tour. There are a lot of people in the sound business who wouldn't know where to start repairing a desk. You have to be much more technically proficient these days. Ten years ago sound desks were not as large as they are now and as the business goes on, they'll get more complex and more computerised."

"I don't want to do sound all my life as I hope to eventually move into production management. At the recent Leeds University Rag Ball, I was brought in to do dimmers for the lighting company. There were some comments from my friends in the sound business about prostituting myself - but it's good to learn about all sides of the business, especially if you want to get into management, because then you'll understand people's problems better."

**Louise:** "I didn't really have much regard for sound until I met Chris because he explains to me how it works. He started me thinking that as a lighting designer, I could also do things with sound people if they were prepared to have a go. It's an avenue I'd like to explore further as it has great potential. There isn't enough communication between sound and lighting people. There's always been a traditional rivalry between the two factions which sometimes becomes too intense."

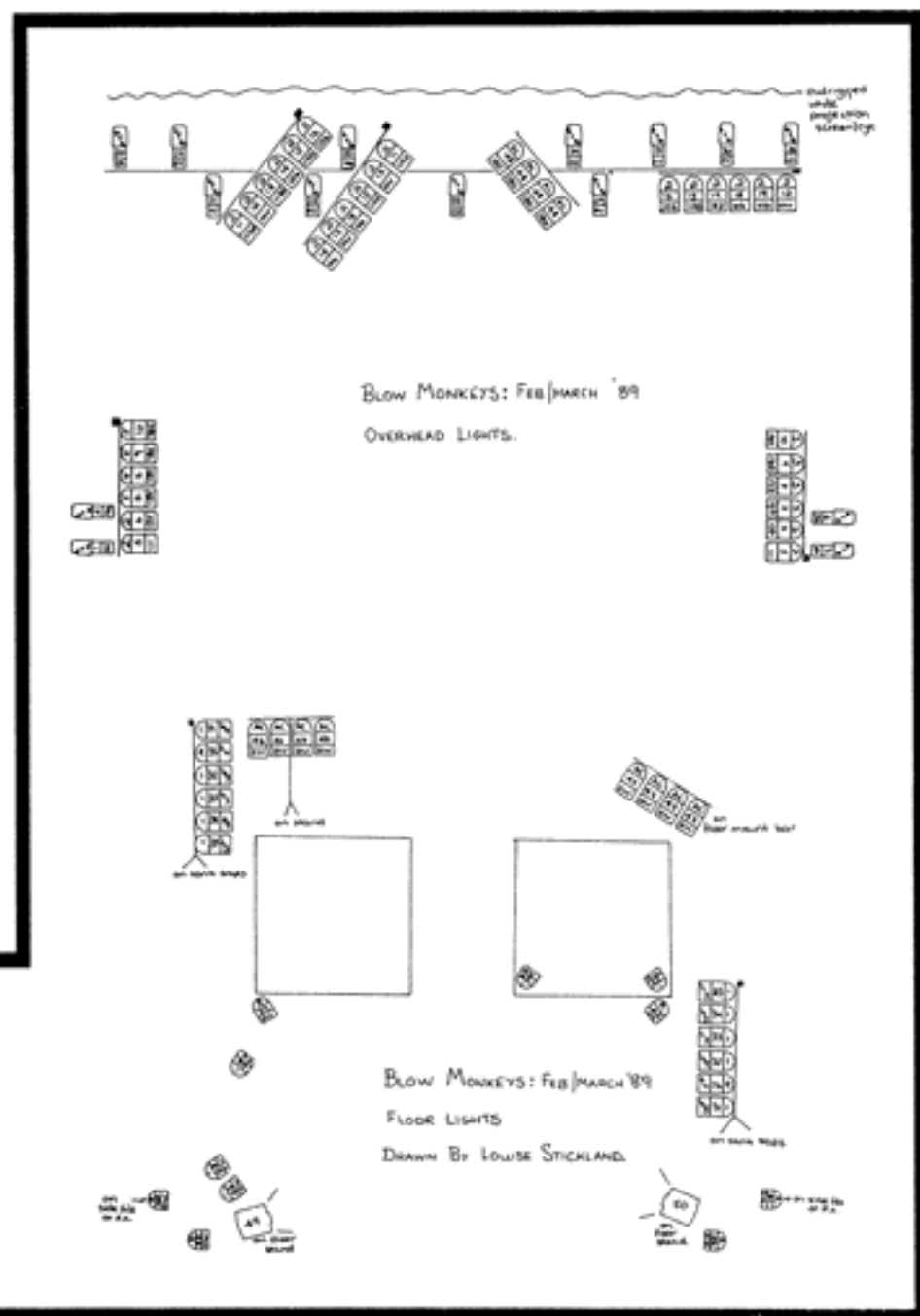
"Although I've got quite interested in sound I can only relate to it in artistic terms whereas Chris always talks in technical terms. I'm reasonably technically competent, but only in so far as putting up a lighting rig and making it work. I'd never be able to do sound or be interested enough to, I'm into visual things. Sound can't create the same sort of drama that lighting can."

**Chris:** "Yes it can!"

**Louise:** "Not so obviously or blatantly. I think that there should be a whole new field with sound and lighting people working together. Chris really knows how to use effects which can give you in-



Louise Stickland (left) with Chris Ingram.





The Blow Monkeys at the Town & Country Club, 1st March 1989.

photos: Chris Ingram

interesting lights, with sound cues to match lighting effects or vice versa.

"Unfortunately, in what's supposed to be a progressive industry, old attitudes are taking a long time to die out. Rock 'n' roll is supposed to be so revolutionary; you're supposed to be able to express yourself in various different ways - politically, socially, morally. But attitudes towards women in the business, for instance, are very old fashioned and not at all progressive."

## THE PASADENAS

### Monitor Rig

#### Channel Allocations:

- Mix 1 = stage left sidefills
- 2 = stage right sidefills
- 3 = vocals (via 5 interlinked wedges)
- 4 = horns
- 5 = keys
- 6 = bass
- 7 = guitar
- 8 = drums

Aux send 1 - Percussion

Aux send 2 - Reverb send

#### FX:

- Drawmer noise gates on Kick and Snare drums
- Graphic EQ on all mixes except percussion
- Graphic on 2 of the vocal inputs

#### Equipment:

- Soundcraft 800B console
- Roadstar own design wedges:
- 6 off 2x12" bi-amped: 5 = vocals
  - 1 = engineer's 'listen wedge'
- 4 off 1x15" bi-amped: 2 = keys
  - 2 = horns
- 2 off 1X15" passive for bass, guitar and percussion
- 2 off 2X15" bi-amped, for drums
- Roadstar own design sidefill cabinets,
  - 1x1.5 kW each side



## EQUIPMENT ON TOUR

The Wonder Stuff, British Tour  
March 13-24 1989

Lighting designer: Carl Burnett

Equipment: Street Light Designs

Control:

1 x Celco 60 Major

72 way Celco Series 2 dimmers

Equipment:

- 14 x bars 6 Thomas Par 64
- 4 x frames of 6 Par 64
- 12 x Par 64 floors
- 1 x string Par 64 ACL
- 2 x strobes
- 5 x Mode flash strobes
- 5 x sections Thomas truss
- 2 x 1 ton Verlinde motors
- 2 x Genie super lifts (ground supports)
- 2 x Genie has hoists
- 2 x crew (Carl and Neil)

# SR PLUS

*for Sound Reinforcement!*



■ *The SR plus Series from Allan & Heath – a range of five Mixing Consoles designed for live sound presentation for Theatres, Churches, Leisure Centres, Concert Halls and Product Launches. For touring and fixed installations SR plus offers quality construction by a famous maker at a budget price.*

*The Allen & Heath Live Sound range also offers Sceptre Rack Mount mixers, SRC modular consoles and our top of the line system – Saber PA.*

**Allen & Heath –  
Building on Success.**

**UK**

69 Ship Street  
Brighton BN1 1AE  
Tel: 0273 23346  
Fax: 0273 821767  
Telex: 878235 MBIAHB G

**USA**

5 Connair Road  
Orange  
Connecticut 06477  
Tel: (203) 795 3594  
Fax: (203) 795 6814

**ALLEN  
&  
HEATH**

**ACTION LIGHTING LTD.**  
367 Unbridge Road, London W3 9HT.  
Tel: 01-993 1684  
Fax: 01-992 0212 Telex: 894452  
Contact: Paul De Ville

**ADAM HALL SUPPLIES LTD.**  
1 The Cordwainers, Temple Farm Ind. Estate,  
Sutton Rd, Southend-on-Sea, Essex SS2 5RU.  
Tel: (0702) 613922  
Fax: (0702) 617168 Telex: 995029  
Contact: John Allondale

**ADDA SUPER CASES LTD.**  
26 Mead View, Oakington,  
Cambridge CB4 5BH.  
Tel: (0223) 233101  
Fax: (0223) 237405  
Contact: Monica Saunders

**AJS THEATRE LIGHTING & STAGE  
SUPPLIES LTD.**  
Hightown Ind. Estate, Crow Arch Lane,  
Ringwood, Hants BH24 1ND  
Tel: (0425) 470888 (Sales)  
Tel: (0425) 470088 (Hire)  
Fax: (0425) 471398 Telex: 418405  
Contact: Simon Sketchley

**ALLEN & HEATH**  
69 Ship Street, Brighton BN1 1AL.  
Tel: (0273) 23346  
Fax: (0273) 821767 Telex: 878235  
Contact: Paula Jackson

**AMARK VIDEO DESIGNERS**  
Anchor House, Warwick Place,  
Cheltenham, Glos GL52 2NP.  
Tel: (0242) 577930  
Fax: (0242) 570131  
Contact: Nick Carter

**ANYTRONICS LTD.**  
Unit 6, Hillside Industrial Estate,  
London Road, Horndean, Hants PO8 0BL.  
Tel: (0705) 599430  
Fax: (0705) 598723 Telex: 869185  
Contact: Bob Hall

**ASTRALLOY INTERNATIONAL LTD.**  
Unit 1, Manor Road, Leeds LS11 5PZ  
Tel: (0532) 465331  
Fax: (0532) 421342 Telex: 55113  
Contact: Mark Reed

**ASTRON**  
Unit 2, Barrowmore Estate,  
Great Barrow, Cheshire CH3 7JS.  
Tel: (0829) 41262  
Fax: (0829) 41292 Telex: 61556  
Contact: Gary Peacock

**AUDREIC LTD.**  
6 Hornsby Square, Southfields Industrial  
Park, Laindon West, Essex SS15 6SD.  
Tel: (0268) 479198/9  
Fax: (0268) 541640  
Contact: Phil Price

**AVINUE ARTISTES SOUND & LIGHT LTD.**  
47 The Polygon, Southampton SO1 2BP.  
Tel: (0703) 227077  
Fax: (0703) 334625  
Contact: Terence Rolph

**AVITEC ELECTRONICS (UK) LTD.**  
80/81 Walsworth Road, Hitchin,  
Herts SG4 9SL.  
Tel: (0462) 58961  
Fax: (0462) 31019 Telex: 825682  
Contact: Tony Kingsley

**AVOLITES PRODUCTION CO. LTD.**  
184 Park Avenue, London NW10 7XL.  
Tel: 01-965 8522  
Fax: 01-965 0290 Telex: 24652  
Contact: Derek Halliday

**BATMINK LTD.**  
Clastonbury Warehouse, Silver Street,  
Clastonbury, Somerset BA6 8BT.  
Tel: (0458) 33186  
Fax: (0458) 35320 Telex: 449530  
Contact: D. Churches

**BOSE (UK) LTD.**  
Unit C2, Trinity Trading Estate,  
Sittingbourne, Kent ME10 2PD.  
Tel: (0795) 75341  
Fax: (0795) 27227 Telex: 965559

**CALNE CABINET MAKERS LTD.**  
Unit 6, Calne Business Centre,  
Harris Road, Porte Marsh, Calne,  
Wiltshire SN11 9PT  
Tel: (0249) 812656  
Contact: Keith Rees

**CCT THEATRE LIGHTING LTD.**  
Windor House, 26 Willow Lane,  
Mitcham, Surrey CR4 4NA.  
Tel: 01-640 3366  
Fax: 01-648 5263  
Contact: David Mannes

**CELCO LTD.**  
3 Bellingham Road, London SE6 2PN.  
Tel: 01-698 1027  
Fax: 01-661 2017 Telex: 927624  
Contact: Colin Whitaker

**CELESTION INTERNATIONAL LTD.**  
Foshill Road, Ipswich, Suffolk IP3 8P.  
Tel: (0473) 723131  
Fax: (0473) 729662 Telex: 98365  
Contact: M. Claydon

**CEREBRUM LIGHTING (SALES & HIRE) LTD.**  
The Stage and Effects Lighting Centre,  
168 Chiltern Drive, Surbiton,  
Surrey KT5 8LS.  
Tel: 01-390 00510/101-390 4841  
Fax: 01-390 4938 Telex: 892337  
Contact: Mike Fisher

**CITRONIC LTD.**  
Hallsax Road, Bowenhill Estate,  
Nettisham, Wiltshire SN12 6UB.  
Tel: (0225) 705600  
Fax: (0225) 709639 Telex: 444131  
Contact: Mike Gerrish

**CLOUD ELECTRONICS LTD.**  
517-515 Stanforth Road, Sheffield S9 4RA.  
Tel: (0742) 447051  
Fax: (0742) 425462 Telex: 547938  
Contact: Roy Millington

**COURT ACOUSTIC SALES LTD.**  
29 Beethoven Street, London W10 4LG.  
Tel: 01-960 8178  
Fax: 01-968 6053  
Contact: Bill Kelsey

**CYBERDESCENCE LIGHTING LTD.**  
9001 High Road, Finchley, London N12 8XJ.  
Tel: 01-446 4248  
Fax: 01-446 1121  
Contact: D. S. Trew

**DIAL SOUND AND LIGHTING**  
Unit 4C, Wharfedale Road, Lutwary  
Trading Estate, Bradford, West Yorks BD4 6SQ.  
Tel: (0274) 653600  
Fax: (0274) 651190  
Contact: Andy Blackwell

**DISCO & CLUB TRADE INTERNATIONAL**  
15 High Street, Sandridge, St. Albans,  
Herts AL4 9DD.  
Tel: (0727) 43995  
Fax: (0727) 44417 Telex: 925859  
Contact: Gerry Gilbert

**DISCO MIRROR LTD.**  
Suite 2, Waterloo Place, Watson Square,  
Stockport, Cheshire SK1 3AZ.  
Tel: 061-429 7803  
Fax: 061-480 8896  
Contact: Colin Gawne

**DISCOMIX CLUB LTD.**  
PO Box 89, Slough, Berks SL1 8NA.  
Tel: (06286) 67276  
Fax: (06286) 67057  
Contact: Marion Pickard

**DONMAR LTD.**  
22 Shorts Gardens, Covent Garden,  
London WC2H 9AJ.  
Tel: 01-240 35270/1-836 3801  
Fax: 01-240 0961 Telex: 264892  
Contact: Phil Wright

**EFFECTS LIGHTING (LEICESTER) LTD.**  
928 Melton Road, Thurmasson, Leicester LE4 6CR.  
Tel: (0533) 601271  
Contact: Malcolm Robertson

**EUROLIGHT LTD**  
Unit 8, Maple Industrial Estate,  
Maple Way, Feltham, Middx TW13 7AW.  
Tel: 01-751 6400  
Fax: 01-751 3334 Telex: 888941  
Contact: Nick Mobbay

**EXCITING LIGHTING & DECOR**  
9 Silverbirch Crescent, Bangor, Co. Down,  
Northern Ireland BT19 2DX.  
Tel: (0247) 462338

**FANTASIA SOUND & LIGHTING**  
16 Chalfonts Hill, Seppole Claydon  
Buckinghamshire MK18 2PL.  
Tel: (029 673) 8255  
Contact: David Laszlo

**FARRAH**  
Unit 7, St. Georges Industrial Estate,  
Richmond Rd, Kingston, Surrey KT2 5BQ  
Tel: 01-549 1787  
Fax: 01-549 6204 Telex: 945114  
Contact: Kevin Swain

**FORMULA SOUND LTD.**  
Suant Road, Ashton Road, Bredbury,  
Stockport, Cheshire SK6 2SR.  
Tel: 061-494 5650.  
Fax: 061-494 5651.  
Contact: Sandra Cockell

**FURZE THEATRE PRODUCTS**  
Traffic Street, Nottingham NG2 1NE.  
Tel: (0602) 863471  
Fax: (0602) 862546  
Contact: Roy Holmes

**GENERAL ELECTRIC USA.**  
628 Prospect Way, Royal Oak Industrial  
Estate, Daventry, Northants NN11 5PL.  
Tel: (0327) 77683  
Fax: (0327) 76386  
Contact: Keith Husley

**GLANTRE ENGINEERING LTD.**  
2 Crennyl Road, Reading, Berks RG1 8NQ.  
Tel: (0734) 509711  
Fax: (0734) 505808 Telex: 846522  
Contact: Derek Gilbert

**HARMAN (AUDIO) UK LTD.**  
M8 Street, Slough, Berks SL2 5DD  
Tel: (0753) 76911  
Fax: (0753) 35306 Telex: 849069  
Contact: Guy Hawley

**HARRISON INFORMATION  
TECHNOLOGY LTD.**  
Unit 3, Button End Industrial Estate,  
Harston, Cambridge CB2 5HX.  
Tel: (0223) 871711  
Fax: (0223) 872094 Telex: 81667  
Contact: Hazel Simpson

**HAZEL GROVE MUSIC COMPANY LTD.**  
Bulkeley House, Stockport Road, Cheadle,  
Cheshire SK8 2AA.  
Tel: (061 491) 9068  
Fax: (061 428) 5595 Telex: 668017  
Contact: Malcolm Rusby

**HIPROFILE CONCEPTS LTD.**  
Station House, Station Avenue, Helsby,  
Cheshire WA6 0AG.  
Tel: (09282) 3604  
Fax: (09282) 5377  
Contact: John Ellis

**HILL AUDIO LTD.**  
Hollingbourne House, Hollingbourne,  
Maidstone, Kent ME17 1QJ.  
Tel: (062 780) 555  
Fax: (062 780) 550 Telex: 966641  
Contact: R.G. Hanson

**ICELECTRICS LTD.**  
22 Woolmer Way, Bordon, Hants GU35 9QF.  
Tel: (04203) 87126  
Fax: (04203) 89113 Telex: 859886  
Contact: Rob Peck

**INFINITY INTERNATIONAL**  
Unit 6D Newmarket Lane, Felnes Ind.  
Estate, Leeds LS9 0SH.  
Tel: (0532) 406755  
Fax: (0532) 401479  
Contact: Steve Greenwood

**JAMES THOMAS ENGINEERING LTD.**  
Station Approach, Pershore Trading Estate,  
Worcestershire WR10 2DB.  
Tel: (0386) 553002  
Fax: (0386) 552321 Telex: 336808  
Contact: Mervyn Thomas

**JASCO SOUND & LIGHT LTD**  
Unit 5, 315 Summer Lane, Hockley,  
Birmingham, B19 3RH.  
Tel: 021-359 7261  
Fax: 021-359 7262  
Contact: Joe Sharpe

**J.E.M. SMOKE MACHINE CO. LTD.**  
Vale Road Industrial Estate  
Boston Road, Spilsby, Lincs. PE23 5HE.  
Tel: (0790) 54050  
Fax: (0790) 54051 Telex: 37207  
Contact: Ann Savage

**R.G. JONES SOUND ENGINEERING**  
Beulah Road, Wimbledon, London SW19 35B.  
Tel: 01-540 9681  
Fax: 01-542 4368 Telex: 8814917  
Contact: David Dyer

**LAMBA PLC.**  
Albion Mills, Albion Road, St. Albans,  
Herts AL1 5JB.  
Tel: (0727) 40527  
Fax: (0727) 37811 Telex: 265871  
Contact: Neil Drain

**LASER CREATIONS LTD.**  
55 Methyrs Terrace, Barnes,  
London SW13 9DL.  
Tel: 01-741 5747  
Fax: 01-748 9879 Telex: 8954111  
Contact: Lorraine Ludman

**LASERPOINT LTD.**  
46/45 Clifton Road, Cambridge CB1 4FD.  
Tel: (0223) 212331  
Fax: (0223) 214085  
Contact: Simon Mobered

**LASER SYSTEMS LTD.**  
Unit 11, Llanerham Park, Cwmbran,  
Gwent NP44 3AX.  
Tel: (0633) 838280  
Fax: (0633) 5002 Telex: 497072  
Contact: Geoff Jones

**LE MAITRE LIGHTING & EFFECTS.**  
316 Parley Way, Croydon CR0 4XJ.  
Tel: 01-686 9258  
Fax: 01-680 3743 Telex: 883220.  
Contact: Lila Franklin

**LEAMINGTON SIGHT & SOUND.**  
Unit 17, Rigby Close, Heathcote Ind.  
Estate, Leamington Spa, CV34 6JF.  
Tel: (0926) 833617  
Fax: (0926) 883120  
Contact: Peter Maddison

**LIGHT ENGINEERING LTD.**  
64 Eden Road, Walthamstow, London E17 9JY.  
Tel: 01-520 23367  
Fax: 01-509 1332 Telex: 898005  
Contact: Stephen Demeza

**LIGHTFACTOR LTD.**  
11 Fairway Drive, Fairway Industrial Estate,  
Greenford, Middlesex UB6 8PW.  
Tel: 01-575 5566  
Fax: 01-575 8678 Telex: 935030  
Contact: Mick Hannaford

**LIGHTING AND SOUND SERVICES**  
237 Chester Road, Helsby,  
Cheshire, WA6 0AD.  
Tel: 092-82 3502  
Contact: Phil Johnson

**LIGHTNING SOUND AND LIGHT**  
410-412 Beamwood Road, Warley,  
Birmingham, B66 4EX.  
Tel: 021-429 6884  
Fax: 021-429 6882  
Contact: Keith Julian

**LIGHT WORKS LTD.**  
2a Greenwood Road, London E8 1AB.  
Tel: 01-249 3627  
Fax: 01-254 0306  
Contact: Charlie Paton

**LUTON SOUND & LIGHTING LTD.**  
75 & 86-88 Wellington Street, Luton,  
Bedfordshire LU1 5AA.  
Tel: (0582) 413733  
Fax: (0582) 391102 Telex: 825562  
Contact: Eamon Hailes

**LYNX LIGHTING LTD.**  
9 and 12 Bartlett Court, Lynx Trading Estate,  
Yeovil, Somerset BA20 2ND.  
Tel: (0935) 29290  
Fax: (0935) 79439  
Contact: Nick Searle

**LYTEMODE LTD.**  
3 Dawson Road, Mount Farm,  
Milton Keynes MK1 1UP.  
Tel: (0908) 644366  
Fax: (0908) 644166  
Contact: Ron Rook

**MALHAM LTD.**  
65-75 Malham Road, London SE23 1AJ.  
Tel: 01-699 0917  
Contact: James Lynon

**MARQUEE AUDIO LTD.**  
Shepperton Studio Centre, Studios Road,  
Shepperton, Middx TW17 0QD.  
Tel: (0932) 566777  
Fax: (0932) 568989 Telex: 894278  
Contact: Spencer Brooks

**MARTIN SOUND & LIGHT.**  
Empress House, 70 Blackstock Rd, London  
N4 2DR.  
Tel: 01-359 1298  
Fax: 01-226 9994 Telex: 261507  
Contact: Martin Prescott

**METEORITES PRODUCTIONS LTD.**  
4 Blotze Way, Borehamwood,  
Hertfordshire WD6 1BS.  
Tel: 01-207 5111  
Fax: 01-207 3655 Telex: 265871  
Contact: Ronan Wilson

**MICO LIGHTING LTD.**  
Troydale Lane, Pudsey, Leeds LS28 9LD.  
Tel: (0532) 567113  
Fax: (0532) 572358 Telex: 558469  
Contact: Michael Kirching

**MODE ELECTRONICS LTD.**  
Chelving Lodge, Tonwell, Nr. Ware,  
Hertfordshire SG12 0LB.  
Tel: (0920) 2121  
Fax: (0920) 553644 Telex: 817837  
Contact: John Bradbrook

**MULTIFORM LIGHTING**  
Bell Lane, Lickfield,  
East Sussex TN22 1QL.  
Tel: 0825 3348  
Contact: Ian Price-Smith

**MUSHROOM LIGHTING SERVICES LTD.**  
76 Terrier Road, Moulton Park Ind. Estate,  
Northampton NN3 1AX.  
Tel: (0604) 494866/494991/790900  
Fax: (0604) 491110  
Contact: Paul Butler

**MUSICRAFT LTD.**  
303 Edgware Road, London W2 1BN.  
Tel: 01-402 2898  
Fax: 01-723 8238  
Contact: Jack Saund

**MYSTICAL LIGHTING LTD.**  
23 Low Farm Place, Moulton Park  
Industrial Estate, Northampton NN3 1HY  
Tel: (0604) 491737  
Contact: Marie Cochrane

**NIGHT FLIGHT SOUND & LIGHTING**  
Torwood, Bowling, Strathclyde,  
Glasgow G60 5AB.  
Tel: (0389) 79261  
Fax: (0389) 79260  
Contact: Bill Smith

**N.J.D. ELECTRONICS LTD.**  
10 Ascot Industrial Estate, Lenton Street,  
Sandiacre, Nottingham NG10 5DJ.  
Tel: (0602) 394122  
Fax: (0602) 490453 Telex: 37605  
Contact: Keith Greenwood

**NORTHERN LIGHTS**  
89 Scofield Road, Lancaster LA1 4SD.  
Tel: (0524) 62634  
Fax: (0524) 37619  
Contact: Ray Wilkinson



**OHM INDUSTRIES LTD.**  
Unit 3b, Wellington Close, Parkgate Ind.  
Estate, Knutsford, Cheshire WA16 8DL.  
Tel: (0563) 54641  
Fax: (0563) 55641  
Contact: Colin Hill

**OPTIKINETICS LTD.**  
38 Cromwell Road, Luton LU1 1DN.  
Tel: (0582) 411413  
Fax: (0582) 400613 Telex: 825920  
Contact: Neil Rice

**OPUS AMPLIFICATION.**  
35-37 Parker Lane, Burnley,  
Lancashire BB11 2BU.  
Tel: (0282) 20795  
Fax: (0282) 411204 Telex: 63201  
Contact: Jim Garlick

**ORANGE DISCOTHEQUE CENTRE LTD.**  
734736 Oxford Road, Reading,  
Berkshire RG1 1BH.  
Tel: (0734) 50996/589453  
Fax: (0734) 507072  
Contact: Simon Spragg

**ORTOFON (UK) LTD.**  
Denmark House, Tavistock Ind. Estate,  
Ruscombe, Twyford, Berks RG10 9N.  
Tel: (0734) 343621  
Fax: (0734) 340214 Telex: 848738  
Contact: Chris Broadbent

**OXTRON DIGITAL SYSTEMS**  
Sucklings Yard, Church Street,  
Ware, Hertfordshire SG12 9EN.  
Tel: (0920) 60542  
Fax: (0920) 60543  
Contact: Geoff Kingdon

**P.A. INSTALLATIONS LTD.**  
26-28 Inkerman Street, Llanelli, Dyfed SA11 1SA.  
Tel: (0554) 752490  
Fax: (0554) 777848  
Contact: Paul Adams

**PANCAN**  
83 Gloucester Road, Brighton,  
East Sussex BN1 4AP.  
Tel: (0273) 672043  
Fax: (0273) 682674 Telex: 9312130131  
Contact: Margaret McLaren

**PAR OPTI PROJECTS LTD.**  
Unit 9, The Bell Industrial Estate,  
Cunnington St, Chewick Park, London W4 5EP.  
Tel: 01-995 5179  
Fax: 01-994 1302 Telex: 933718  
Contact: Paul Raymond

**PEGASUS SOUND & LIGHT**  
23-25 Cannongate, The Royal Mile,  
Edinburgh EH8 8BX.  
Tel: 031-556 1300  
Contact: David Hunter

**PICKERING (UK) DISTRIBUTION**  
24 Gillygate, York YO3 7EQ.  
Tel: (0904) 642463  
Contact: David Vickers

**PLAYLIGHT HIRE LTD.**  
15 Park Street, Swinton,  
Manchester M27 1UC.  
Tel: 061-793 5848  
Fax: 061-794 5651  
London: 01-965 8188  
Leeds: 0532 461148  
Birmingham: 021-328 1591  
Contact: Nick Rowland (Manchester)

**POWERDRIVE DRUM CO. LTD.**  
Unit A11, Cherycourt Way,  
Stanbridge Road, Leighton Buzzard,  
Bedfordshire LU7 8LH.  
Tel: (0525) 370292  
Contact: K. Dowzell

**POWERHOUSE HIRE**  
(Rainbow Discotheques)  
247 Oakleigh Rd Nth, Whetstone, London  
N20 0TX.  
Tel: 01-639 9022/01-368 9852  
Fax: 01-368 6229 (South)  
Contact: Norman Snithens (South)  
Contact: Robin Smith (North)

**PRESENTATION CONSULTANTS LTD.**  
168 Chiltern Drive, Surbiton,  
Surrey KT5 8LS.  
Tel: 01-390 4841  
Fax: 01-390 4938  
Contact: John Lethbridge

**PULSAR LIGHT OF CAMBRIDGE LTD.**  
Hensley Road, Cambridge CB1 3JA.  
Tel: (0223) 66796  
Fax: (0223) 460708 Telex: 81697  
Contact: Derrick Saunders

**RAINBOW INTERNATIONAL**  
448 Ubridge Road, Shepherds Bush,  
London W12 0NS.  
Tel: 01-743 9999  
Contact: Mervyn Thomas

**RAMSA**  
(Panasonic Consumer Electronics UK)  
300-318 Bath Road, Slough, Berks SL1 6BH.  
Tel: (0753) 34522  
Fax: (0753) 38781 Telex: 847652  
Contact: Ian Sharpe

**R.K. LIGHTING LTD.**  
4 Sheep Hill, Streatham, London SW16 1UL.  
Tel: 01-769 5714  
Fax: 01-677 7463 Telex: 896559  
Contact: K. M. Ahmed

**BOSCOLAB LTD.**  
Blanchard Works, Kingley Bridge Road,  
Sydenham, London SE26 5AQ.  
Tel: 01-639 2300  
Fax: 01-639 3153 Telex: 8953352  
Contact: Joanne Butler

**BOSULA LTD.**  
11 Fairway Drive, Fairway Industrial Estate,  
Greenford, Middlesex UB6 8PW.  
Tel: 01-575 5566  
Fax: 01-575 8678 Telex: 933030  
Contact: Mick Harvford

**SCOTT SOUND SYSTEMS**  
451 Handsworth Rd, Sheffield, S. Yorks S13 9QQ.  
Tel: (0742) 580722  
Fax: (0742) 758157  
Contact: G. Bibson

**SCREENS ETC.**  
40 Weathill, Epsand, Surrey, GU8 6DQ.  
Tel: (0252) 702757  
Fax: (0252) 702823  
Contact: Rod Mountain

**SHUTTLESOUND LTD.**  
Unit 13, Osiers Estate, Osiers Road,  
Wandsworth, London SW18 1EJ.  
Tel: 01-871 0966  
Fax: 01-870 9300 Telex: 27670  
Contact: Tony Oates

**SICK SYSTEMS**  
Portland Street North, Leek,  
Staffs ST13 6LA.  
Tel: (0538) 372109  
Fax: (0538) 381315  
Contact: Paul Marsh

**SMITHFIELD ELECTRONICS**  
1 West Street, Hooile, Chester CH2 3PU.  
Tel: (0246) 49062  
Contact: Chris Aberdeen

**SOUND CREATIONS**  
8 Britannia Road, Worcester WR1 5BQ.  
Tel: (0905) 21707  
Fax: (0905) 21163  
Contact: Eddie Davies

**SOUND ELECTRONICS LTD.**  
124 Junction Road, London N19 5LB.  
Tel: 01-272 6044  
Contact: Pat Murray

**SOUND ELECTRONICS (NEWCASTLE) LTD.**  
201-215 Jesmond Road,  
Newcastle Upon Tyne NE2 1LA.  
Tel: 091-281 4248  
Fax: 091-281 1194  
Contact: Ray Scott

**SOUNDTECH LTD.**  
137 Western Rd, Hockley, Birmingham B18 7QD.  
Tel: 021-523 6344  
Contact: Chris Jones

**SPECIALIST LAMP DISTRIBUTORS LTD.**  
10 Sovereign Enterprise Park, King William Street,  
Salford, Manchester M5 2LP.  
Tel: 061-873 7822  
Fax: 061-873 8089 Telex: 668168  
Contact: Ron Merchant

**SPOTLIGHT PUBLICATIONS LTD.**  
Greater London House, Hampstead Road,  
London NW1 7QJ.  
Tel: 01-387 6611

**SQUIRE LIGHT & SOUND LTD.**  
176 Junction Road, London N19 5QJ.  
Tel: 01-272 7474  
Fax: 01-263 4600 Telex: 9419153  
Contact: Ian Kirby

**STAGE TWO LTD.**  
197 Watford Road, Croxley Green,  
Rickmansworth, Herts WD3 3EH.  
Tel: (0923) 30789  
Fax: (0923) 55048  
Contact: Terry Douris

**STAR HIRE**  
Blackburn Hall, Milton Road, Thurlough,  
Bedfordshire MK44 2DG.  
Tel: (0234) 772233  
Fax: (0234) 772272 Telex: 825644  
Contact: Roger Barrett

**STARSTREAM AUDIO VISUAL LTD.**  
Party House, Mowbray Drive,  
Blackpool FY3 7JR.  
Tel: (0253) 302602  
Fax: (0253) 309000 Telex: 67426  
Contact: John Barnett

**STARLIGHT DESIGN (Light & Sound) LTD.**  
9 Alma Hill, Bourn, Cambs CB3 7SH.  
Tel: (09544) 8841  
Fax: (09544) 8846 Telex: 827547  
Contact: Graham Smith

**STRAND LIGHTING LTD.**  
Grant Way (off Syon Lane), Isleworth,  
Middlesex TW7 5QD.  
Tel: 01-560 3171  
Fax: 01-566 2103 Telex: 27976  
Contact: Russell Dunsire

**STUDIO 1 ELECTRONICS**  
The Gatehouse, Foley Trading Estate,  
Foley Street, Hereford HR1 2SF.  
Tel: (0432) 277067  
Contact: Bryan Morris

**SUPERWICK LIGHTS**  
119-121 Freston Road, Holland Park,  
London W11 4BD.  
Tel: 01-221 2322  
Fax: 01-227 8693  
Contact: Peter Clarke

**PLASA**

**Professional Lighting and Sound Association**  
7 Highlight House, St. Leonards Road, Eastbourne, Sussex BN21 3UH  
Telephone: (0323) 410335

Chairman: Rob Peck (Icelectrics Ltd.)  
Vice-chairman: Tony Akers (CZronic Ltd.)  
Treasurer: Kevin Hopcroft (ND Electronics Ltd.)  
Committee: Peter Brooks (Zero 88 Lighting Ltd.), Tony Kingsley (Avitec Electronics UK Ltd.), Roy Millington (Cloud Electronics Ltd.), Martin Prescott (Martin Sound & Light), Ken Sewell (Pulsar Light of Cambridge Ltd.), Marion Smith (Starlight Design).  
Sub-committee chairmen: Tony Akers (Standards), Martin Prescott (Membership), Tony Kingsley (Sound and PK).

For details of membership please write to:  
Tony Andrew, general secretary, at the Eastbourne office

**SUPERVISION INTERNATIONAL DISCOTHEQUE SERVICES LTD.**  
320 Munster Road, London SW6 6BH.  
Tel: 01-385 2383  
Fax: 01-386 9206  
Contact: Chris Bradbury

**TANNOY LTD.**  
The Bilton Centre, Coronation Road,  
Cressen Industrial Estate, High Wycombe,  
Buckinghamshire HP12 3SL.  
Tel: (0494) 450606  
Fax: (0494) 374311 Telex: 83251  
Contact: S. Harris

**TIC (Sound & Light) LTD.**  
Ludgate House, Ludgate Hill,  
Birmingham B3 1DX.  
Tel: 021-233 4262

**THE SOUND DEPARTMENT LTD.**  
Aikew Crescent Workshops,  
Aikew Crescent, London W12 9DF.  
Tel: 01-749 2124  
Fax: 01-749 8789  
Contact: Steve Smith

**THEATRE SOUND AND LIGHTING (SERVICES) LTD.**  
9 Wigton Place, Kennington, London SE11 4AN.  
Tel: 01-582 8009  
Fax: 01-820 9584  
Contact: Matthew Griffiths

**TOA ELECTRONICS LTD.**  
Tallon Road, Hutton Ind. Estate,  
Brentwood, Essex CM13 1TG.  
Tel: (0277) 233882  
Fax: (0277) 233966  
Contact: H. Greenaway

**TORYSOUND LTD.**  
137 High Street, Burton-on-Trent, Staffs DE14 1JZ.  
Tel: (0283) 45301  
Fax: (0283) 63539 Telex: 878723  
Contact: Steve Hallall

**TOMCAT ENGINEERING LTD.**  
Unit 24, Penhore Trading Estate,  
Penhore, Worcestershire WR10 2DD.  
Tel: (0386) 556640  
Fax: (0386) 554950  
Contact: Chris Cronin

**TRIPLE E LIMITED**  
Unit 58B, Tower Works, Riley Road,  
London SE1 3DG.  
Tel: 01-237 6354  
Fax: 01-237 7650  
Contact: David Edelstein

**TUNEWELL TRANSFORMERS LTD.**  
115A Myddleton Road, Wood Green,  
London N22 4NG.

Tel: 01-868 6044  
Fax: 01-868 0158  
Contact: Tony Heaney

**TURBOSOUND LTD.**  
Star Road, Patrige Green,  
West Sussex RH13 5EJ.  
Tel: (0403) 711447  
Fax: (0403) 710155 Telex: 878723  
Contact: Richard Frankson

**VOLT LOUDSPEAKERS LTD.**  
Benlow Works, Silverdale Road,  
Hayes, Middlesex UB8 3BW.  
Tel: 01-573 4260  
Fax: 01-573 4260  
Contact: David Lyth

**W.B. LIGHTING LTD. TIA COSMAR (UK)**  
4 Tenter Road, Moulton Park Industrial  
Estate, Northampton NN3 1PZ.  
Tel: (0604) 499331  
Fax: (0604) 499446 Telex: 312320  
Contact: Mike Wood

**WEMBLEY LOUDSPEAKER CO. LTD.**  
Aikew Crescent Workshops,  
Aikew Crescent, London W12 9DF.  
Tel: 01-743 4567  
Fax: 01-749 7957 Telex: 9413306  
Contact: Paul MacCallum

**WHARFEDALE LTD.**  
Sandfleas Way, Crossgates, Leeds,  
West Yorkshire LS15 8AL.  
Tel: (0532) 601222  
Fax: (0532) 600267 Telex: 556157  
Contact: Fred Clayton

**WIGWAM ACOUSTICS LTD.**  
St. Annes House, Eyecroft Avenue,  
Haywood, Lancs OL10 1QB.  
Tel: (0706) 687668/24547  
Fax: (0706) 65565 Telex: 265871  
Contact: Mike Spratt

**WIMEX LTD.**  
Compton House, 35 High Street, New Malden,  
Surrey.  
Tel: 01-949 2545  
Contact: Peter Merrick

**WYNNE WILSON GOTTLEUR LTD.**  
The Old Mission House, Ide Hill, Severnside,  
Kent TN13 6BZ.  
Tel: (0732) 73204  
Fax: (0732) 455905  
Contact: Tony Gottleaur

**ZERO 88 LIGHTING LTD.**  
Hart Road, St. Albans, Herts AL1 1NA.  
Tel: (0727) 33271  
Fax: (0727) 43676  
Contact: Freddy Lloyd

**&S**  
**Light & Sound Show**  
Olympia 2  
10-13 September 1989

Please send me more information about

Exhibiting in the 89 Light & Sound Show

Visiting the Show

Name \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Tel No. \_\_\_\_\_

Sponsored by **PLASA**

# DIRECTORY

Lighting + Sound  
Equipment Sale/Hire  
Installation and Design

**DO DIMMERS  
LEAVE YOU  
IN**

**THE DARK?**

If the answer's yes call:



3 Dawson Road, Mount Farm,  
Milton Keynes, MK1 1LH

Tel: (0908) 644366

**Southwest Lighting**

**Sound & Lighting  
to the Trade**

Agents for:

Citronic, Coemar,  
SIS, Optikinetics,  
JEM, Scott, Avitec  
and many more

Send large SAE for current  
Trade Catalogue

The Old Smithy, Church Road  
Cockwood, Exeter, Devon  
Tel: (0626) 890806  
Showroom open Mon-Sat 10-5

**DHA**

- Library and Custom made Gobos and Slides.
- Screen Printing onto various Materials.
- Standard and Custom Fibre-Optic Effects and Equipment.

For further information contact:

DHA Lighting Ltd.  
3 Jonathan Street, London SE11 5NH  
Tel: 01-582 3600 Fax: 01-582 4779  
Telex: 935639 GOBOCO G

**FIBRE OPTIC  
Lighting**

We are specialist manufacturers & suppliers of all fibre optic lighting materials - Glass & Polymer fibre harnesses - light sources - colour changers - edge light interfaces - theatre curtain washers - spot, ball & bullet lenses - optic conduit - Par Startube & Star Rod - ceiling fittings.

Our Chiswick showroom has examples of our products, also mirrors, stencils and displays from subtle backgrounds to fibre optic fireworks. Leaflets available. (orders by appointment)

Trade & Export call **PAUL RAYMOND**  
Per Opti Projects Ltd.  
Unit 9 The Bell Ind. Est.  
Cunnington St.  
Chiswick, Middx.  
London W4 5EP  
Tel: 01-895 5179



Tel: 0204 610010

**ARRI  
IMAGE  
IMAGINE**

The world's best lighting controls  
and the most reliable.

**DONMAR**



Donmar Ltd 22 Shorts Gardens Covent Garden  
London WC2H 9AU Telephone 01 836 1801 Fax 01 240 0961

**Dial Sound & Lighting**

Wholesale Distribution for

**CITRONIC BOSE RAMSA**  
**SOUNDSHOP OPTIKINETICS ZERO 88**  
**ROSCO COSTAR PULSAR**  
**POWER Drive TECHNICS JBL Le Maitre**  
**MODE ELECTRONICS**

and other leading brand names

Specialist supplier of Mini Light Tube

INSTALLATION DIVISION — SHIPLEY DIAL LTD.

**DIAL SOUND AND LIGHTING**  
Unit 4G Wharfedale Road, Euroway Industrial Estate,  
Bradford BD4 6SG.

Telephone: (0274) 651600 Fax: (0274) 651190

**TSL**

**Theatre Sound & Lighting  
(Services) Ltd**

U.K. DISTRIBUTORS  
FOR

**Clear-Com**  
Intercom Systems

67 DRURY LANE,  
LONDON WC2B 5SP  
Phone 01-836 7877/8



HIRE  
0924  
455586

SALES  
0924  
455586

SERVICE  
0924  
468183

Strand Lighting

**LIGHTING  
HIRE  
SALES  
SPECIAL FX**

**STAGE CONTROL LTD.**

STATION PARADE,  
WHITCHURCH LANE,  
EDGWARE, MIDDX. HA8 6RW

TEL: 01 952 8982  
TELEX: 924896

**FUTURIST  
LIGHT & SOUND**

HOYLE HEAD MILLS,  
NEW STREET  
EARLSHEATON, DEWSBURY  
WEST YORKSHIRE. WF12 8JU

**NORTHERN  
LIGHTS**

**Sound & Lighting**

**Distributors**

Trade representation for

**OPTIKINETICS  
POWERDRIVE  
ANYTRONICS  
LE MAITRE  
TEXTLITE  
ZERO 88  
PULSAR  
CLOUD  
SHURE  
SATEL  
MODE  
EDC  
ICE**

89 Scottforth Road, Lancaster.  
Tel: 0524 62634.

**CLS  
SALES**



**Professional lighting  
suppliers for Entertainment,  
Leisure and the Arts**

Jeff Doreau, Sales Manager  
tel: (0204) 391343

**SPOT ON  
FOR QUALITY**

**LUTON  
SOUND &  
LIGHTING**

Sound, Lighting and Special  
Effects for leisure, promotion,  
entertainment and the arts.

- First class technical back-up.
  - In-depth stocking at the best prices.
  - Speedy mail order and export service.
  - Field sales and installations.
  - OPEN MON-FRI 9.30-5.30. SAT 9.30-4
- Brochure on request.

**LUTON SOUND & LIGHTING**

75 & 86-88 Wellington Street,

Luton, LU1 5AA, England.

Telephone: 0582 411733

Telex: 825353/825562 CHACOM G LITECO  
Fax: 0582 391102

## Strand Lighting

- Stage & TV Lighting
- Lighting Control Equipment
- Effects Projectors
- Colour Filters
- Dealers throughout the UK

Grant Way (off Syon Lane),  
Isleworth, Middlesex TW7 5QD

**01 560 3171**



### Hire • Sales • Service

- ★ Lighting
- ★ Curtains
- ★ Cables
- ★ Make-Up
- ★ Books
- ★ Sound
- ★ Track
- ★ Connectors
- ★ Scenics
- ★ Pyrotechnics

Theatre • Disco • Display • Architectural

Hightown Industrial Estate,  
Crow Arch Lane, Ringwood,  
Hampshire BH24 1ND

Sales 0425 470888 Hire 0425 470888

## LHS

Leslie Hire & Sale

For  
**Stage and TV Lighting  
and Stage Equipment,  
phone**

**01 871 5132**

LHS Limited The Business Village, Broadhill Road,  
Wandsworth, London SW18 4JG.  
Telex 917003 LFC G

## DHA

- Library and Custom made Gobos and Slides.
- Screen Printing onto various Materials.
- Standard and Custom Fibre-Optic Effects and Equipment.

For further information contact:

DHA Lighting Ltd.  
3 Jonathan Street, London SE11 5NH  
Tel: 01-582 3600 Fax: 01-582 4779  
Telex: 935639 GOBOCO G



## SPOT ON THEATRE SERVICES

- ★ Supply & Hire of Stage Lighting Equipment & Effects
- ★ Design & Consultancy Work Undertaken
- ★ Complete Mechanical & Electrical Installations (NICEIC) Make-Up, Curtains, Rostra Supplied

ILKLEY (0943) 602979  
ILKLEY (0943) 830574  
KEIGHLEY (0535) 606255  
21A LEEDS RD, ILKLEY LS29 8DP

## S.A.V.

SOUND + LIGHTING  
DISTRIBUTORS

SALES & HIRE

Optikinetics  
Powerdrive

Le Maitre

Zero 88

Pulsar

Bose

AKG

CCT

Tannoy

Coemar

System Freestyle  
etc.

STARDREAM AUDIO VISUAL  
Party House, Mowbray Drive,  
Blackpool, Lancs.

Telephone: (0253) 302602  
Telex: 67426 PARTY G

black light

black light

Scotland's lighting company  
THE OLD CUSTOM HOUSE, WEST HARBOUR ROAD,  
GLASGOW, SCOTLAND G1 1JF

01 591 2217  
24 HOUR 1 DAY  
01 279 1434  
RADIO UNIT 02

HIRES AND SALES

DEALER FOR CCT  
ARRI  
ROSCO  
ZERO 88  
COEMAR  
LE MAITRE  
DURAFLUG  
POWERDRIVE



LIGHTING

HIRE

DESIGN

ENGINEERS

London 01-891 4755

## eurolight

Lighting Controls  
Stage Management Systems  
Patching Systems  
Paging and Relay Systems  
Full Installation Service

Eurolight Ltd.  
Unit 8, Maple Industrial Estate  
Maple Way,  
Feltham TW13 7AW  
England

Telephone: 01-751 6400  
Telex: 888941 LCCI LITESYM

FOR ALL  
YOUR  
CONTROL  
REQUIREMENTS

UPDATE



- ★ Sound and lighting equipment hire
- ★ Le Maitre special effects stockist
- ★ Installation service and one night stands available
- ★ Special promotions
- ★ Competitive rates and efficient service

Call us for colour  
brochure and price lists

STAGE TWO LTD  
197 Watford Road, Crossley Green,  
Herts WD3 3EH  
Watford (0923) 30739



Manufacture, Supply  
and Installation  
of Lighting and Sound  
for Clubs and Discotheques

FULL DESIGN SERVICE  
Trade/Export Enquiries Welcomed

Starlight Design (Light and Sound) Ltd  
9 Alms Hill, Bourne, Cambs CB3 7SH  
Telephone: 09544 8841/2/3  
Fax: 09544 8846  
Telex: 827547 CG BUS G Attn Starlight

## Lancelyn Lighting

Lighting Hire & Sales

Equipment from all  
major manufacturers  
Hire of Outdoor Equipment  
including Staging and Seating  
Special Effects, including  
smoke machines, snow machines,  
projection, pyrotechnics, etc.

HIRE: Oxford (0865) 722522  
SALES: Oxford (0865) 511522  
Hire and Sales Northwest:  
051-334 8991

## CHARLES FISHER

STAGING LIMITED  
EXHIBITION and CONFERENCE  
DESIGN and CONSTRUCTION

Specialists in Something  
Different

Straw House Farm, Kirkby Road, Ripon, North Yorkshire HG4 3JU.  
Tel: 0765 701604 Fax: 0765 701389

## THE THEATRE LIGHTING SHOP

Lee Colortran International has opened a specialist  
theatre equipment shop at Nottingham.

From this single source you can get:

- ★ theatre luminaires
- ★ dimming and control filters by the roll or sheet
- ★ replacement lamps
- ★ complete theatre refurbishments, including drapes
- ★ professional consultancy and technical advice

Consumables also available from our other shops in  
Manchester (061 788 0174) and London (01 968 7000)  
Everything that's needed. From Village Hall to West End.  
Without drama.

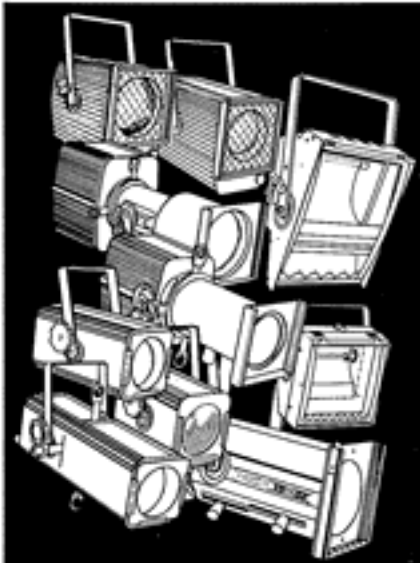
LEE Colortran  
International

Unit 43, Nottingham South and Wilford Industrial Estate,  
Ruddington Lane, Nottingham NG11 7EP

Tel: 0602 455520

# STAGE LIGHTING SALE HIRE

- 500W FLOODS
- 1000W FLOODS
- VARIABLE BEAM PROFILE SPOTS
- FRESNEL SPOTS
- PEBBLE CONVEX SPOTS
- DIMMING AND CONTROL
- COLOUR CHANGE
- EFFECTS
- RIGGING EQUIPMENT



Export Sales - Trade Shows

Mon-Fri 9.30 am - 5.30 pm.

**CCT** theatre lighting limited

WINDSOR HOUSE, 26 WILLOW LANE, MITCHAM, SURREY, CR4 4NA TEL: 01 649 3384 TELEX: 946648

## ELTEC

Manufacturers of  
Drama Lighting Control Systems

Eltec Drama Lighting, and J. Colin Valley Trading Estate  
Llanymyneir, Pwys 1922 800 Tel: (0497 104) 8301

## MUSHROOM LIGHTING

The professional  
people.

Specialists in  
supplying all your  
sound and lighting  
requirements.

For Hire or Sales  
phone 0604 494866  
or 494991.



## MICO LIGHTING

The specialist for  
LAMPS used in the  
THEATRE and  
ENTERTAINMENT  
industries.

U.K. Distributor for  
Philips/Westinghouse,  
U.S.A

Excellent Trade terms  
available.

Mico Lighting Ltd.  
Troydale Lane, Pudsey,  
Leeds, West Yorkshire.  
Telephone: (0532) 567113  
Telex: 556469 (MICO G)

## MAC manchester

Professional sound  
hire nationwide

•  
High quality  
communications  
systems

•  
Sales and  
service facilities



Telephone 061-969 8311

1 & 2 Attenburys Park,  
Park Road, Altrincham,  
Cheshire, WA14 5QE.



W.B. Group

cover the complete  
lighting spectrum  
from film to T.V.,  
theatre to disco  
special & motorised  
effects

Only the best is good  
enough

W.B. Group

4 Tenter Rd., Moulton Park Ind. Est.,  
Northampton NN3 1PZ

Tel: (0604) 499331

## TRAFALGAR LIGHTING LTD.

01-360 0936  
LIGHTING  
SALES-HIRE  
SECONDHAND KIT  
BOUGHT & SOLD  
01-360 0936

FARRAHS  
LONDON - LOS ANGELES

SOUND EQUIPMENT  
SALES • HIRE  
INSTALLATION

FARRAH SOUND LIMITED

TELEPHONE: 01-549 1787

FAX: 01-549 6204

TELEX: 945114 FARRAH G

*the sound professionals*

## WENBLEY LOUDSPEAKER COMPANY LIMITED

### deuce



Professional Loudspeaker  
Repair  
Specialists for all Makes  
of Power Units

also  
Manufacturers of 'Deuce'  
Mini & Maxi Cube  
'B Line'

(the ultimate professional  
18" Bass 500 Watt Loudspeaker)

Sound Systems custom designed and  
manufactured for all sizes of venue.  
Mobile Systems from 100 Watts to 20k

Unit 4, Askew Crescent Workshops  
Askew Crescent, London W12 9DP

Tel: 01-743 4567

Fax: 01-749 7957

## NIGHT FLIGHT

Sound and Lighting

### THE BIG ONE IN SCOTLAND

Installation, Design,  
Hire, Repair and Service  
0389-79261

## Fantasia

SPECIAL EFFECTS LIGHTING

- ★ Specialising in the hire of large motorised special lighting effects by SATEL etc.
- ★ Follow Spots by Spotlight - ParCans by Thomas
- ★ Mail Order available on most popular products.
- ★ Large TrILite rig for hire.

SATEL

- ★ Hire Catalogue available
- ★ Pyrotechnics - various manufacturer's

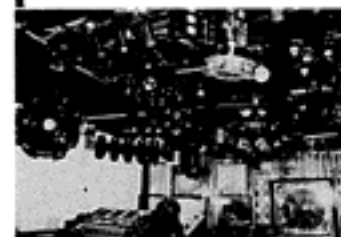
Fantasia S.P.F.X. Lighting

12a-12b West Street,  
Sleeple Claydon, Buckinghamshire.

Tel: 029-673-8255

Tel: 029-673-8327

Tel: 0860-378471 (24 hr emergency)



## Northern Light

Lighting & Sound Equipment Hire & Supply  
Technical Equipment for the Leisure & Entertainment Industry

Sale • Installation • Hire

Stockists for Strand, Hall Stage, Roscolab, DHA,  
Tecpro, Allen & Heath, Bose, Tannoy, Toa, AKG,  
Le Maitre, Slick Systems Trussing.

Manufacturers of Socket Boxes, Working Light and Specialised control systems

Edinburgh 031-553 2383

(Fax 031-553 3296)

Glasgow 041-440 1771

(Fax 041-445 4406)

**Specialist Technical Equipment and Services  
for the Entertainment and Allied Industries**

**The Best  
Of  
British**

Filled Cloth  
and  
Sharkstooth Gauze

IN STOCK  
NOW

**Gerriets**

Unit 18  
Tower Workshops  
Riley Road, London SE1 3DG  
Tel: 01-232 2262  
Fax: 01-237 4916



**Leamington  
Sight & Sound**

Design, Supply & Installation  
of Sound, Lighting  
and Special Effects

incorporating  
**UKD** United Kingdom Distribution  
Wholesale supply to the trade,  
utilising our unique location  
for nationwide delivery using  
our own vehicles.

Units 16/17 Rigby Close  
Heathcote Industrial Estate  
Leamington Spa CV34 6TJ  
Tel: 0926 833617  
Fax: 0926 883120



**Hall Stage Products**

Limited

offer a complete range of  
**Stage and Scenery Hardware**  
Rigging Gear, Pulleys & Curtain Tracks  
for the discerning designer

For the latest literature write or  
telephone:

Chris Hitchens  
**HALL STAGE PRODUCTS**  
The Gate Studios, Station Road,  
Borehamwood, Herts WD6 1DQ.  
Telex: 8955802 PERLUX-G  
Telephone: 01-953 9371/2.

**TRIPLE E LTD**  
FROM CURTAIN UP TO PRODUCT REVEAL  
**UNI - TRACK**  
IS THE SOLUTION

We sell and hire the most sophisticated and  
comprehensive track system available on the  
market. Even the most complicated system  
tailored to meet your requirements, whether  
manual or motorised may be hired

**WE ARE THE TRACK  
SPECIALISTS**



01-237 6354

**LIGHTING HIRE & SALES**

**Philip L. Edwards**  
(Theatre Lighting)

5 Highwood Close, Glossop,  
Derbyshire SK13 9PH.  
Telephone: 04574 62811.



**SPECIALISTS IN  
HI-TECH PROMOTIONS**

5 Courtlands, Church Hill,  
Newhaven, East Sussex BN9 9LU  
Telephone: (0273) 512149  
Mobile: (0830) 252885  
Fax: (0273) 514968

For the creative use of "Lasers" in the  
A.V. industry, Music Industry and  
Theatrical industry call us first.  
You'll be glad you did!

**get on the  
right  
tack!**

Printed Tapes + Labels.  
Anti-Slip Flooring.  
Electrical + Double Sided Tapes.  
T.V. "Studio Vinyl" Flooring.  
Genuine American "Gaffer" Tape  
and much, much, more

Call us for Brochure and Price List  
**Mark self-adhesives Ltd.**  
unit 24, stephenson way, st lves,  
cambridgeshire pe17 4wj  
tel: huntingdon (0480) 494540



**LIGHTING**

HIRE  
DESIGN  
ENGINEERS  
London 01-891 4755

**THE TOTAL  
PACKAGE**

- Design, supply and installation of lighting, sound, communication, stage equipment, rigging, A.V, conference and projection systems.
- For theatres, studios, halls, clubs and commercial presentation.
- Full in-house electrical contracting service.
- UK and Worldwide.



**GLANTRE  
ENGINEERING LTD.**  
2 Cremyll Road, Reading, Berks.  
**0734-509711**

**WHITE LIGHT**

57 Filmer Road · London SW6  
Tel: 01-731 3291  
Telex: 295811  
FAX: 01-371 0806

**THEATRE LIGHTING  
HIRE AND SALES**

Our prices are competitive  
please ring for price list or quote

NORTHERN BRANCH  
SAW HILL FARM · TRIANGLE · NR. HALIFAX  
WEST YORKSHIRE  
TEL: HALIFAX (0422) 822016

For annual advertising rates  
in the DIRECTORY section of

**LIGHTING SOUND**  
*International*

telephone

**(0323) 642639**

# VIEWPOINT

## Francis Reid pleads for more optimum and less maximum

What hope is there for a lighting designer who believes that lighting is not really all that important? Or certainly not as important as we would all like to think it is?

I have to confess to a nagging worry that many of us theatre people get so blinkered about our own speciality that we lose sight of how it fits into the whole.

This is not new thinking on my part: The proportions of production time and money devoted to lighting have been causing me concern for more than 30 years. Indeed, as a young stage manager in the fifties, I got involved in lighting, not so much because of a passion to create, but a desire to try and get the action moving so that we could all go to bed.

I am just as concerned today because I suspect that theatre currently stands poised on the brink of being a victim of the dinosaur syndrome. The danger is international. Any element of risk is now impossible on Broadway and inadvisable in the West End. But costs are not only a problem for theatres operating within a market-based economy: the generous subsidy levels of most central European countries are under increasing pressure.

The theatre world claims that its major growth area has been in quality. Few would deny the exciting surge of the sixties and early seventies. But the subsequent decade has been rather more notable for its expansion in the areas of technology and bureaucracy. Growth follows a natural progression from minimum to maximum and somewhere in between is an optimum where there is a flattening of the curve of improvement plotted against expenditure of time and money. The search for an optimum approach has never been attractive to people in creative fields like arts, politics and marketing. Minimum and (particularly) maximum are much more exciting than optimum. And I get a growing feeling that those of us who work in performance technology have become so fixated on going for the maximum that theatre may be on the way to becoming so bloated as to be unable to feed itself.

The size of lighting rigs and the knob count on control desks has climbed resolutely upwards, while the labour saving potential of each new hardware development has been absorbed by growth in the numbers used. The best of our lighting design is as good as it ever was (no, the best of it is **not better**, although the 'go for maximum' syndrome needs to assume that it is better) but how about the routine middle-of-the-road stuff? It is certainly brighter. But are eyes and teeth always getting the visibility which is at the core of any actor support system? Which brings us back to balance: the more one works with light, the more one discovers how to increase the effect of one light by taking another light down or out.

At least the audience are protected from escalating brightness by the automatic irises in

their eyes. But how about sound, now increasing in loudness to the point where musical intervals are becoming compressed to vanishing point? So far, the only people to have succeeded in developing irises in their ears seem to be sound operators.

But light and sound is just one element of an overall **maximum tendency**. The ratio of management to actors has increased exponentially and much of this is due to invasion by that prime industrial virus of our age... the one that believes marketing to be more important than product. But a more sinister cause may be the cost of public accountability. How much of the nation's theatre budget is devoted to funding the machinery of public audit and the procedures of democracy? And what is the cost - in salaries, telephones and photocopies - of the protests that theatres make about their inadequate funding? (Mostly counterproductive: the theatre industry, which exists by communicating the subtle nuances of laughter and tears, seems quite incapable of giving a simple explanation of its own economics.)

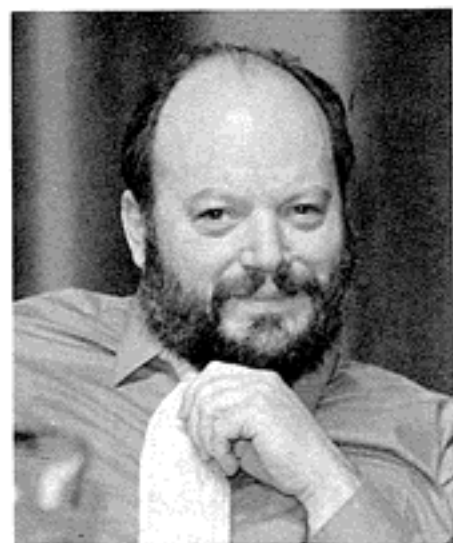
Public accountability now includes the necessity to be seen to be seeking sponsorship. But what is the cost of touting for such money? Euphemisms abound. Can we really expect our theatre to develop when its **development directors** are executives who have been specifically hired to raise funds. Occasionally, we are given an indication of the subsidy and sponsored percentages of unit seat cost: we are never told what percentage of that percentage is devoted to the costs of seeking, granting and auditing. Not so many years ago, theatres were undermanaged. Are some now overmanaged? I have a strong suspicion that many have passed upwards through the optimum.

Perhaps we lighting people should lead the way by demonstrations of restraint. The desire to maximise is understandable. I am no stranger to the compelling wish to ensure the success of my contribution to a production by hanging lights for every contingency then adding a belt to the braces. But I have discovered time and time again that elimination of equipment through extended agonising during the planning phase tends to result in lighting that is not just cheaper, but cleaner and crisper. And, while I acknowledge that most of the knobs on the jumbo lighting boards were not put there for working the performance, but for speeding up rehearsals, it has been my experience that it is not the board that matters, but its operator.

My generation is lucky: our development proceeded in tandem with the growth in sophistication of the technology. For us it was a process of gradual discovery with a continual need to make priority decisions. But people taking up a theatre lighting design career today are thrown into complex technology without adequate preparation. We have to develop our lighting education...

and I say education rather than training because we are talking, not just about understanding the possibilities of technology, but about developing visual sensibility. Our theatre needs lighting people with eyes and sound people with ears. And I believe that everyone - performers, directors, designers, technicians, managers - needs to know much more about each other's contribution. Only then can we hope for a theatre which is greater than the sum of its parts: a situation more likely when each of these parts is based upon an optimum rather than maximum or minimum use of resources.

But to return to my starting point: the importance of lighting. The crunch is that lighting usually only seems important when it is not very good or takes up more than its fair share of the budget and schedule.



Francis Reid has been professionally involved in theatre lighting, on and off, since focussing his first pattern 23 in 1954. While his lighting designs include 10 years at Glyndebourne and over 30 West End productions, he has also been administrator of the Theatre Royal in Bury St Edmonds and head of the theatre design department at London's central school of Art and Design. Some of his recent activities illustrate the diversity of life for a theatre survivalist: lecturing in Helsinki, Montreal, Reykjavik and Seville, advising in Hong Kong, Seville and Taipei, directing the British Council's first international Theatre Lighting Course, reviewing theatre buildings for the architect's journal, preparing a report for Eastern Arts Association on large scale touring in the Eastern region, writing a book on Theatre Design (now at the printer) plus, of course, a bit of lighting design from pantomime in Edinburgh to revue in Athens.

## Index to Advertisers

ABTT	9	DDA	53	Laserpoint Ltd	80	Presentation Consultants Ltd	11
AC Lighting Ltd	79	Direct Lighting	10	Laser Grafix	43	Pulsar Ltd	61
ADB	8	Doughty Engineering Ltd	46	Le Maitre Lighting & Effects	10/65	Ray Engineering Co	7
Allen & Heath	71	English Glass	14	Lightfactor Sales	38-42	RDE	43
Astralloy International	54	Eurolight Ltd	58	Lytemode Ltd	45	Scott Sound Systems	66
Avitec Electronics Ltd	36/37	Fabtronic Lighting	7	Marquee Audio Ltd	65	Strand Lighting Ltd	12/13
Avolites Production Co	33	Fantastic Fireworks	10	Midnight Design	46	Teatro srl	63
CCT Theatre Lighting	3	Hardware House	16	Mushroom Lighting Services Ltd	46	Theatre Projects	43/54
Celco Ltd	4	Harman UK	67	Optikinetics Ltd	2	The Great American Market	25
Citronic Ltd	32	Jands Electronics Pty	44	Pancan	2	TIS Lighting	66
Clay Paky srl	15/16/17	JEM Smoke Machine Co	51	Par Opti Projects Ltd	36	Unusual Rigging Ltd	66
Coemar	48	King Disco Light	64	Philips Electronics	57	Vari-Lite (Europe)	29
Concert Light Systems	6	Kupo & Co Ltd	16	PLASA Light & Sound Show 89	47	WB Lighting	18
				Powerdrive (Cerebrum Lighting)	14	Wigwam Acoustics Ltd	66

# A.C. LIGHTING LTD

THE INTERNATIONAL STAGE LIGHTING SUPPLIER

## PROUDLY PRESENTS

FROM ALL OVER THE WORLD  
A STAGE LIGHTING EXTRAVAGANZA

APPEARING DAILY

**18th 19th 20th MAY 1989**

**STAND 13 ABTT TRADE SHOW**

RIVERSIDE STUDIOS - HAMMERSMITH, LONDON



VIENNA,  
AUSTRIA

• THE ULTIMATE IN HIGH-POWERED FOLLOW SPOTS AND PROJECTORS: HMV 1202/20, HMV 2500 ZOOM BP1-2, BP4, BP6 GOLD

**SPOTLIGHT**  
MILANO

MILAN, ITALY

• 'AREA', 'VARIO' AND 'FIGURA' AND A COMPREHENSIVE CAST OF LUMINAIRES

**JANDS**

SYDNEY,  
AUSTRALIA

• THE CREATIVE LIGHTING CONTROL CONSOLES

THE GREAT AMERICAN MARKET

HOLLYWOOD,  
U.S.A.

• THE MAGIC OF 'COLORWIZ', 'LIGHTWIZ', 'GAMCOLOR', 'ACCESS' AND PATTERNS

**LYCIAN**  
STAGE LIGHTING

NEW YORK, U.S.A.

• THE FOLLOW SPOT FAMILY: 'MIDGET', 'SUPER ARC', 'SUPERSTAR' AND 'STARGLITE'

**ALTMAN**  
STAGE LIGHTING

NEW YORK, U.S.A.

• THE AMAZING 'ZIPSTRIP'



OMAHA, U.S.A.

• 'THE LEADER' SUPER TROUPER

## DON'T MISS IT



A.C. LIGHTING LTD  
UNIT 4, SPEARMAST INDUSTRIAL PARK, LANE END ROAD,  
SANDS, HIGH WYCOMBE, BUCKS HP12 4JG ENGLAND  
TEL: (0494) 446000 TELEX: 838829 ACLITE G FAX: (0494) 461024

# SHAPE UP AND

# Dance

# WITH

# PIXELITE –

# THE VERSATILE VIDEOWALL

The Pixelite Videowall is one of the most sophisticated and versatile videowall systems available today. State-of-the-art software drives the video imagery through the very latest framestore technology, powering virtually any configuration of monitors up to a maximum of 400.

Reliability and creativity are guaranteed as the Pixelite system is totally designed and manufactured by Laserpoint in Cambridge.

For a stunning demonstration of the latest developments contact Laserpoint on 0223 212331.



Easy-to-use software operates the Pixelite Videowall System

**Laserpoint Ltd**

**44/45 Clifton Road Cambridge CB1 4FD**  
**Telephone: 0223 212331 Fax: 0223 214085**  
**Telex: 817281 Laserp g**

LASERPOINT