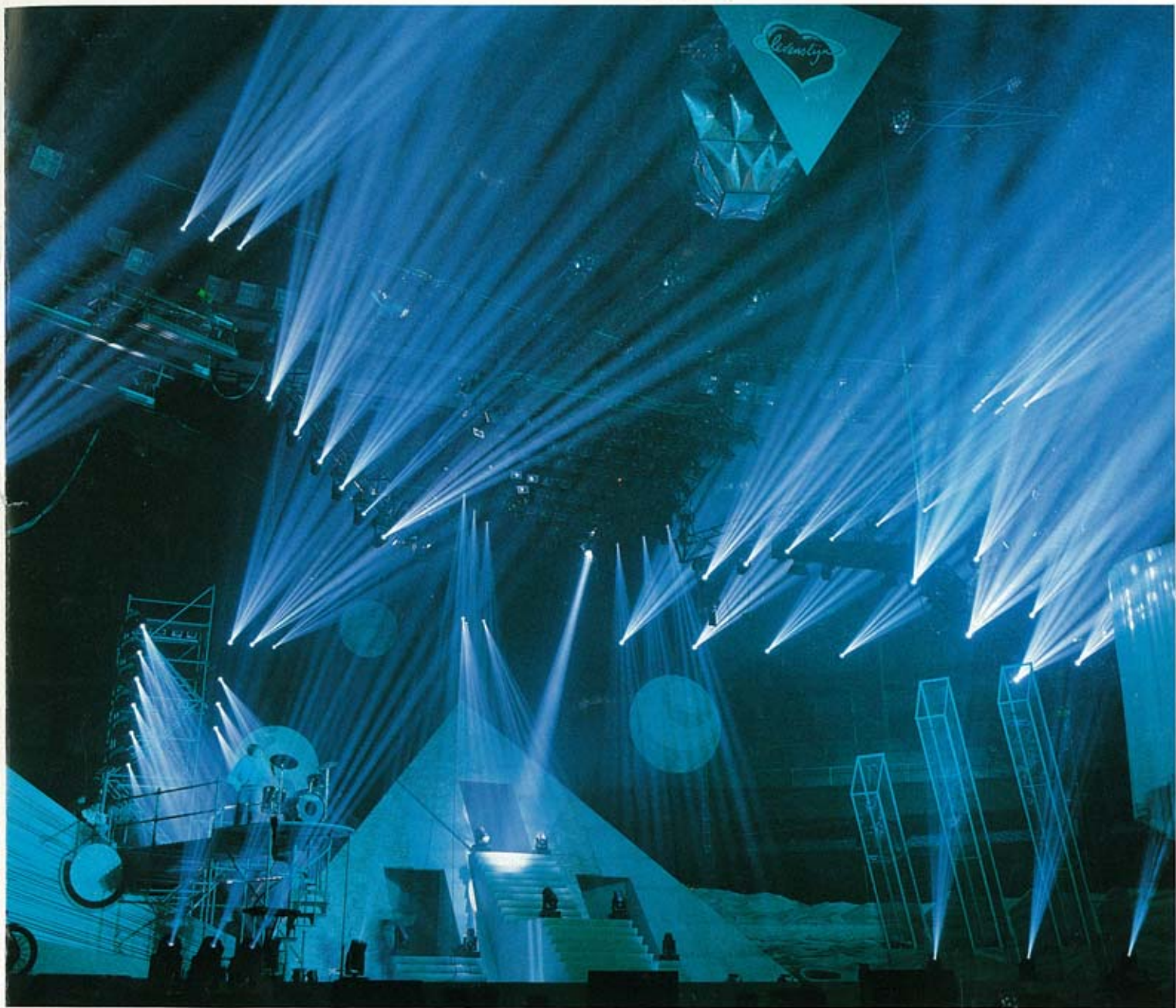


LIGHTING+SOUND *International*

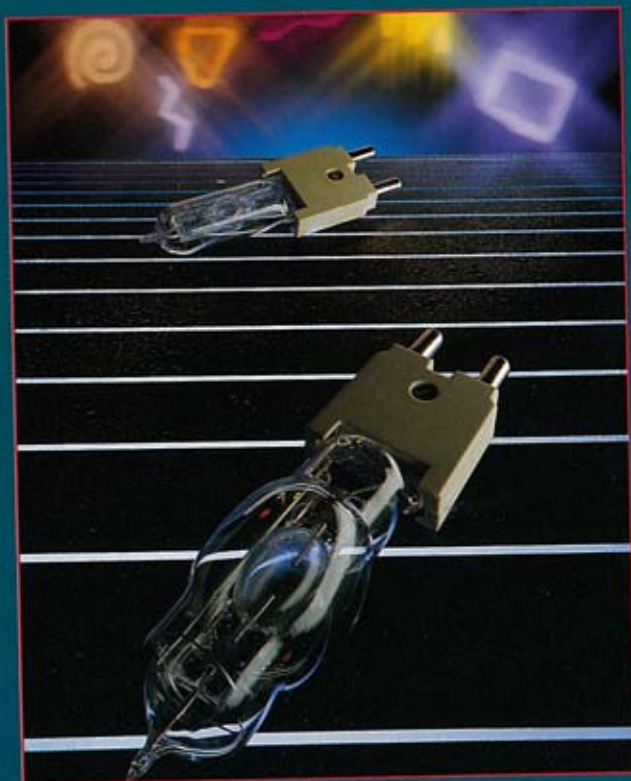


ANTWERP, BELGIUM: LIGHTING FOR THE OM TE ZIEN TV SPECIAL

- Siel 92: First show of the International Season
- Birmingham Arena - an Acoustic Forum
- Company Profile: Ramsa Panasonic
- Sporting Sound at the Winter Olympics, Albertville
- Belgian TV Special and Eric Clapton On Tour
- Full Show Report from Sound '92

MARCH 1992


Brite Beam®
Brite Arc®




Par Lamps


Theatre


Audio-Visual


Studio


General



SYLVANIA

Turbosound®

Perfect Geometry...

Science has an explanation for most things. But not all of them. Some things just happen to be right and when they are, we shouldn't interfere. Everything we do is of a highly scientific, technical nature, with every aspect considered.



Speakers with qualities like ours have to be worked at, with great patience and care. But one thing we never forget: to listen to our instincts. And when they're strong enough, we follow them. That's why a Turbosound loudspeaker differs so much from an ordinary loudspeaker.

It's perfectly natural.

 **Turbosound** 
ONCE HEARD NEVER FORGOTTEN

TURBOSOUND LIMITED, STAR ROAD, PARTRIDGE GREEN, WEST SUSSEX RH13 5EZ. TEL: (0403) 711447
FACSIMILE: (0403) 710155 TELEX: 878723 TURBO G

 an **AKG** group company

PATHFINDER

THE RIGHT

COURSE



- 60 control channels
- 512 patchable dimmers
- up to 480 memories
- up to 480 alpha numeric legends
- up to 120 level sequences each with programable speed in BPM
- up to ten 99 entry cue stacks with programable dipless crossfade times
- sound to light and bass step sequence
- linking via MIDI in/out/thru connectors
- Q-Card storage interface
- optional MSC (Midi Show Control) system


CELCO

A Division of Electromark Ltd.
Honey Mill, Honey Road, Dartford, Kent DA3 7BY England
Telephone 0322 22 22 11 International +44 322 22 22 11
Fax 0322 22 22 02 International +44 322 22 22 02 Telex 890325 ELMING

UK and US pattern pending

LIGHTING+ SOUND *International*

MARCH 1992

7 News In Lighting+ Sound International

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

21 Siel of the Century

John Offord and Tony Gottelier report from the Porte de Versailles where the French show celebrated its tenth year

27 One Man and his Machines

(The Ramsa UK Story)

John Offord sets out to discover how a Japanese Electronics giant reaches out to its customer

33 Birmingham Arena

Tony Gottelier considers the latest addition to Birmingham's conference and performance facilities

37 Bose in a Cold Climate



Tim Frost packs his skis and heads for Albertville to learn more about the sound system in use for the Winter Olympics

43 On Tour



with Om Te Zien in Belgium, and Eric Clapton in London

47 Sound'92 at the Heathrow Penta

Tim Frost reports on the first showing of new sound products this year

52 PLASA News

53 PLASA Members

57 Equipment News

59 International Directory

61 Directory of Suppliers and Services

66 Viewpoint

Bruno Wayte on the need for Training Initiatives

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

LIGHTING+ SOUND *International*

published monthly by the Professional Lighting and Sound Association

© Copyright Professional Lighting and Sound Association

ISSN 0268-7429

Editor: John Offord

Assistant Editor: Ruth Rossington

Associate Editor: Tony Gottelier

Advertisement Manager: Alison Hunt

Published from the PLASA Office

7 Highlight House, St Leonards Road, Eastbourne, East Sussex BN21 3UH England

Telephone: (0323) 642639 Fax: (0323) 646905

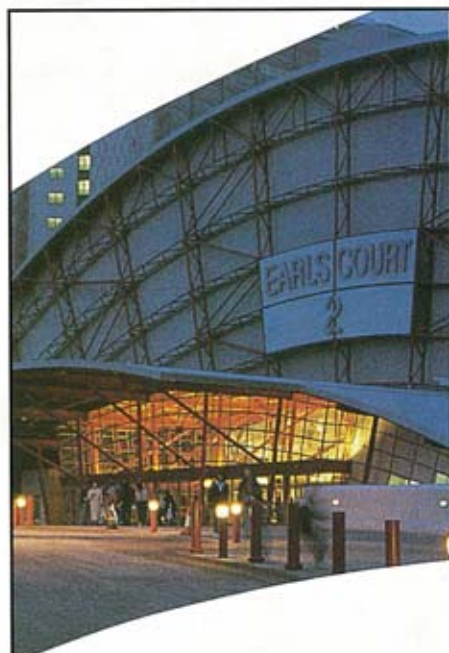
No part of this magazine may be reproduced without the permission of the Editor

The magazine is available on annual subscription

UK £45.00 Europe and rest of world £60.00 Airmail £85.00. Single copy price £3.00 plus postage

Editorial Advisors: Tony Akers, Peter Brooks, Wyatt Enever, Mike Gerrish, Matthew Griffiths, Kevin Hopcroft, Tony Kingsley, John Lethbridge, Ian Levine, Iain Price-Smith, Neil Rice, Jackie Staines

Lighting + Sound International is published monthly for \$90.00 per year by The Professional Lighting and Sound Association, 7 Highlight House, St Leonards Road, Eastbourne, East Sussex BN213UH. Second class postage paid at Middlesex, N.J. Postmaster: Send US address changes to C and C Mailers International, 40 Foxhall, Middlesex, N.J. 08846



EARLS COURT 2 LONDON'S LATEST EXHIBITION VENUE

WILL BE THE
NEW VENUE
FOR THE

PLASA LIGHT+ SOUND SHOW 92

SEPTEMBER 6-9
1992

FOR INFORMATION CALL
JAMES BROOKS-WARD
AT PHILBEACH EVENTS
NOW!

Organised by

Philbeach Events Limited • Earls
Court Exhibition Centre • Warwick
Road • London • SW5 9TA

Contact James Brooks-Ward
071 • 370 • 8215

LIGHTPAINT

The easy-to-use colour scroller
with unique features:

Frame-by-Frame.

Silent Control.

Smooth colour change.



LIGHTING TECHNOLOGY

2 Tudor Estate Abbey Road Park Royal London NW10 7UY
Telephone 081-965 6800 Telex 894452 LIGHT G Fax 081-965 0970

OSCAR LIGHTING AB

Norra Hamnvägen 3 S-115 42 Stockholm Sweden
Telephone +46(0)8-665 65 10 Fax +46(0)8-661 84 80

Brits Going Big

Meteorlites have been contracted to supply the lighting equipment and control for the opening and closing ceremonies for the Olympics in Barcelona. They'll also provide a lighting rig for the royal enclosure. Lighting design by Marc Brickman.

Two majors recently announced by **Britannia Row** include Turbosound Flashlight sound systems for the Eurovision Song Contest at Malmo in Sweden (May 9th) where a five stage set-up has to be accommodated, and for a tour of The Cure in North America which commences in May and runs through to the end of the year.

Latest list of 'biggies' being looked after by the **Samuelson Group** of companies includes the major Freddie Mercury Tribute due to take place at Wembley Stadium on April 20th. A truly massive rig will draw on the combined resources of Samuelson Concert Productions, Vari-Lite and Theatre Projects. Stars lined up include Elton John, Rod Stewart, Madonna, George Michael et al. Vari*Lite will also be involved in the Olympic ceremonies mentioned earlier where 36 VL2Bs and 50 VL4s will be employed, and at the opening of EuroDisney in early April.

Light & Sound Design have a string of tours on the go that you've already heard about in these pages including Dire Straits, Bryan Adams, Eric Clapton, Guns 'n' Roses and Simply Red. Just starting to tour in the States are U2, and Prince is currently in rehearsal. Apart from the fact that they've just opened their new 70,000sq.ft manufacturing facility in Birmingham, Simon Austin of LSD warned that an announcement was imminent on the 'biggest jobs we've ever done'.

Samuelson Stage Brilliant Move

The lighting and sound division of Samuelson Group is to form a new company, Brilliant Stages, which will be headed by Charlie Kail. Working closely with Samuelson Concert Productions the new business will provide custom fabrication to support and enhance the conventional lighting aspects of the company.

Roger Dix, MD of the division told L+S: "I'm pleased to add the name of Brilliant Stages to those of Samuelson Concert Productions, Vari-Lite Europe, Theatre Projects and Samuelson Communications. I believe we now have a good combination of talent, expertise and resources to meet the challenges of our industry in the years to come." Brilliant Stages will commence operations this month at the Division's Greenford base.

Musical Chairs at SIEL

Partly due to the collapse of Ever-Radio France last year, there were a large number of changes in distribution arrangements in that country announced at the SIEL show which took place in February at the Parc des Expositions in Paris.

As Coemar confirmed Collins as their outlet, in a volte face High End and Lightwave Research abandoned Highlight Systems and appointed their existing Swiss agent LSE to take on France as well. In a connected move, FAL and Collins separated, to avoid internal competition with Coemar's product range, and FAL moved to Celestion. FAL are virtually Coemar's next door neighbours at Castel Goffredo.

Optikinetics, who were also unrepresented as the result of the Ever failure, decided to appoint Dominique Belot, who previously worked for their ex-distributors, to cover the territory on their behalf selling both lighting and Trilite products. Radio Violette continue to sell Optikinetics, High End and Coemar products in Belgium from their headquarters in Brussels.

The full story of this year's SIEL, which seems to have been the most successful yet, starts on page 21 of this issue.

SIEL Introduction



Cerebrum Lighting's Rod Bartholomeusz (right), currently celebrating his 35th year in the lighting business, had for various reasons over those years missed out on meeting with Hermann Sorger of Vienna-based Ludwig Pani.

L+S editor John Offord was delighted to be able to effect the necessary introduction at SIEL, Paris last month. (more SIEL pictures and full report on page 21)

Laserpoint in Town



Pictured on the front steps of their new London premises are (left to right) Andy Holmes, Johan and Lucian Hamelinck and Ron Turpie with Sussi Christiansen in foreground. See story page 10 this issue.

New Venue for ABTT

The 1992 ABTT Trade Show will take place at the Royal Horticultural Halls in Westminster, London on Thursday 2nd and Friday 3rd April. As with previous years, the ABTT awards will be presented during the show and nominations are invited for the Product of the Year and Technician of the Year categories.

Stand space is still available, so if you're interested in exhibiting, contact Ethel Langstretth at ABTT in London, telephone 071-434 3901.

Showlight '93

The fourth Showlight international conference, Showlight '93, is scheduled to take place in 1993 in Bradford, England, from the 19th - 21st April.

Based around the twin venues of the National Museum of Photography, Film and Television and the adjacent Alhambra Studio Theatre the conference is aimed at lighting designers and associated professionals working in, or supplying, the performing arts. It provides a forum for discussing both new and established techniques across the wide spectrum of entertainment lighting.

Action News

My new LIGHTPAINT Colour Scrollers from Action Lighting are Great... A full eleven colours change very smoothly at all speeds continuously or frame by frame ...

... SO silently that you could hear a tiny mouse walking on tip toe!

EXEL

LIGHTING TECHNOLOGY

Action Lighting

Lightpaint

the intelligent colour changer

on our stand at

ABTT 1992 London Trade Show

April 2nd & 3rd at

The Royal Horticultural Halls

London

2 Tudor Estate
Abbey Road Park Royal
London NW10 7UY
081 965 6800
Fax 081 965 0950

Manchester

46 Kansas Avenue
Salford
Manchester M5 2GL
061 876 0576
Fax 061 876 0517

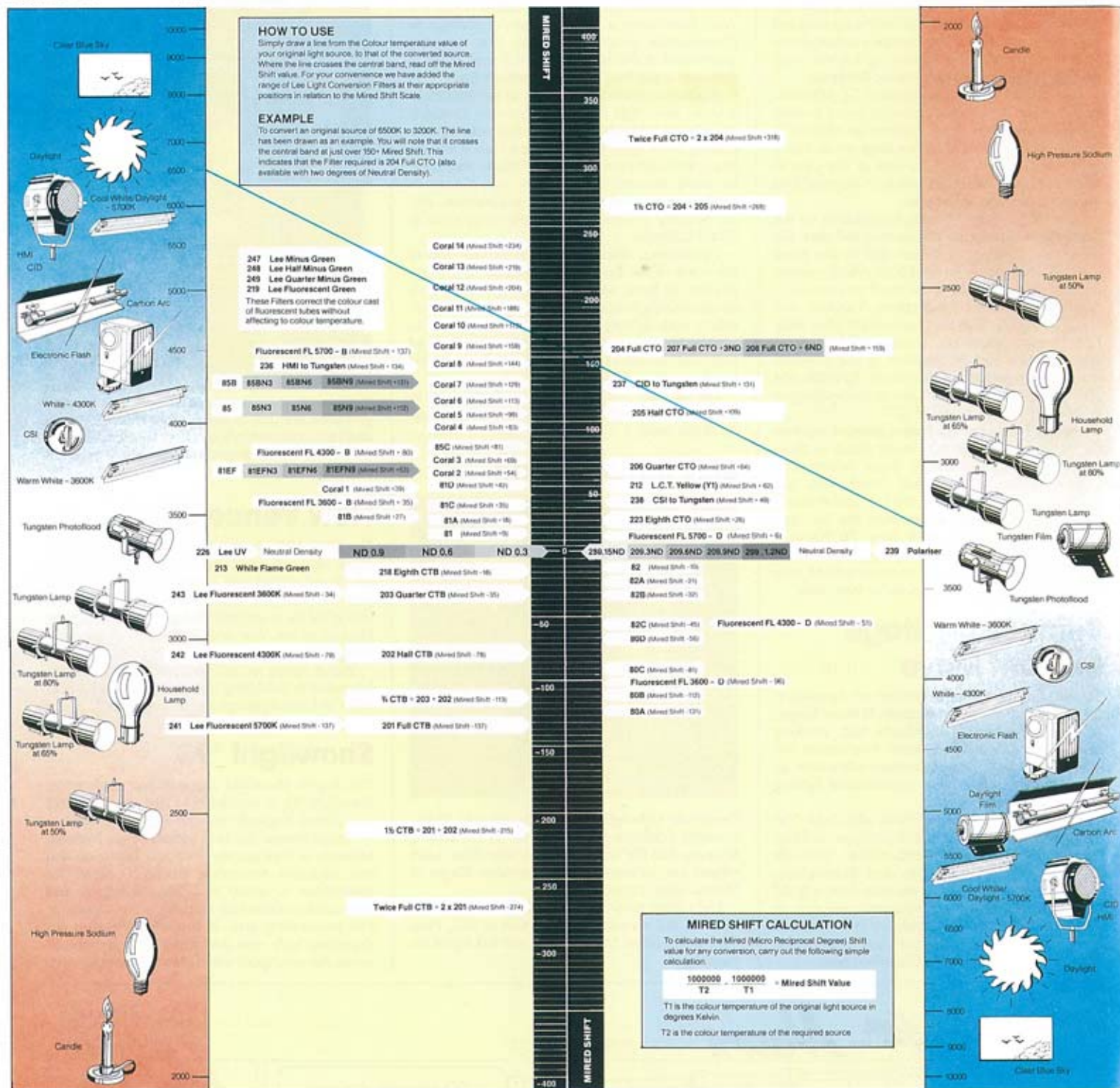
Light Source Conversion Calculator

Original Source (Kelvin)

(Kelvin)

Converted Source (Kelvin)

(Kelvin)



MIREDS SHIFT CALCULATION

To calculate the Mired (Micro Reciprocal Degree) Shift value for any conversion, carry out the following simple calculation:

$$\frac{1000000}{T_2} - \frac{1000000}{T_1} = \text{Mired Shift Value}$$

T1 is the colour temperature of the original light source in degrees Kelvin.
T2 is the colour temperature of the required source



The Art of Light

The Art of Light

revealed

Lee Filters Limited does much more than manufacture high quality light control media for the film, television, theatre and stills photographic markets. The company offers - whenever it can - to make an additional input to benefit the industries it serves.

That's why it has developed a series of technical posters - available free of charge - to help filter users make the most of its products. To understand more fully how the art of light works. To create better images. The first poster in the series - shown on the opposite page - has been designed to provide a simple and instantaneous reference for the calculation of filter requirements when converting from one light source to another.

Each type of conversion filter is listed in its appropriate place on the scale together with neutral density, UV and polarising filters.

To get your free poster (size 33" x 23½") simply clip the coupon, and send it to:

**Lee Filters Limited,
Central Way,
Walworth Industrial Estate,
Andover, Hampshire SP10 5AN,
England.**

This is what you've come to expect from Lee Filters. The art of light. And more.

SIEL PEOPLE (see main feature pages)



Carla Maris of Sylvania (centre) with Mike Lowe and Christiane Staboli of Teatro.



Oliver Verlet (left) and Alain Comevaux (third from left) of ESL with Mervyn Lister (second left) and Andy Trevett of Doughty Engineering.



Enigma on show: Rod Bartholomeusz (Cerebrum Lighting) and John MacPhail (ALS) with Jean-Paul Lerat of Business Number One.



Joanne Shapley and Mike Hall of Rosco on the stand of Régiscène.



Grouped on the Ariane stand: Adrian Brooks (Lite Structures) and Bob Hall (Anytronics) (standing), with Andrew Morris (Mode Electronics) and Didier Lepetz of Axel.



Christophe Sauvage (left) of Animation Lumineuse with Graham Norman of Light Processor.

UK Venture

Lighting specialists Venture Lighting International have recently established new UK headquarters in Hatch End, north west London. The company specialize in the design and manufacture of metal halide lamps for use in office, retail and leisure markets.

Well-known for their White Lux range of lamp fittings which are intended to replace high pressure sodium lamps, and which are designed to retrofit directly into a 250 or 400 watt sodium fixtures, the company have more recently introduced a new metal halide lamp. This unit features an integral extra safety glass which allows its use in open fittings.

Wembley in France

After providing sound for many Martin Professional presentations, Wembley Loudspeaker's Paul MacCallum has announced that Martin's French distributors, SLD of Paris, will become his distributor for France.

Rumours Most Strenuously Denied

Rod Bartholomeusz has denied suggestions overheard at SIEL that he will be handling exclusive world-wide distribution of Pani's 24k 'Uranium' projector currently under development. "It's pure fall-out," he said. "In any event, I hadn't even met Pani's Hermann Sorger until the SIEL show." Rod Bartholomeusz is 95.



**UNUSUAL
RIGGING
LIMITED**

- Rigging and supply of equipment and personnel
- Design and manufacturing of specialised equipment
- Drafting services
- Permanent installations
- Consultancy and maintenance contracts
- Equipment rental
- Equipment sales

4 Dalston Gardens Stanmore
Middlesex HA7 1DA
Tel: 081-206 2733 Fax: 081-206 1432



**marquee
AUDIO** PROFESSIONAL
SALES
AND SYSTEMS

**Pro audio sales
System design
Installation
Export**

**0932-566777
041-810 3375**

Please send my free copy of the Lee Filters Light Source Conversion Calculator poster.

Name _____

Job Title _____

Address _____

ARE YOU PRESENTING THE RIGHT IMAGE?

Samuelson
COMMUNICATIONS

Samuelson Communications has everything you need to project the right image at your next presentation.

As one of the leading names in the rental of equipment and technical services to the conference, exhibition, trade show and live event markets, we can offer...

- Audio Visual and Sound Equipment
- Large Screen Video Projection
- Prompting Services
- Data Display Projectors and Monitors
- Aston Caption Generators
- Portable Production Units and Camera Systems
- Satellite and Microwave Conference Links

For further information or advice, a quotation or a demonstration, and a copy of our latest rate card, call Samuelson Communications now.

London:
20-22 Fairway Drive
Greenford
Middlesex UB6 8PW
Tel: (081) 566 6444
Fax: (081) 566 6365

Manchester:
7-8 Piccadilly Trading Estate
Great Ancoats Street
Manchester M1 2NP
Tel: (061) 273 1557
Fax: (061) 273 8065

A MEMBER OF THE LIGHTING AND SOUND
DIVISION OF SAMUELSON GROUP PLC

Laserpoint in Town

A new operation has been launched in London under the Laserpoint DJS banner to provide an active 'front of house' facility for the promotion and sale of products and services to production companies, designers and architects, discotheques, show and exhibition promoters and the rest.

Located at No.1 Hardwick Street in EC1, a short walk from Sadler's Wells, lady luck came to hand during the search for premises. The all-steel 3,500sq.ft ground floor venue, complete with designer pipes and valves and numerous bits of metal framing and gadgetry, was just waiting for a company such as Laserpoint looking for something 'a bit different'. Evidently, the previous design company inhabitants didn't beat the recession clock and all their hard work had to be left behind.

So Laserpoint DJS have made excellent use of resident fixtures and fittings and bought in a wide range of equipment to show off.

"The prime reason for opening this London showroom was a direct response to the rental demand for the Pioneer RM-V2000 projection cubes combined with Pixelite Electronics - also the further promotion of laser projection systems for show and exhibitions," explained Sussi Christiansen, marketing director. "Along with the complete projection package, Laserpoint DJS are also promoting their services to production companies where designers can use the in-house facilities. A laser display exhibition is also being created within the complex.

The on-site video projection wall consists of nine Pioneer RM-V2100 projection cubes complete with computer and monitor, Pixelite electronics rack, software and timecode reader. The sound system comprises two Axys speakers, AGM stereo enhancement and a Tascam 16 into 4 mixing console. The video monitor wall consists of nine 28" monitors and the necessary back-up equipment.

Laser equipment consists of two Coherent Purelight 3.5W mixed gas units, fibre optics, scan head effects, blanking units, colour mix units, graphics and animation, MIDI sequencer and tape interface system. An Aquarius is in control. There are a large number of downrange effects and target mirrors including motorised screens. There are two 50 x 60cm white light reflection real image holograms which are changed every month. Laserpoint's latest, a new laser video projector hot from the United States, will be launched from Hardwick Street next month.

To view all this Laserpoint DJS had a launch party on February 13th.



No 1 Hardwick Street.



Launch party-goers: Alan Parker, Tony Panico (left) and Derek Halliday (right) of Meteorlites with Martin Crick of Outback Productions.



Laserpoint duo Sarah Bradford (standing) and Sussi Christiansen.



Lasers and projection in action at the new Laserpoint DJS facility.



Light Relief Power Up Cyfartha Castle in Wales

The exterior lighting of Cyfartha Castle in Merthyr Tydfil, Glamorgan, which was the outright winner of this year's 'Lighting up Wales' awards presented by the Electricity Board, was carried out by Light Relief of Cardiff.

Design consultant Mark Satchell has produced a

series of colour washes and highlights of different features of the castle creating different moods which have been worked into a five minute programme of changing light and colour.

Cyfartha Castle is one of many unusual major projects which Light Relief has undertaken

throughout Wales, including lighting and sound in the Dan yr Ogof Showcaves complex in the Brecon Beacons, lighting for the 'Dinosaurs from China' exhibition in the National Museum of Cardiff, and lighting for a permanent exhibition 'Power in Wales' in the museum in Llanaberis, Snowdonia.

New Distributor, New Company

Compulite R&D Ltd have appointed the Lighting Technology Group as distributor for their products within the UK and other selected European markets. As a result a new division of the Lighting Technology Group, called Compulite GB, has been formed to handle the marketing, sales and servicing of the Compulite product range.

Both companies hope that the distribution of products, such as the Smart, Applause and Ovation lighting control desks, from Lighting Technology's premises in London and Manchester and through their various regional sales offices will help extend the customer base and enable them to provide an extremely high level of product support.

Compulite GB will also play an active part in specifying new products, and developing existing products, alongside Compulite R&D Ltd. The new company is based at 2 Tudor Estate, Abbey Road, Park Royal, London NW10 7UY.

Memotech's new Italian Distributor

Oxon-based Memotech Computers Ltd have appointed Videasel International srl, the sales and marketing division of Italy's largest TV and video manufacturers, as their Italian distributor. The first collaboration between the two companies will come this month at the SIB '92 exhibition in Rimini. Memotech will be displaying their videowall products on the Videasel stand.

Donmar Museum Piece

Donmar has just completed work at the Eureka Children's Museum in Halifax. The installation included Pulsar dimming and control Donmar cordpatch & IWBs and CCT zoom profiles, fresnels and PCs. In addition to this, Electrosonic 20amp unit dimmers with local controls for various low voltage luminaires were installed by the main electrical contractors.



At the Museum of London, Donmar were asked to light the Lord Mayor's Coach. Part of a larger Donmar supply contract to the Museum, the coach is lit by 18 Strand Lighting Quartet PCs on Donmar IWBs suspended on 250kg SWL self-sustaining hand winches. The intensity of the luminaires is controlled by Strand Lighting 20 amp Universal Unidim dimmers installed by Andy Murray, the chief electrician at the museum.

£12 Million Concert Hall for Basingstoke

Basingstoke and Deane Borough Council has announced plans for a £12m concert hall which promises to become a major focus of artistic entertainment and business activity in the area. The 1400 seat hall designed by architects Renton Howard Wood Levin Partnership, will be adapted to many uses including provision for a full symphony orchestra, cinema, conference facilities, sport, trade launches and a disco.

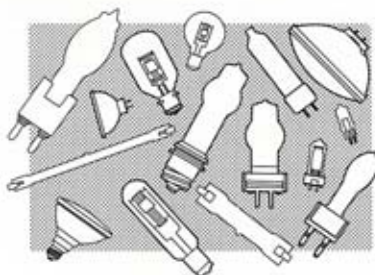
Cadac J-Type Debut

Opening night for London's newest musical Moby Dick will see the unveiling of a new live console series from Cadac. The 59-channel J-Type used on the production is the first to be commissioned and features flexible output options, programmable routing and the ability to reconfigure modules quickly and easily once in situ.

The J-Type design is a natural progression from Cadac's successful E-Type series, differentiated primarily by its unique frame design, in which modules are fitted with connectors on the rear vertical face and can be placed in any position. Each frame can be configured to hold any combination of modules, up to a maximum of 16 sub groups, providing a 16 x 32 matrix. All inputs, outputs, audio mixing busses and insertion sends/returns are electronically balanced. Cadac have also added the external PC interface into the Central Control module and provided local cue memory storage. (See 'Moby Dick' feature next issue.)

STAGE STUDIO & DISPLAY LAMPS

Competitive Prices
Large Stocks
Immediate Dispatch
Nationwide Delivery



RB lighting 081 977 9665

RB LIGHTING LTD. TEDDINGTON MIDDX TW11 9EU FAX: 081 977 5687

19 Pin Connectors — socapex compatible

Aluminium die casting and black electroplated.
Max. rated current: 20 AMP
24K gilding pins.



DOUGHTY

Doughty Engineering Limited
CROW ARCH LANE, RINGWOOD, HANTS BN24 1NZ
Telephone: (0425) 478961 Fax: (0425) 474481

PRO SERIES

Meet the Pro Series... a combination of A-T's precision transducer skills and extensive R&D facilities in the U.S.A. When it comes to sound no other is quite like your own and the Pro Series deliver it with distinction, be it voice or instrument. And now there's a range to suit almost every application.



PRO 22

The perfect start at a starter price. Budding musicians will appreciate the low weight and sparkling all round sound ability with Hi / Lo impedance switching. Finished in reflection cutting matt black and terminates in 1/4" jack.

PRO 4L

Moving slightly up the ladder comes the Pro 4L, a vocal mike to fully realise your potential. Low impedance and XLR connector suits most mixing rigs. Sister model PRO 4H offers high impedance and 1/4" jack.



Leading to SUCCESS!

PRO 8D

A dynamic headworn microphone offering freedom of movement while leaving both hands free... great for keyboarders and drummers! Flexible mic, boom, belt clip and 1/4" jack termination.



PRO 9D

Quality moving coil mike with high sound pressure level rating. Ideal for top quality sound reinforcement and bass drum/bass guitar stagework but also excels in studio/recording uses.



PRO 10HE

A wide ranging moving coil dynamic with advanced 'floating diaphragm'. This 'High Energy' design uses new magnet materials for increased sensitivity and transient response. A top performer when quality counts!



CLASS MIA APRS

PRO-AUDIO DIVISION
audio-technica®
INNOVATION PRECISION INTEGRITY

Technica House, Royal London Distribution Centre,
Old Lane, LEEDS LS11 8AG.
SALES: (0532) 771441 FAX: (0532) 794836

LIGHTING IN BRIEF

Entec Sound & Light have expanded their range of lighting equipment with a bulk purchase of Clay Paky Goldenscan 2s to add to their hire stock. The Goldenscans are to be used on the lighting systems Entec are supplying to Barclay James Harvest's lighting designer Carol Cooper for the band's 10-week tour of Britain and Europe.

Over 150 papers from 26 countries have been received for the European lighting conference **Lux Europa**, to be held from 4-7th April 1993 in Edinburgh. The conference, organised by CIBSE, will cover all aspects of lighting, and papers will examine new techniques and applications, presenting the results of the latest research. The venue for Lux Europa is the new purpose-built conference centre at Heriot-Watt University. For further details contact CIBSE in London, telephone 081-675 5211.

Tunnel luminaires and approach road lighting from **Siemens Lighting Ltd** have been installed in the revolutionary Conwy Tunnel in North Wales. Nearly 4000 luminaires were supplied for the 1km twin-bore tunnel comprising 2600 58W single and twin fluorescent luminaires and over 1100 150W, 250W and 400W twin lamp SON fittings. The fittings have end access for easy maintenance of the gear and lamp trays. To save energy and improve visibility it is linked to a computer which provides eight stages of switching according to light levels outside the tunnel. All single tube fluorescent luminaires are fitted with high frequency control gear and are dimmable. Twin lamp units have dual circuits so that lamps can be individually controlled to meet the requirements of the switching system.

Osram are publishing a new journal for specifiers and independent luminaires manufacturers. Each issue will contain details of new product developments, examples of OEM luminaires, a selection of case studies, advice on lighting and an opinion piece from a leading figure on lighting. The magazine is generally available and copies can be obtained from Rob Thomas at Osram, telephone 081-904 4321.

Trafalgar Lighting have increased their line up of hire stock. New additions to the range include Intellabeams, the Celco Navigator, Zero 88 XL control desk, Sirius DMX and demultiplexers.

London-based **i-Laser** have provided a custom laser and lighting system for Le Chat Bleu nightclub in the Bordeaux region of France. **VSI Clublife** of Croydon were brought in as sub-contractors for the lighting installation with main effects provided by Fal - Blowstars, Crocodiles, and a Sapro Rainbow. Control is provided exclusively by Light Processor equipment. i-Laser installed an Image Synth V.2e laser system with six watts of blue, green and cyan laser power. i-Laser have also been hard at it at Richard Branson's Heaven nightclub where they have also supplied an Image Synth custom laser system.

Goodbye old Friend?

It seems the future of an old industry favourite may be in question. The 15 amp round-pin plug and socket has been the standard theatrical connector for about 40 years, but in the next few months this

could all change, if MK Duraplug decide to call it a day.

MK bought out Duraplug 18 months ago, leaving only themselves and Permaplug as the two major suppliers of 15 amp plugs. Following the buyout MK ceased production of 5 amp plugs which are now only available through Permaplug. More recently, several PLASA members report having difficulties getting hold of the MK843 socket connector, which MK have now confirmed is no longer being manufactured.

Speculation is now rife that MK will pull the plug on the 15 amp too as the market for it is relatively small. It seems that this is not the first time such a move has been considered. The manufacturers have tried before to kill off the 15 amp, but were forced to keep it in the catalogue under lobby pressure from the theatres.

More recently it has been noted that the HSE are taking a very close look at safety standards within theatres. The feeling is that they will soon implement recommendations which will make the 13 amp, which has shrouded pins where the 15 amp doesn't, the industry standard.

This would prove an unpopular move, if it were to happen, as the 13 amp contains a fuse, and people want connectors without fuses as they are easier to maintain. Peter Coleman of Midland Theatre Services, who manufacture equipment that uses the 15 amp told L+S: "The industry should take the initiative and approach HSE to recommend CEEFORM as the industry standard. PLASA now has an opportunity to decide on the direction we take." CEEFORM is a relatively cheap multi-source family of connectors and has already been adopted by the television and broadcast industries, and would seem the more acceptable alternative.

Change for M & M

M & M Lighting and Camelont London have moved to larger premises in the heart of London's Camden Lock. The new premises give the two companies more than four times the amount of floor space, allowing warehousing on site, so all product including Rainbow Colour Changers, Smoke Factory fog machines and Selecon Lighting is now available for immediate delivery. The move also gives both companies showroom space so that viewing of the products can be easily arranged.

M & M can be reached at Unit 2, Cameron House, 12 Castlehaven Road, London NW1 8QW, telephone 071-284 2504.

ARK LIGHT THEATRE LANTERN RESTORATION

COLOUR MATCHING TO DECOR
SPARES, T/H KITS

2 Partridge Close, Upper Bruntingthorpe
Leicestershire LE17 5QY

Tel: (0533) 478336



Midland
Theatre
Services
for

lighting
sound
special effects
sales
service
hire

Junction 1
Industrial Estate
Dartmouth Road
Smethwick
Birmingham B66 1AX
Tel: 021 525 4545
Fax: 021 525 2413

M&M
Approved Contractor

PEOPLE

Phil Pell of Celestion International has been promoted from the role of UK sales manager for the SR Line only to sales manager for all professional products including chassis business.

Catherine Harrower has joined M & M Lighting and has taken on the day-to-day client contact, with particular emphasis on the Selecon Lighting and Smoke Factory product ranges. Catherine was previously deputy chief electrician at the Shaftesbury Theatre and prior to that was hire manager at Avolites.



Phil Pell.



Catherine Harrower.

The Autograph group of companies has announced the departure of **David Solari** from his position as managing director of Autograph Sales. He was instrumental in establishing Meyer Sound within the UK and Europe and having completed the hand-over and transition arrangements of their Meyer-related European business, he will be moving on to pursue other projects.

Graham Paddon has now joined the board of Autograph Sales as sales director. He joined Autograph four years ago as sales manager, but has undertaken the role of European sales manager for the last two years.

Turbosound have announced that **Tony Andrews** and **John Newsham** have resigned as directors of the company and will now act as independent consultants to the company. Their new consulting group will work closely with Turbosound and will continue to supply the necessary technical support.

US-based Hoffend & Sons inc have appointed **Bill Liento** as vice-president of sales and marketing. He has previously worked as senior vice president of Colortran where he headed sales and marketing. Prior to that he had been executive vice-president at Strand Lighting.

Neve Electronics have appointed **David Franklin** to the position of European sales engineer. Working alongside Roger Clemo, sales manager Europe, Franklin's territories include Spain, Portugal, France, Belgium, Holland and Greece. He moves to sales from R & D, where he was involved in digital research. Previously he worked in digital systems design for Marconi.

Mitchell Moves On

Colin Mitchell has left the Juliana's Group, where he had been responsible for co-ordinating projects in Tokyo and elsewhere in the Far East to take up a new post as technical manager with Light and Sound Image in Singapore.

LSI are distributors and installers of audio visual and specialist lighting equipment, representing Electrosonic and Celco amongst others. Mitchell gained considerable experience of the videowall business when, prior to returning to Juliana's for whom he had previously worked, he was responsible for marketing at Memotech.

At LSI he will take on the design and project management of contracts throughout the Pacific Rim.

Festival Lights

Clay Paky has been chosen to supply the lighting for this year's San Remo Festival. Futura Luce, the company responsible for stage lighting at the festival will utilize 34 intelligent SuperScan projectors to create the special effects required. Clay Paky have also been involved in a number of other projects including the Eurofestival, Fantastico, Domenica In and Non e la Rai.

Buzz at the Station

The opening of a new nightclub on the site of the old Liverpool bus garage, marks the third such venture for local entrepreneur John Fallows, whose previous clubs are now part of the European Leisure estate. Partly as the result of a scouse in-joke, the place is to be called 'Buzz'.

As with previous Fallow's ventures, the interior design was by Graham Fields of Bulldog Design and lighting and sound by Hi-Tec of Liverpool, for whom the club is the first major project since shaking off earlier commercial difficulties and starting afresh. The site, close to the Adelphi Hotel and Lime Street Station, will eventually incorporate a conference/function centre and a hotel. Mike Boylan of Hi-Tec, who was responsible for the sound design, opted for a 'wall of sound' principle with all the dance floor speakers, mainly ElectroVoice, in a single stack and acoustically coupled. Hi-Tec's Paul Davis, told L+S: "We were asked to engineer a high-powered music system focused on the dance floor. We chose the point-source approach to optimise the low end coupling characteristics, while maintaining even high frequency and minimising phase cancellation." The dance area lighting which, among other items, features Clay Paky Miniscans and Lynx Synchro Pins on a largely static three dimensional frame with a single, central, Lynx Elevator carrying a WB Lighting Tango, is controlled by a Pulsar Masterpiece.

SCIF Initiative

At the Annual General Meeting of the Sound & Communication Industries Federation (SCIF), the new Chairman Peter Barnett announced the Federation's intention to proceed with Project '92. The project encompasses the introduction of an Approved Installers Scheme, the publication of a Product and Services Directory, technical standards, training, and seminars. Further details are available from SCIF, telephone (0628) 667633.

ETR FOOTCONTROLLED LIGHT SHOW
SWISS

8 CHANNELS
1000 W EACH

TAKES A NORMAL
240 V SUPPLY

To see at:
Frankfurt Music Fair 1992
Stand 8.0 H 80
M & T, Musik & Technik, D-3550 Marburg

ETR Lighting, CH-6388 Grafenort, Switzerland, Tel. 0041 41/65 25 07 Fax 65 25 13

THE WHITE BOOK THE INTERNATIONAL PRODUCTION DIRECTORY

TO THE ENTERTAINMENT, LEISURE RECORD, CONCERT, FILM, VIDEO, CONFERENCE AND EXHIBITION INDUSTRIES

Used more than a million times a year!

UK and International listings of Agents, Managers and Promoters. Extensive coverage of UK Artists, Acts and Attractions. NEW CATEGORY OF MAJOR AMERICAN ARTISTES. Production Services include Sound, Lighting, Stage Construction, Rigging and Crew Services, Tour Managers, Tour Caterers, Security, Trucking and Transport. Venues Worldwide. Plus coverage of the Record, Film and Video, Conference and Exhibition Industries both in the UK and Overseas.

"all those unusual acts & attractions, services & supplies, throughout the world, that you can't find anywhere else ...!"

1992 EDITION NOW AVAILABLE

and FREE with every copy the LITTLE WHITE BOOK, a "POCKET SIZED" publication containing an invaluable A to Z listing of company names and telephone numbers from within THE WHITE BOOK.

THE WHITE BOOK 1992 EDITION - PRICE £39 in the UK
£43 in Europe, £48/USA\$96 in the USA, £52 in all other countries.
(prices inclusive of postage & packing)

ALL MAJOR CREDIT CARDS ACCEPTED - TEL: 0784-464441
THE WHITE BOOK, PO Box 55, Staines, Middlesex TW18 4UG, England
Tel: +44-784-464441 Fax: +44-784-464655

CONTROL BEYOND IMAGINATION



Imagine a lighting controller that will run Golden Scans, Par Cans, Strobes, Pinspots, tubelights, theatre lanterns, display spots, downlighters, floods, multi-mirror lamps, neon, etc., etc., and produce every effect you could ask for.

Now imagine a controller capable of doing all this simultaneously, but with every effect in its own individually programmed and timed sequence. Guess how much it would cost? Well, the answer is a lot less than you might think - less, in fact, than virtually any memory control board on the market.

Masterpiece is in a class of its own, the second generation of integrated lighting controllers. It is designed not only to get the best from intelligent lighting, but also to replace a collection of controllers that might previously have been needed for the job. We have tried to include every feature needed in modern light control.

MASTERPIECE

• 108 CHANNEL MEMORY LIGHTING DESK

- add Masterpieces, switched to slave mode, to expand 108 channels at a time, without theoretical limit.

• DESIGNED FOR:

Theatres, Bands, Discotheques, Intelligent Spotlight and Environmental control.

• CONCEPT:

A synthesis of Pulsar's Touch Panel, Control Desk, Rock Desk and Modulator technology - plus a little more! 70 Touch Pads, 25 Sliders, 108 LEDs, 4 Digit Display and Joy Stick.

• STRUCTURE:

108 Channels, 216 Scenes of the 108 channel levels with fade in and out times, 54 Scene Chases, 48 Environments of Scenes and Scene Chases, 6 Environment Chases.

• FOR THEATRICAL USE:

Fully automatic crossfades or manual crossfades using the A and B masters. Fade In and Fade Out time sliders to create/override the values stored with each scene. Add in any amount of the other 216 scenes at any time. Individual control of the 108 channels always available. Grand Master. Black Out.

• INPUTS:

Audio for Sound to Light and Chases. RS232 and MIDI for total remote control of ANY feature.

• OUTPUTS:

Channels 1-36 available as 0-10v analogue, channels 1-108 transmitted in both RS232 and DMX formats.

• SPEED:

The ultimate in both programming and operation thanks to its conceptual simplicity and having one touch pad for every requirement.

• MEMORY:

Internal memory non volatile. RAM card for backup, changing shows and transfer between Masterpieces.

• SOUND TO LIGHT:

Pulsar Modulator's Sound to Light circuits built in, 3 zones of 4 channels, each patchable at any level over the 108 channels.

• SECURITY:

Using his security code, the 'Programmer' may deny access by the 'Operator' to any touch pad or slider.

• OTHERS:

18 Keyboards of 18 pads, Latch/Flash/Swop/Solo keyboard modes, Sound to Light monitor, Joy stock with position/velocity, Change security code, Freeze output, Master/Slave desk, Chase section: Manual step fwd/rev, Speed, Slope, Bass/treble burn, One-shot/repeat, Use some fade times, copy chase...

... THE
SPECIFICATION
SAYS IT ALL

FOR FULL SPECIFICATIONS CONTACT

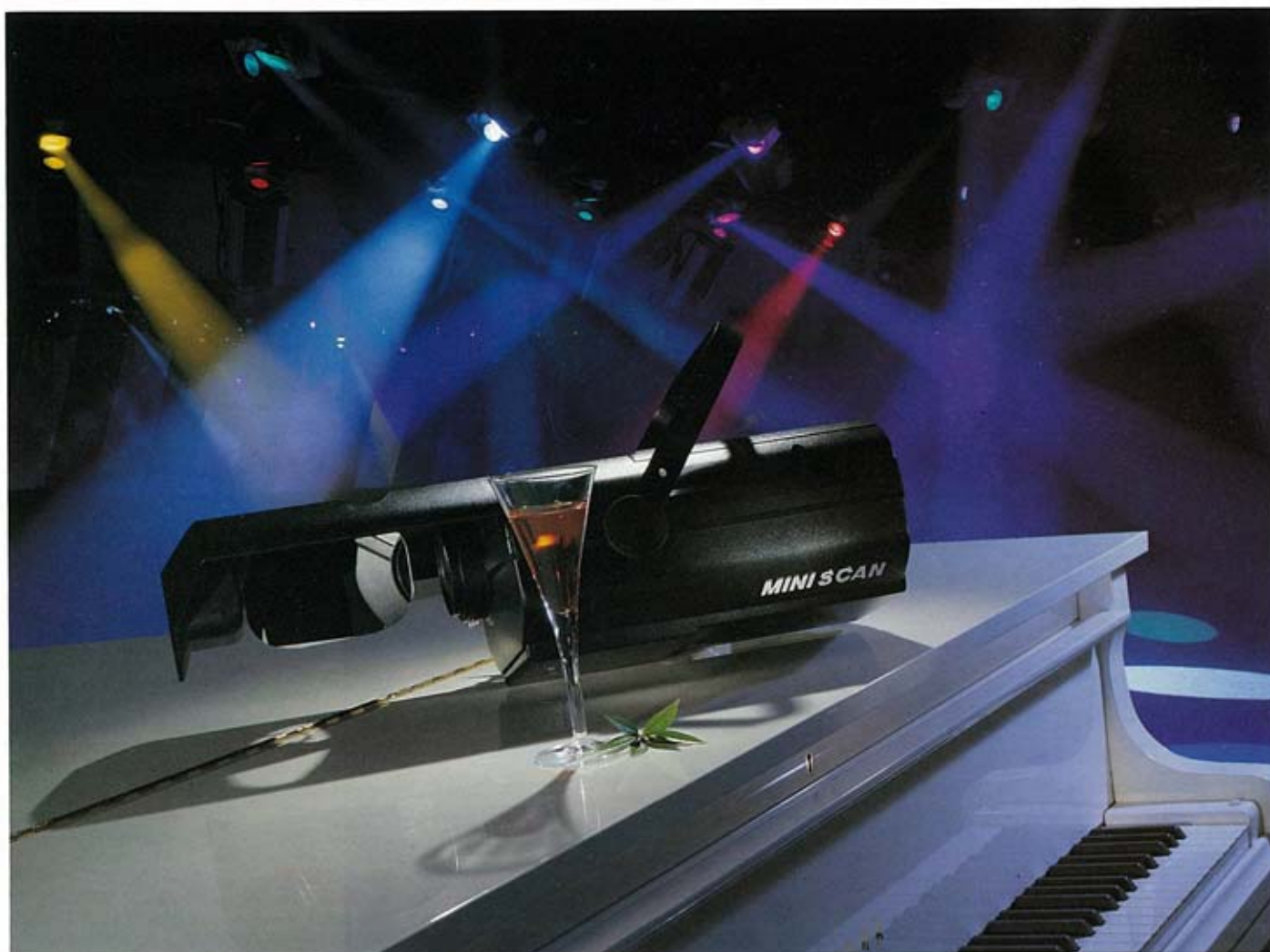
PULSAR
LIGHTING FOR EFFECT

United Kingdom,
Pulsar Light of Cambridge Ltd.,
Henley Road, Cambridge CB1 3EA,
Tel: 0223 66798 Fax: 0223 460708

France,
Clay Paky & Pulsar Sarl,
10 Ave du Fresno, 14760 Brenteville sur Odon
Tel: 31 741001 Fax: 31734729

Germany,
Clay Paky & Pulsar Vertriebs GmbH
An der Talle 26, 4790 Paderborn
Tel: 05251/409051 Fax: 05251/409931

Mini Scan: Mini Kolossal.



An intelligent lighting system as only the mega-discos can afford.

MINI SCAN* is a mini kolossal, the first and only miniaturised intelligent projector that contains the complete technology of the sophisticated and expensive professional scanners.

No compromises have been made.

MINI SCAN beyond imagination:*

- eight colours
- bicolour beams
- continuous rotation of the colour wheel, with adjustable speed up to a rainbow effect
- five gobos
- black out and strobe effect with adjustable speed
- all functions are fully controllable, including the mirror rotation
- discharge lamp which guarantees, not only brilliant light but also economy, thanks to its long life
- control signals: analogue 0-10 V, digital RS 232 and DMX 512.

**MINI SCAN is small and compact, it weights only 8.5 kg.
MINI SCAN is mini only in its dimensions: in reality is a giant of technology.**

* Patent pending

PULSAR Pulsar light of Cambridge
Henley Road, Cambridge, CB1 3EA.
Tel. 0223/66798 - Telex 81697

CLAY PAKY s.r.l. - Via G. Pascoli, 1
24066 PEDRENGO (Bergamo) Italy - Tel. 035/663965
Fax: 035/665976 - Telex 305242 CLAYPA I



PROFESSIONAL SHOW LIGHTING

SOUND IN BRIEF

Marquee Audio has now expanded its activities to include the manufacture of custom flight cases, having purchased the assets and stock of Wearhard case company. Marquee has doubled the size of its Shepperton headquarters to both accommodate the new venture and to extend the technical manufacturing capabilities. In addition to flight cases, the company is now also building complete pre-wired systems and multicores.

Mersey Television has recently purchased an **EMO GEQ60** stereo 30 band graphic equaliser for use in the 'Brookside' programme's dubbing studio.

Orbital Acoustics, the London-based theatre and conference sound rental company is currently involved in two very different projects. On one hand, the company are supplying a small system for the UK tour of 'Straight and Narrow' starring Nicholas Lyndhurst, and on the other they are supplying no less than 19 Micron diversity radio mic units, and a 40 input Midas XL3 (pictured below) console for Sainsbury's 1992 management conference in Birmingham.



Sound reinforcement company **Dimension Audio** has recently installed a 'unique' multi-play CD system in London's much talked about Ark office complex. Prospective tenants arriving to view the building, activate the remote-controlled system, which fills the air with orchestral music, giving the impression of a full concert orchestra performing on the sixth floor, and leaves visitors non-plussed as to its source.

Birmingham-based PA company **SSE** has become the first in the UK to commit to TC Electronic's 1128 programmable graphic EQ for system equalisation, part of a major move by the company to add total recall control to its touring rig.

The system's first use is on the current Simply Red tour using ElectroVoice MT4 and a small amount of MT2 for nearfield. The system is semi-distributed with five loudspeaker stations to enhance coverage.

An electro-acoustic system installed at St Albans Arena Theatre has won major acclaim for SIAP Ltd of London in the **Toa/S&CS Golden Ear Awards** for 1992. Sponsored by Toa the aim of the award scheme is to acknowledge and promote standards within the sound industry.



Michael Holden (far left), managing director of SIAP, a finalist in the Toa/S&CS Golden Ear Awards 1992. He is pictured with **Harry Greenaway** (centre), managing director of public address manufacturer Toa and **Kevin Hilton**, the editor of *Sound & Communication Systems* magazine.

Encore installed the full house sound reinforcement system into the newly-opened Grand, Clapham, featured in January's *Lighting and Sound International*. The installation consists of a Martin Audio F2 system coupled with a Midas XL3 and system control and effects.

Dartington College of Arts in Devon has installed five **Tannoy** Monitor Series loudspeakers in its listening rooms. The rooms are teaching areas for the college's BA degree in music. Three Tannoy System 2 NFMs and two System 8 NFMs have been bought from Tannoy dealer KGM. At the other end of the UK (well nearly) 100 Tannoy CPA 5 speakers are currently being installed into Glasgow Airport as part of its extension programme.

Sennheiser is the first, and according to the company, only manufacturer to date to produce DTI approved equipment for use on the new Channel 69 radio mic frequencies. Channel 69 was introduced in January to replace the old Channel 35 which is being given over to the new Channel 5 television station, the advantage being that the new channel has far more frequencies available.

Clive Green & Co have announced the completion of the latest Cadac 'E'-type console for the Tokyo production of *Miss Saigon* due to open in May of this year. Comprising 70 input channels, the desk is specified in accordance with the US version of the show, with sound design by Andrew Bruce of **Autograph Recording**.

French speaker system manufacturer **Nexo** will be showing several new products at the forthcoming AES in Vienna. In contrast to last year's new products, the TS2400 touring system and L-Sub ranges, this year's launches feature high-powered smaller cabinets, which will feature alongside Nexo's complete range of products.

The new musical *Crazy for You*, which recently opened at the Schubert Theatre on Broadway is the first US production to harness two **Out Board Electronics** SS1 theatre sound automation systems running in tandem.

The SS1 was specified by leading sound designer Otts Munderloh, and is similar to that used on the Broadway production of *Miss Saigon*.

Audio Technica (pictured below) have moved to new headquarters in Leeds. The new site offers almost double the warehousing space, and room for further expansion. During the summer the company will be building a professional showroom, designed to showcase the full range of pro-products. In a concurrent move, Audio Technica announced their decision to end all hi-fi sales through wholesalers. All business will be handled by AT's direct sales team and product specialists.



Neve Electronics have relocated their headquarters to a brand new purpose-built facility in Litlington, five miles from the current office complex in Melbourn, near Royston. Located on a three acre site, the new 4,500 sq.m premises have enabled Neve to centralise its operation by bringing R&D back under the same roof as sales and marketing. A major feature of the new Litlington facility is Neve's own purpose-built state-of-the-art recording studio, to be used for both training and demonstration purposes.

Wigwam Acoustics Ltd have won the contract for a sound reinforcement installation at the Glasgow Royal Concert Hall. The new system, designed by Wigwam's Mike Spratt, consists of four Meyer Sound UPA-1Bs, two Meyer MSL-3s, Meyer sound processors and Crest Audio power amplifiers. This will complement the existing sound

system which will eventually be replaced by an all Meyer system in the near future.

Aberdeen-based Northsound Radio have recently purchased a British-designed and manufactured 3G Unit 8 Series mixing desk for outside broadcast duties. The system supplied by UK distributor **HW International** is a 24-8-2 configuration, and has already been used for OB's from Aberdeen's Music Hall.

Saffron Walden-based company **Envotech** are installing a new sound system into the George Canning, a live music venue in south London. The system comprises of a Toa process professional sound system with a Tascam M216 mixer. The system is a permanent installation for visiting bands to use.

MSL are launching a major promotion of the SM150 mixer directed at the 'bedroom mixer' market. The promotion kicks off with a competition in DJ magazine which is aimed directly at the mixer DJ. MSL are putting up prizes to the value of £1500 and are planning to follow up the competition with a series of 'mixing' events at their north London showrooms. The company are busy on the competition front and are also running a joint promotion of the Martin Junior 700 Fog machine. Away from all the promotions and competitions, the company has recently been appointed pro-dealer for Denon.

Soundcraft consoles are finding new homes all the time, most recently in Studio Luca in Slovenia, where the TS12 model is being put through its paces. BBC Northern Ireland has bought a 24 input Delta monitor from Belfast-based Soundcraft dealer Sound Control. The Delta monitor is part of a complete stage monitoring system for its new Studio A complex based at Blackstaff in Belfast.

VDC At Work

VDC Trading the central London-based audio and video cabling company have recently secured the contract to supply Channel 4 Television with pre-wired audio patchfields for their transmission room re-vamp.

The company have also completed an external patchbay for Soundcraft Electronics' top of the range 3200 console. Consisting of 11 1U 96-way bantam patchbays to accommodate all the facilities of the 48 channel desk, all 1056 balanced lines are accessed through 54 90-way chassis-mounted EDACs connected to the desk by EDAC to EDAC looms.

Aside from all this the company have also just completed a £.25m installation at The Garage Arts & Media Centre under the auspices of Walsall Metropolitan Borough Council. Using three 24-channel TAC Scorpion consoles, full audio and video link-up was provided between the 24 track recording studio and the live auditorium's 8.5kW PA rig.

Discoscene Grows

The second annual Discoscene Wales & West is to take place at the Hilton National Hotel in Newport, Gwent, on Sunday 8th March. It is the first in a line-up of regional Discoscene events that will take place throughout the summer and autumn. Traditionally the shows have had a bias towards the mobile disco market, but to reflect the expansion of the industry, Terry Lees, organiser of the shows, has broadened the scope of the exhibitions.

The autumn Midlands exhibition in Birmingham attracts exhibitors from the club installation, mobile and theatrical supplies sectors. A special feature of the day will be a showcase of live disco/cabaret acts giving club managers a chance to see artistes in a working environment.

Other dates in the Discoscene season are Sunday 12th April, Discoscene East in Cambridge, and Sunday 17th May, Discoscene North in Manchester. Details of the Birmingham exhibition will be available soon.

For further information on these exhibitions contact Terry Lees in Birmingham on, 021-707 1925.

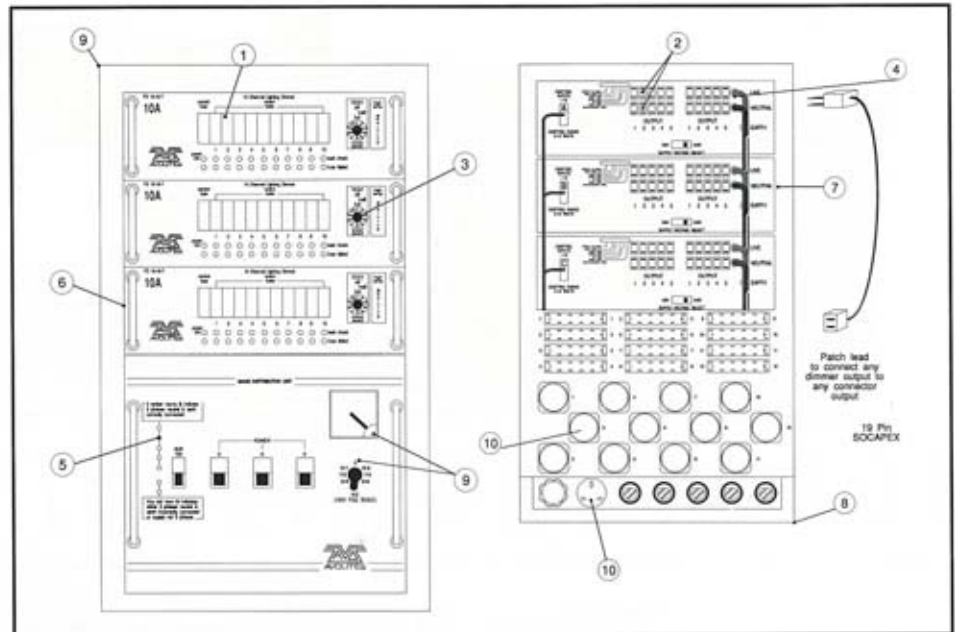
AVOLITES LTD PRODUCT PROFILE DATA

The D-30 Dimming Systems

Formed in 1978, AVOLITES was originally a touring company producing equipment for their own use. Today Avolites design and manufacture lighting control equipment capable of withstanding the harsh environment of 'Life on the Road'.

AVOLITES products are installed wherever quality and reliability is important, from television and theatre installations to major world events and tours with leading artistes.

AVOLITES total commitment to the industry is further reflected by their on-going policy of research and development. This has resulted in one of the most comprehensive ranges of lighting control desks and dimmer systems available from any one manufacturer today.



Quality and Reliability . . . Avolites Making Light Work

FOR MORE INFORMATION ON ANY OF
THE EXTENSIVE RANGE OF
PROFESSIONAL LIGHTING CONTROL
EQUIPMENT CONTACT

STEVE WARREN
AVOLITES LIMITED
184 PARK AVENUE
LONDON NW10 7XL

TELEPHONE: 081 965 8522
FAX: 081 965 0290

All brand names and trade marks are the
property of their respective owners

The D-30 Dimming System has been specifically designed and manufactured by Avolites, in the UK, for the club, fashion show, and industrial presentation lighting industry.

This system incorporates three 10 channel versions of our 10 and 20 amp dimming modules. Each module has its own integral patch outlets. The compact mains patch facility allows a total of 72 lamp channels.

By utilizing this simplified patching method we have been able to produce a compact dimming system that retains all the basic features of the Avolites dimmer at a price within the scope of the most basic budget.

Various versions are available including CEE-125A input connectors and HBE-16 output connections.

1. Inductive loads controlled smoothly
2. Two Hotpatch outlets per channel, series or parallel.
3. Channel test switch, half or full level.
4. Over voltage protection
5. Seven neon 'correct mains' connection displays
6. All modules on heavy duty slides
7. Each module 'whisper fan' cooled
8. Small footprint 86cm(h) x 57cm(w) x 50cm(d)
9. Supply voltage meter with seven way phase selector switch
10. Full choice of input and output connectors.

Useful Dimmer Connections

19 Pin 'Mains' Socapex

Pin 1	Live Circuit	1
Pin 2	Neutral Circuit	1
Pin 3	Live Circuit	2
Pin 4	Neutral Circuit	2
Pin 5	Live Circuit	3
Pin 6	Neutral Circuit	3
Pin 7	Live Circuit	4
Pin 8	Neutral Circuit	4
Pin 9	Live Circuit	5
Pin 10	Neutral Circuit	5
Pin 11	Live Circuit	6
Pin 12	Neutral Circuit	6
Pin 13	Earth Circuit	1
Pin 14	Earth Circuit	2
Pin 15	Earth Circuit	3
Pin 16	Earth Circuit	4
Pin 17	Earth Circuit	5
Pin 18	Earth Circuit	6
Pin 19	Earth Circuit spare N/C	

37 Pin 'Control' Socapex

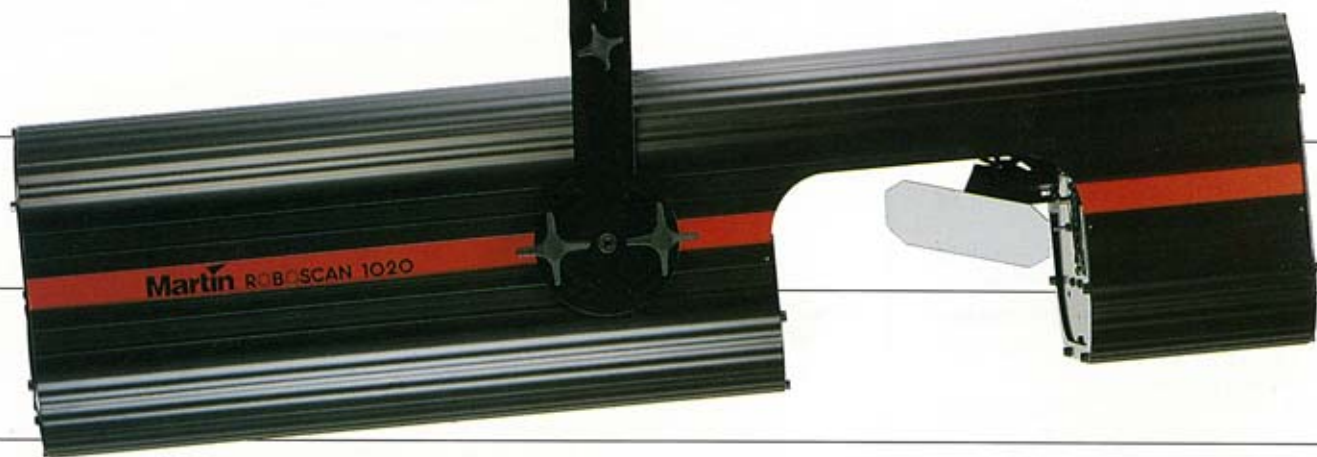
Pin 1	Control channel	1
Pin 2	Control channel	2
through to...		
Pin 29	Control channel	29
Pin 30	Control channel	30
Pin 31	Spare N/C	
Pin 32	Spare N/C	
Pin 33	Spare N/C	
Pin 34	Spare N/C	
Pin 35	All linked together and connected to the screen of the cable - 0 Volt reference	
Pin 36		
Pin 37		

Cannon D - Type 15 Pin 'Dimmer Input' Connector

Pin 1	Channel 1	(0 to +10 volts)
Pin 2	Channel 2	(0 to +10 volts)
through to...		
Pin 10	Channel 10	(0 to +10 volts)
Pin 11	Channel 11	(0 to +10 volts)
Pin 12	Channel 12	(0 to +10 volts)
on FD 12 Channel Modules		
Pin 13	All linked together and connected to the screen of the cable - 0 Volt reference	
Pin 14		
Pin 15		

FROM ROCK TO OPERA - AVOLITES MAKING LIGHT WORK

THE INTELLIGENT LIGHT OF THE 90'S



ROBOSCAN® 1020/1200 MSR

The Ultimate Projector

Just take a look at these features:

- 1200 Watt MSR discharge lamp – one of the most powerful lamps available.
- 175 degree pan in 0.028 degree steps (6208 different positions).
- 83 degree tilt in 0.056 degree steps (1472 different positions).
- Variable pan and tilt speeds.
- 2x9 dichroic colours plus white.
- Colour mixing – create your own colour shades.
- 2x10 motorized gobos.
- Gobo mixing – create your own gobo patterns.
- Motorized focus – keeps the gobo patterns knife-sharp.
- Motorized iris.
- Motorized dimmer.
- Multiplying prisms.
- The colour change, gobo change, iris control, dimmer control, focus change and prism change can all be performed at varying speeds.
- Variable shutter speed for strobe effect.
- Efficient fan cooling.
- Programmable via the 2032 controller, or 2208 controller.



Roboscan is a registered trade-mark of Martin Professional A/S.

International Martin distributors:

ARGENTINA
Importadora Electronica
Carnarones 2459
C.P. 1416
Buenos Aires Argentina
Fax: 1 5826586

CANADA
Martin Professional Canada
8744 Boul. Pie 1X
Montreal Quebec H1Z 3V1
Tel.: 514 5905220
Fax: 514 5924461

AUSTRALIA
Lights Audio Video Australia
Pty Ltd
285 Burwood Road
Hawthorn Victoria 3122
Tel.: 02 8164444
Fax: 02 8797377

DENMARK
EB Elektronik A/S
Nymarkvej 11
7200 Grindsted
Tel.: 75 32 40 90
Fax: 75 32 33 95

AUSTRIA & W. GERMANY
Zitroner Musik
Instrumente und Elektronik
Vertriebs GmbH
Herzogsrasse 4
8047 Karlsruhe
Tel.: 8131 95036
Fax: 8131 98959

FINLAND
Elektronikkakeskus Oy
Alomitie 5C
00370 Helsinki
Tel.: 005031188
Fax: 905031079

BELGIUM
E.V.D.V. Trade BVBA
Dr. Persoonslaan 41
2830 Willebroek
Tel.: 03 8862190
Fax: 03 8660744

FRANCE
S.L.D.
9, Avenue Ferdinand de Lesseps
91420 Morangis
Tel.: 64 48 06 58
Fax: 69 34 82 78

GREECE
SLS (Hellas) LTD
P. Patrikios Sia Epe
Botani Street 4, Kanigos Square
Athens TT 106 82
Tel.: 01 3628937
Fax: 01 3622710

HONG KONG
Trinity Engineering Ltd.
Unit A, FL, K.K. Industrial Building
5 Mok Cheong Street, Tokwawan,
Kowloon, Hong Kong
Tel.: 3 7657863-6
Fax: 3 634820

ITALY
Etabeta Electronics Srl
Via Milano 38/D
22070 Bregnano (CO)
Tel.: 31 773539
Fax: 31 773798

JAPAN
Pro Media
Choei Bldg. 6F
1-13-7 Kitashinagawa Shinagawa-Ku,
Tokyo 140
Tel: 0334718151
Fax: 0334718246

LUXEMBOURG
PEC Europe s.a.r.l.
10, rue de Grevenmacher
L-6912 Roodt-Sur-Syre
Tel.: 352 77377
Fax: 352 77375

MALAYSIA
Music Plaza PTE. Ltd.
16-18 & 24-26, Jalan SS 2/72,
47300 Petaling Jaya
Selangor Darul Ehsan, Malaysia
Tel.: 03 7178977
Fax: 03 7194123

NETHERLANDS
Fairlight
Rijnstraat 74
6586 MK Doornenburg
Tel: 08812 1735
Fax: 08812 3810

NORWAY
Telek A/S
Sverresgate 4
0652 Oslo 6
Tel.: 02 683010
Fax: 02 684010

POLAND
Discotech
Marek Slowikowski
Mickiewicza 13/15 M 21
01-517 Warszawa
Tel.: 22 390118
Fax: 22 349755

PORTUGAL
Audium
R.D. Joao V. 2D, Loja
1200 Lisboa
Tel.: 01 691859
Fax: 01 692831

SWEDEN
Bo Saverus AB
Ribers Borg Vegen 14C
20071 Malmö
Tel.: 040 100870
Fax: 040 914222

SWITZERLAND
Effeconic AG
Schindellegistrasse 57
8808 Pfäfers SZ
Tel.: 055 483355
Fax: 055 483383

TAIWAN
Rolling Stone Music & Sound Co.
P.O. Box 512
Taichung
Taiwan R.O.C.
Tel.: 04 2366430
Fax: 04 2312939

UNITED KINGDOM
Martin Professional UK
Unit 8 Mill Hall Business Estate
Aylesford Maidstone
Kent ME 20 7JZ, England
Tel.: 622 790164
Fax: 622 790166

USA
Tracoman Inc.
2533 N.W. 74th Avenue
Miami
FL 33122
Tel.: 305 591 5991
Fax: 305 591 5990

SINGAPORE
Music Plaza Pte. Ltd.
80A Tannery Lane
Singapore 1334
Tel.: 7409266
Fax: 7450150

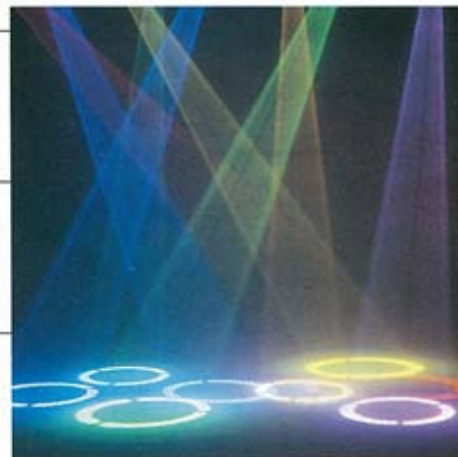
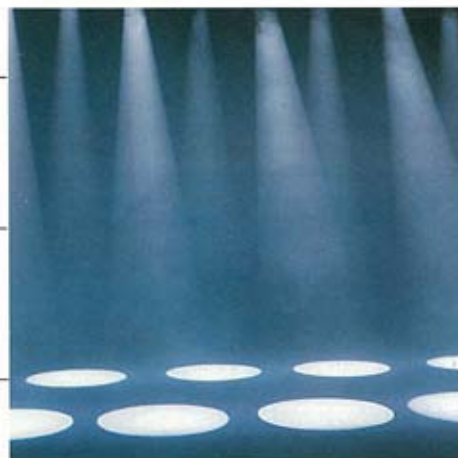
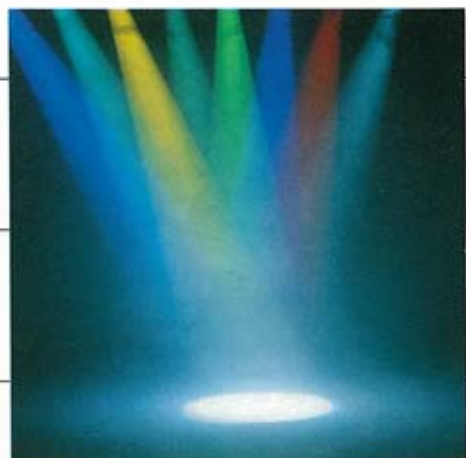
SPAIN
ECLER
Laboratoria De Electro - Acustica, S.
Vand. 273, bjs
08024 Barcelona
Tel.: 03 2841412
Fax: 03 2844803

YUGOSLAVIA
Solicom
Ul. Bratov Ucakar 60-62
61117 Ljubljana
Tel.: 061 572 604
Fax: 061 571 654

Throughout the 15 years we have been in the lighting industry we have had countless discussions with just about every professional in the business. This feedback of information has given us a very clear picture of what our ultimate projector had to be able to do. It was no easy task to combine all the required functions in one unit and yet keep the size and weight reasonable and the price affordable. But we did it!!

No other projector on the market has the combination of state-of-the-art features and extraordinarily high lamp power that characterizes the 1020/MSR1200. No other projector can position its waggly mirror so precisely, so smoothly and so quickly. Pinpoint your target to within tiny fractions of a degree!!

This is the flagship of the Martin Professional range of lighting equipment and yet the price is as low as the cheapest models of intelligent lighting projectors in other manufacturers' product ranges. How do we do it? By doing everything ourselves. Everything from the idea stage, through research and development to the production stage is carried out on our own premises under the personal supervision of the company's founder, Peter Johansen. You told us what you wanted and we delivered the goods!



The 2032 (32 channel) controller and the 2208 (8 channel) controller can be used to program all types of Martin intelligent lighting units to provide hours of richly varied lighting entertainment.

STATE OF THE ART IN LIGHTING - MARTIN!

STOP PRESS!

Martin Professional won the 1991 Disco Club **Manufacturer of the Year Award!** The Roboscan won the 1990 Disco Club Award for the **Best New Lighting Product.**



Martin

Martin Professional A/S, Vejlbjergvej 16,
DK-8240 Risskov, Denmark
Phone: +45 86 17 52 88, fax: +45 86 17 52 52
UK Distributor: Martin Professional UK,
Unit 8 Mill Hall Business Estate,
Aylesford Maidstone, Kent ME 20 7JZ
Tel: 0622 790164 Fax: 0622 790166

Martin distributors in the United Kingdom:

AJS Lighting & Stage
Highlow Industrial Est.,
Crow Arch Lane
Ringwood, Hampshire
Tel.: 0425 470888

Contract Audio
Unit F20 Bath Road Trading Estate
Lightpill, Stroud, Glos
Tel.: 0453 751865

Cookes Sound & Light
34 St. Benedicts Street
Norwich
Tel.: 0603 623563

D.D.S.
100 Rose Lane
Mossley Hill
Liverpool
Tel.: 051 7246424

Disco Sales & Hire
171/181 Lynchford Road
Farnborough Hants
Tel.: 0252 513713

Disco Supplies
888 High Road
Chadwell Heath
Essex
Tel.: 081 597 0119

D.S.D. Design
127 Ballynahinch Road
Hillsborough
County Down
Tel.: 0646 683833

KC Sound & Light
8 Southwell Road
Nottingham
Tel.: 0602 484863

Langley Sound & Light
102/104 Meadfield Road
Langley, Slough
Tel.: 0753 43389

Mobi Deque
14 Charlton Village
Charlton, London SE7
Tel.: 081 856 4777

Northern Lights
89 Scoforth Road
Lancaster
Tel.: 0524 845584

Pegasus Sound & Light
23/25 Conningate
The Royal Mile
Edinburgh
Tel.: 031 556 1300

P.S.D.
Unit 9, Trelogan Ind Est
Newquay, Cornwall
Tel.: 0637 851454

Sofistotech
1438 Leeds Road
Bradford
Tel.: 0274 661405

Southwest Lighting
The Old Smithy
Church Road
Cockwood, Exeter
Tel.: 0626 890806

Squire Sound & Light
Unit 1 Queens Court East
Greets Green Road
West Bromwich
West Midlands
Tel.: 021 520 4545

Squire Sound & Light
1 Queen Margaret Road
Kelvinside Glasgow
Tel.: 041 946 3303

Squire Sound & Light
Unit 12 New Business Centre
Artesian Close
Stonebridge
London NW10
Tel.: 081 451 5556

Squire Sound & Light
Units 24-25 Enterprise Est
Moorfield Road, Slyfield Green
Guldford
Tel.: 0483 502121

Squire Sound & Light
Unit 1 Mercury Park
Mercury Way
Off Barton Dock Road
Trafford Park
Manchester
Tel.: 061 896 8075

Teknique Systems
Unit 10 Linn Park Ind Est
Drakemere Drive
Glasgow
Tel.: 041 634 2343

Tr Music
234 Stafford Street
Walsall
West Midlands
Tel.: 0922 613101

Zap Sound & Light
35 Parker Avenue
Burnley
Tel.: 0202 831707

Get Legal

At the moment if you're using radio mics you are more than likely to be illegal . . . that's the word from the DTI's Radio Investigation Service. Under pressure from manufacturers who have spent much time and money ensuring that their radio equipment meets regulatory standards, the DTI is about to clamp down on the widespread use of non-approved equipment, still being sold in music stores.

Whilst not wishing to give details of any campaigns about to be launched the DTI commented that "radio microphones are a problem area that has come to our attention," and they draw a parallel with last year's campaign on car radio alarm systems, where much of the equipment being sold was unapproved.

Whilst many groups currently operate radio equipment on the deregulated VHF channels, the equipment still has to be DTI approved and issued with a Type Approval Number. So check before you buy!

Leisure Group Blues

Further signs of the continuing gloom, and the impact of high interest rates, emerged recently with the announcement that European Leisure PLC would not be paying dividends on their Convertible Cumulative Preference Shares in 1992. Payments are due in April and October and the company state that they will not be resumed until, and only if, the Group experiences a sustained period of recovery and bank borrowings are reduced by disposals.

Lightwave gets the call from Detroit

Despite the serious impact of the recession on the automobile market world-wide, Chrysler seem determined to complete an ambitious project to create an R&D centre whose singular goal is to be the finest such facility in the world.

The Chrysler Technology Centre is a 3.3m sq. four storey structure of granite, glass, steel and concrete situated on a 504 acre site, 30 miles north of Detroit. At the hub of this complex is a circular show space 44 metres across, below a perforated aluminium dome, which will be used to display vehicles for evaluation of their design and styling, and for demonstration purposes.

The dome itself had to be capable of totally concealing all the luminaires, in order to provide what is described as a 'horizonless' backdrop for the viewing and photographing of automobiles and for evaluating prototype finishes and surfaces. The job of solving the illumination problems in order to achieve as 'real' a result as possible by artificial means, no easy task with the spectacular and highly reflective nature of metal body finishes, went to lighting design consultancy Illuminart of Mississippi.

When it came to the production, supply and control of the 85 customized, colour and optically-corrected 'smart' spotlights, which they had specified for the purpose, together with the technology to achieve mechanized porthole covers in the dome behind which the lights would be concealed, Illuminart turned to Lightwave Research of Texas who were able to plunder the expertise gained in the development of Intellibeam for solutions. The units had to be installed above the skin of the dome, had to eliminate any spurious light spill and the fixtures had to be silent. The room is acoustically designed to minimize resonance. Several defined colour correcting dichroic filters were developed for the project and produced in Lightwave's in-house vacuum coating plant, to emulate various artificial and daylight conditions. Remote focus of the units allows for control of beam definition from hard to soft edge and the broad range of projection distances, from 7 to 20 metres, necessitates a luminaire with precise focus and dimming capabilities. The project is being co-ordinated at Lightwave by John McDowell, and a full report will appear in a future issue.

Coemar's Dedoro Talks Back

It has been Coemar's policy not to respond to controversial issues. However now, in a frank and wide-ranging interview with Tony Gottelier, Bruno Dedoro speaks his mind.

With the entire market in considerable turmoil, as the result of the continuing downturn in business, a situation from which no one is exempt, it was a poignant moment for Bruno Dedoro, ebullient Capo di Coemar, to speak out.

On the question of grey importing Dedoro was adamant. "I can assure you that Coemar have never sold a single item to any English customer directly, but only through WB Lighting. We are therefore not guilty and no one can justify accusing us of having done so. What I would say, however, is that it is up to the distributor, in this case WB to take appropriate action to defend himself against any such unauthorized imports. Keep in mind that he buys our products at the very lowest price and so he has all the weapons he needs to defend himself in such a circumstance."

I am sure that he could have been equally forthright in his response to a question about the change of distribution in France, but preferred instead to disregard what he describes as "useless polemics" and "not waste any more of my precious time on this particular matter." It was sufficient he said for him to say how pleased he is with his new arrangements with Collyns and to look forward from there.

He was equally reticent about the question of parallel importation via his associate TAS, pointing out that WB are also the sole agency for these products. This is still a conundrum for UK companies who find the sleight of a change of name on similar or identical products, though sometimes aimed at different market sectors, hard to swallow. However this seems endemic in continental Europe.

Snr Dedoro confirmed that, in the light of market restrictions, trading conditions between Coemar and its outlets will be toughened-up but otherwise it will be business as usual in 1992. "Our new policy is to have one Coemar distributor only in each country and they will be expected to operate a serious commercial policy, to provide excellent back-up service and to pay their bills on time. Should they fail to satisfy any one of these requirements we will dismiss them and appoint another in their place." Tough talk.



Bruno Dedoro.

At SIB in Rimini, Coemar will show two versions of the Microscan, their compact articulate projector, one with a 650W halogen source and the other a 400MSR lamp. The Samurai, for which there have been some delays with the control electronics, should also be ready but with Italian software. This seems quite a calm and considered approach for Coemar who usually show off a lot of new product at the show. "What is more important right now is having the right products at the right price," Dedoro emphasized. "But we will be making a splash with some dynamic new products at the PLASA Show in the Autumn."

Finally, I asked about the situation with Teatro, the theatrical arm which had undergone something of a change since Mike Lowe acquired all the shares in that company. "Never before have we had such a good relationship or such close co-operation between the two companies and between Mike and myself. I am convinced that this happy situation will continue for many years to come."

Translations and diplomatic interpretations for this interview were provided by Ivano Burato, Coemar's ever-patient international sales executive whose delight in continually exploring the vagaries of the English language is a source of pleasure and admiration throughout the industry.

As I complete this report I cannot help feeling that this will not be the last occasion that a touch of controversy surrounds Coemar and its ambitious president, Bruno Dedoro. Watch this space.

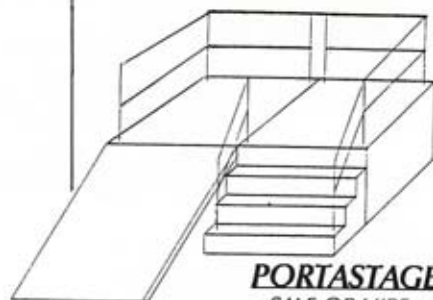
FAX ALL YOUR NEWS TO L+SI
ON (0323) 646905

Sofiscotech
1440 Leeds Road, Tel: (0274) 66405/6
Bradford BD3 7AA Fax: (0274) 666463

Martin MODE ELECTRONICS
ROBOSCAN **Jamo**
audio-technical **TRIFIBRE**
Numark Containers
HARRISON **STANTON** **HH** **TEAC**
LAD **Trantec** **OHM**
Sound and Light

ALISCAFF LIMITED

"The only stage Mrs Worthington would allow her daughter on"



PORTASTAGE SALE OR HIRE

Portable modular stage system giving infinitely adjustable heights of .125 metres - 2 metres, complete with fascia, guard rails, steps and ramps. Safe working load 1 tonne per unit. Sale prices from £7.00 per sq foot. Hire prices from 40 pence per sq foot

Aliscaff Limited
Unit 2 Hotspur Industrial Estate
West Road Tottenham
London N17 0RJ
Tel: 081-808 5005 Fax: 081-801 9851

SIEL OF THE CENTURY OR SIEL DU SIECLE

John Offord and Tony Gottelier report from the Porte de Versailles where the French show celebrated its tenth year.

With no sign of a lift in the recessionary gloom a surprising number of international people headed for the SIEL Show in Paris this year. More on a wing and a prayer it would seem, than the appearance of any solid encouraging evidence to the contrary, nevertheless it appears that few of them lived to regret their straw-clutching decision.

SIEL is a show which in the past has always been as idiosyncratic in its Frenchness as boules, berets and baguettes, and considered, by many as largely parochial in its market position. Suddenly, this year, it became the place to be for visitors and exhibitors alike. Of course, all the quirky 'French' sideshows and jokey bits were there as ever, but so was a spirit of serious intent despite the fact that the market in France is as flat as a galette in common with the UK. It was as if the world of entertainment technology woke up on Saturday 15th of February and said, as one: "To hell with this, let's go to Paris tomorrow and make things happen!" And there were certainly enough changes in distribution arrangements alone, between this year and last, to keep everybody on their toes.

As one stalwart of the exhibition circuit commented: "We were talked into this recessionary spiral by the national media and others, and now we must bloody well talk ourselves out of it before it drowns us all!" Hooray to that.

What was really extraordinary was that most exhibitors had booked their stands with the original intention of showing the flag in the French market, or possibly as their first chance of unveiling some new product for '92. On evidence of the previous year they were not really expecting great tangible results. Yet, there you go, many of the people we talked to were amazed and delighted with the actual orders written at SIEL, as can be seen from the brief round-up below.

Whether we are seeing the light at the end of the tunnel at last, or just the light show at the end of the 'toonelle' (as she is spoken) is quite another matter. What is certainly true is that we are all dependent on a few brave entrepreneurs, until the punter on the street cries "enough!", or even "ca suffit", and starts to spend again. A grim insight, into what passes as the real-world in these days, was given by a passing executive from one of the quoted leisure companies, who told us, with only a degree of levity, that whenever anyone spent 60 Francs (circa six quid



SIEL 92: the shapes of Stacco.

in your pocket) buying him a round of drinks, he was struck by the thought that the same sum would now buy more than 60 shares in his employer's multi-unit operation. So it's the investing punter too that's sought.

However, in the same area also there was a whiff of hope during SIEL, when it was announced in London's Tuesday city pages that Nick Irens, presently financial director of First and previously in the same position at Juliana's in its glory days, was to resign to set up his own leisure company with a partner. While this may not immediately seem like a cause for celebration, certainly not for the company themselves, anyone who has come into contact with Nick over the years will know just how astute the man is. If anybody knows when to jump, or when to reach for the lifebelt, it's Nick. If he says this is a good time to start a major new leisure enterprise, I would rely on his judgement every time in preference to testing the texture of the proverbial seaweed, which is about all else we can do at present.

First out of the hat by virtue of the alphabet, are **A C Lighting**. Consolidating their sales effort into Europe, Peter Searles (projects manager) and Nic Tolkein (sales director) had a very busy four days on stand in Paris. Equipment and

companies on show included Jands lighting control systems (Event and ESP boards) plus dimmers and the E21COM intercom system, Commando stands, Vision luminaires, the Pro Colour filter range and Summa Technologies' fully automated luminaires. "It was an excellent show for us," commented Nic Tolkein, "and the contacts made were excellent, giving us the chance to expose our products to an ever-wider audience."

Any journalist looking for the quiet life shouldn't put **ADB** on his shopping list. Christian Leonard, group vice-president, and Michel Musso, marketing consultant, had such a massive batch of new equipment and product enhancements to explain that a feature article would have been the best device to portray the extent of output from Zaventem these days. The company boasted a 30 per cent growth in 1991, and they seem to want to beat that for 1992.

First on their list was Eurodim/2, the second generation of 180 and 225kW digital dimming systems. These have a new central processor, enhanced performance and diagnostic capability built-in. Europack also moves on to its second generation with a host of options and enhancements, and far too many to list fully here. Bolero/12 and 24 are two new manual effects lighting control desks designed to replace the SM22 and SM26 desks, thousands of which have been sold over the years. They come with 12 (or 24) pre-defined effect patterns and many other features and outputs are DMX512 or optional 0/10v and 370 uA analogue.

Next comes Tango. These two new manual/memory lighting control desks will be available in 12/24 and 24/48 channel versions with 1 or 2 software configurable presets. In addition to features and capabilities of the Bolero desks, Tango 24/48 will offer nine banks of 99 memories each plus five insert memories between each of the 99 memories, direct access for memory modification, nine programmable chasers with 99 steps each, a softpatch up to 96 dimmers, a manually or timed operated cross-fade submaster, memory and library storage, comprehensive LCD display, etc, etc.

There's a lot more. **ADB-Demux 24/48/60** is a brand new range of three demultiplexers in 19" x 2u racks and able to convert DMX512 or AVAB digital signals into a series of 0/+ 10v or 370 uA analogue signals on Socapex or DB25 connectors. Front plate controls allow the addressing of any channel between 1 and 512,



Celco's Keith Dale explains Navigator - in French?



French format: the Masterpiece Screen Driver from Pulsar.



Strand Lighting: global development.

the programming of 10 lighting curves, the creation of a lighting cue and the testing of each circuit. ADB-Mux 120 is a new multiplexer (1u), able to convert up to 120 0/+ 10v analogue channels into a digital DMX512 signal.

Finally, and in brief, there was Data Booster, Multipro and Gelbus. Data Booster is a new line amplifier which will find its application whenever data line exceeds 250m or is split in a T junction. Multipro is a universal protocol converter and mixer in a 19" x 2u rack allowing the conversion of any one or two of six digital and analogue multiplexed protocols into any of the others. Shown briefly at PLASA last year, Gelbus, ADB's own colour changer, is now in full production. It can scroll between two and 21 colours at three different speeds: 0.2, 0.5 or 1 second per colour. According to Michel Musso it has already found its way into several theatres, particularly in Germany.

Meanwhile, French company Ariane, who we see at most international shows, were busily promoting two products with evocative American names. California is a neatly packaged, sound activated double scanner incorporating two ENH250W lamps and six dichroic colours. The other, Hawaii, is a wagging mirror centre piece which uses stepper motors and MSR400W lamps, with five dichroics and five gobos to simulate the presence of several articulate projectors.

Up, running, in full production, and with alarmingly high order books, CCT Lighting had their complete luminaire range on view. Don Hindle and David Manners were taking orders on stand, and had nothing but praise for this year's show, which they considered a great deal more 'active' than in previous years. The next



Solar 575 projection from Optikinetics.

product enhancements from CCT can be expected at the PLASA Light and Sound Show at London in September.

Celco, represented by their new distributor CAW Sonoss, were also having a good show. Confirming a higher level of response over last year, Keith Dale and Colin Whittaker were keen to praise Sonoss' efforts on the marketing front and the way they had approached customers prior to SIEL to let them know what was going down. This had resulted in a high level of interest in Navigator. Sonoss are also the distributor for Thomas in France, so they are also an ideal outfit for Celco.

We spent some time talking to Bruno Dedoro of Coemar, via his affable and ever diplomatic international sales manager Ivano Burato, and that wide ranging conversation is reported more fully elsewhere in this issue. Specifically with regard to SIEL, Dedoro confirmed that they had not come to Paris with high hopes but mainly to launch the Microscan in France and he would be doing the same, perhaps surprisingly, at SIB this year. "We do plan a big push and exciting new product for uplift in market expectations," Dedoro told us. However, his enthusiasm for new distributor Collyns, gained in an emotively charged back-to-back swap with High End Systems last year, was tempered somewhat by setbacks with the introduction of the first Samurai, on which much future hope is pinned. A Samurai without guts would not be an appropriate reflection of the original Chinese warriors after whom the, eventually, articulate luminaires were named, so a speed-up with the development at the Coemar end has had to be found *postea hasta*.

Bruno Dedoro adds that it's tough out there.



Full house - the Lighting Technology emporium.

"But unlike some people who, as we say in Italy, will drop their trousers and expose themselves completely in such circumstances, we prefer to pull in our belts and hold tight," he said. "We are restricting credit and concentrating on producing the right product at the right price. For Coemar that is the way out of this difficult time."

At Collyns themselves, who incidentally must have the most appropriate address in the industry at Avenue des Freres Lumiere, we talked to their marketing manager Patrice Vandenbussche, in search of an insight into the stage of the market in France. This is a company of which we don't hear much in the UK these days, that is since their last great innovative product, the much emulated Raflash. Confirming that the French market is still threadbare, M. Vandenbussche told us. "Although we have been amazed at the response at SIEL, we are really here for prestige reasons and to ensure that we keep up last year's sales figures at least," he said. "This is the most important show in the French market so we have to be seen to be here and, of course, we welcome the opportunity to show off our new association with Coemar which will be very important to us."

He also spoke about several new Collyns control products. There are two new 'Complite' controllers suitable for both generic and moving light control, not to be confused with a product of the same name and same definition from Crystal Equipment, exhibited elsewhere in the same hall, about which more below. The Collyns 'Complite' S240 is a 19" rack mounting, 240 channel controller with accessible controls and a joystick. It outputs 192



ADB - a range of new and enhanced products.



Parscene - the route into France for Teatro, Arri and Chris James.



The united colours of Clay Paky and Pulsar (CP&P).



The Robert Juliat display included AVAB equipment.



Wybron Scrollers - a Paris view.



Ryger Electronics from the UK.



Projections from Hardware Xenon.

channels of AMX192 and 48 zero-to-ten analogs and provides many facilities for pre-programming and memory states and comes with a monochrome monitor. 'Compulite Micro' is simply a Collyns-branded version of the basic Daslight, the Amiga-based control system also exhibited by the manufacturers in its 'Gold' version. Collyns offer two versions: the M22 'Junior' which is 0-10v only offering 16 dimmable channels and six non-dims, and the M54 which provides 48 DMX512 channels and six analogs. Both can be boosted by ten extra channels via 19" rack add-on. The mysteries of unravelling AMX and DMX are resolved via low cost eight channel demuxing receiver cards, which can be resident in the dimmer packs or wherever. These have been realised without the use of microprocessors which, they say, explains prices as low as £35 and £52.50 respectively. Collyns have also released a simple, but programmable, slimline, four channel controller called 'Master TL4'.

To add to the ever-changing jigsaw puzzle of international interconnections, Collyns no longer distribute FAL, who have now moved to **Celestion France**. For their debut with Celestion the Italian company constructed a 10 x 12 x 6m

stand entirely from standard Trilite, no mean feat this, and announced one new product and two enhancements to existing effects luminaires. Nouveau is the 'Wizard' which is a new twist on the RoboZap 'mirrorball-in-a-box' concept with the colour provided by the mirrors. A tunnel version of the static 'Scorpion', generating eight coned beams, is now available thanks to a new mystery 800W lamp developed for the purpose. The 'Super Cleverscan' (Yuk!) launched at Pro Asia, from whence the name was presumably borrowed, has since acquired some cute dichroic colour effects. Concentric circles of colour are achieved by twin overlaid filters - looks great behind a gobo. This 575HMI contender for the Golden Scan, Intellabeam, Roboscan, Samurai, 'smart' projector market will be upgraded for the Rimini SIB show with microstepping, and a Junior version will be launched contra Mini and Microscan. As usual, the FAL show was run by Paul Dodds who, we were sad to hear, is soon to end his full-time involvement with Avitec.

The aforementioned **Crystal Equipment** introduced two boards designed specifically to make life easier for LDs using those same 'smart' projectors, provided they receive USITT standard data. The MLC-24 and MLC-48 will

provide control and programming of 192 and 384 signal channels respectively, for such luminaires, plus 48 analogs. Aside from the memory and recall capabilities, which are similar to a more conventional memory desk, programming is made simple by the provision of a tracker ball and eight digital wheels to replace the more usual linear faders, such antique technology having proved itself entirely unequal to the task.

The French distribution company **DCI** were demonstrating **Oxtron's** new Aud-It programmable digital sound store under the guiding hand of the UK company's Geoff Kingdon. By applying simple programmable logic to an audio storage unit, Oxtron have in Aud-It a unit which can hold up to 14 sound effects or messages on a 1.44MB floppy, which can subsequently be programmed, edited, timed or otherwise manipulated under predefined and dynamic conditions. Aud-It works in conjunction with a PC. Oxtron were also promoting their CL6-10, multi-function intelligent 10A wall mounting dimmer, aimed at the architectural lighting market which is proving attractive to several other manufacturers at present. DCI also handle Databeat in France and were prominently displaying the system which



RVE: listening to 'wish lists'.



Anytonics: amps for France.



Mode control on the Ariane stand.



The Doughty 'Combi' top.



LCB: showing Zero 88, Pan Command, Niethammer and Kupo.



A C Lighting's Peter Searles and Nic Tolkein.

is currently undergoing major re-constructive surgery both commercially and technologically. (More in a forthcoming issue).

For their first trade show appearance outside the PLASA Light & Sound Show in London, **Doughty Engineering** practically took over the stand of their distributors ESL of Montpellier. Technical director of Doughty, Mervyn Lister, told L+SI that the move was a major step forward for the company. "Previously, we had concentrated our efforts solely on the PLASA Show, but as we have released so many new products over the past 12 months, it is important we provide as much support as possible to our overseas distributors," he said. "We will also have a very high profile at Frankfurt, Rimini and Madrid as we continue with this policy."

New Doughty products on display at SIEL, and described by sales manager Andy Trevett, included a deceptively simple device, the 'Combi' top, which allows the use of either a standard 19mm spigot or a 29mm TV spigot on the same stand. Andy, an ex-hire manager, was confident this little piece of metal would be a sure-fire hit all around the business. Also new were additions to the Studio range of stands, with three units coming in triple extension format, and compact as a result. Doughty have high hopes for their new followspot stand. "Our existing unit was not flexible enough," explained Mervyn Lister. "Our customers either loved or hated it. We would prefer them all to love it and we are sure they will really go for this new one."

Fiat Lux was the base for **Cerebrum's** Rod Bartholomeuz and **Anytronics'** Bob Hall, both of whom probably know the difference between a piss up and a piste de dance but were keeping it to themselves. They were also talking with

enthusiasm about positive reactions at the show. Bob Hall, who commented that the Cerebrum/Fiat Lux route into France was proving very successful, showed Anytronics' Series 194 three phase D6106 x 10A dimming packs, customised for the French market, and he's got them ready for the Germans too. A new blinder of a strobe was due for Rimini, he promised. On the same stand there was **Powerdrive** equipment, **Pani's** famous projectors, and the **Controlite** system from **Amptown**. This motorised lighting system, first seen at PLASA last September, is now in its final version with 12 units currently undergoing 'on-the-road' testing. Full production is expected within a couple of months. Also on demo was Fiat Lux's own computerised Digital-Lift system.

Laura Cowen of **High End Systems** also told L+SI about their new distribution arrangements. "We felt it was necessary to make a change in France and, after considering various options, we asked Juerg Tscherner, whose company LSE has been our Swiss agent for the last three years, to take it on." Whether the switch from a Belgian to a Swiss company, in staunchly xenophobic Gaul, proves the ideal move only time and the sales figures will tell. Ever Radio Violette retain their agency in Belgium.

Incidentally, after the show we spoke to Richard Belliveau, wired-up president of associate company Lightwave Research, who in an attempt to shock the unshockable said that he had come to work in a skirt that day. We took this to mean a kilt, if only because its image is a whole lot less dramatic, at least in certain parts of the UK. Nevertheless, the mental picture of Richard in a tutu was quite enough to make our

day. He told us in passing that the Texas-based outfit are keeping their powder dry on new launches until LDI in the Autumn when he promises several "awesome new products". Can't wait.

After some careful pre-planning in their backyard at Park Royal in London, the chaps from **Lighting Technology** came up with a snug and highly attractive stand at SIEL, and enjoyed their first-ever showing at the event. They certainly pulled in the people, and had the advantage of a quiet spot with plenty of space around it. As Garry Nelsson reported: "Visitors were a good mix from the very top French lighting designers thinking of another thousand ways to use an electronic candle through to the etudiants de theatre who were just wanting to know about everything." LT also had a lot of interest in the Lightpaint colour scroller from Sweden - orders were taken on the stand - and in their brand new 'Brucie Brute', an eight-light unit that measures only 160 x 180 x 20mm using 20, 35 or 50W MR11 lamps. It's output is quite staggering.

We also asked Peter Johansen of **Martin Professional**, who opened the exhibition season with a new presentation which will develop further over the year, for his impressions of SIEL. "We really only went to Paris as a flag waving exercise with no great expectations. But we were really amazed at the orders we took this year and not just in France, for example we received an order for 40 Roboscans from one Belgian customer!!"

New on stand and emphasising their move to mobility, Martin showed their flight-cased double 1208 unit - two projectors with 250W 12v ENH lamps. Each unit has a waggly mirror, strobe effects, eight different gobos and two colour wheels. All you do is take off the lid, hang it up or put it on a stand and you're ready to go. Shock absorbers take the strain of travel and Martin are looking for a big sale to mobile discos and touring bands. Also new is RoboColour Mobile - four of their basic RoboColour units built into a flight case for stand mounting. Finally, to make it all happen at the touch of a foot, the new Stage Controller enables musicians to do just that, if they so wish. It provides on-stage control of any Martin products, coping with up to eight intelligent lighting units or 128 standard dimming/smoke units or a combination of these.

Tucked away in a corner we found an interesting system, based on the Atari, providing 128 channels of lighting and SFX control via MIDI with added SMPTE options. The Midi Synchro MTC from **Midi Pile** provides for 256 cues and 2560 timed cue-calls which can be recorded with music in MIDI and played back accordingly, or recalled to an external time code programme or via the on-board SMPTE. Simple but useful graphical displays are provided to help



Martin: two 1208s in a case.



Soak test for a Diafora colour changer.

with soft patching, programme preparation and monitoring, or preview facilities. Outputs to analog dimmers are via 32 and 64 channel signal converters which can also be used as stand-alone items. The company also provides a number of other MIDI interfaces, including units to convert some channels on an analog lighting desk to enable MIDI generation, units to fire pyros from music, and a 'MIDI Sound Expander' to control VCAs.

A similar fate to that which affected High End also awaited **Optikinetics** who, in contrast, opted to appoint a commission agent to handle both the Trilite range and all Optikinetics lighting product in the territory which, according to Neil Rice, has certain commercial advantages. Again, he was pleased with the response, taking over 200 enquiries. "It was a buzzy old show, wasn't it?" The Solar 575 in particular attracted a great deal of attention as it continued its campaign to revive the liquid wheel. Also on stand was Opti's Club Strobeflower system.

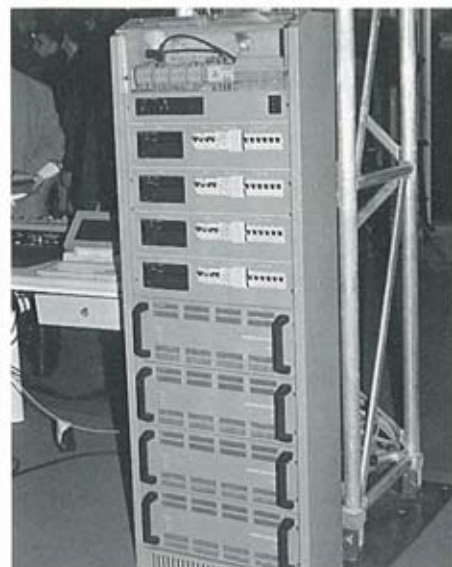
New from **Pulsar** on the **CP&P France** stand was their Masterpiece Screen Driver. User-friendly Andy Graves showed how it provides options for several different output modules including RGB DIN sockets and SCART socket, both of which are capable of driving standard colour television screens. These are in addition to CGA monitor, green screen BNC monitor output and a slot for a 32 RAM memory card. It comes housed in a 19" rack mounting 1U high unit. The software, developed in-house by Pulsar, incorporates a user text area which enables the operator to allocate names to each channel, scene, environment or environmental chase, for easy identification. You use the Masterpiece itself for text input. Latest versions of Masterpiece actually incorporate text key codes for ease of programming, and yet more ease of use is provided by five different help

screens in various European languages. The activity of Masterpiece's 108 channels can be shown at any time on the monitor in the form of a two page bar graph, showing the status of 54 channels on each page. By the addition of an E-Prom the Screen Driver is compatible with all existing Masterpiece systems.

There was a rumour that Japanese would soon follow on the Masterpiece Screen Driver 'help' screens, and that sales director Ken Sewell was currently at work on the language. With the flags of the European Community, Germany, France, Italy and the UK flying over the Clay Paky and Pulsar information centre, one wonders whether banners from nations in the Far East will be joining them in the not too distant future.

Clay Paky will be making major product launches at SIB in Rimini, but they had on view the new Astroraggi Twin, an update of their classic Astroraggi, first launched in 1983 and still available in the original form. The new 'Twin' has two lamps moving inside the projector which can be switched on together or alternatively. Combined rotation with sequential switching produces an oscillating effect with a total of 103 concentrated beams. In addition, the new unit has full colour capability, using dichroic filters, giving a much brighter all-round result than the white 'mono' original.

Following comments in the January issue regarding updating dimmer technology, it seems that, not surprisingly, others have had similar ideas at much the same time, or otherwise they have been listening to customers with similar 'wish' lists. In particular, **RV Electronique**, who until recently have kept their light hidden under a Gallic bushel, have in the advent of the single market, gone decidedly international and introduced product to match. The HDS and HDD dimming systems provide analog and fully



Zero 88's new LTC dimmer cabinet.

digital lighting control respectively, using plug-in dimming modules from 2 x 10A to 1 x 50A and others in between. While the analog system provides a selection of individual dimming curves, and can be adapted to accept a wide range of different protocols via RVE's demultiplexer, the HDD system is truly digital and incorporates intelligent control. This has major implications both for maintenance, performance and security all of which are of considerable interest for DMX512 users as, of course, no feed-back to the desk is normally possible. This control unit, which can be removed from the rack, provides diagnostics, soft patching and selection of dimmer performance characteristics, plus the automatic activation of a pre-programmed back-up lighting sequence



Oxtron's Geoff King talks Aud-It.



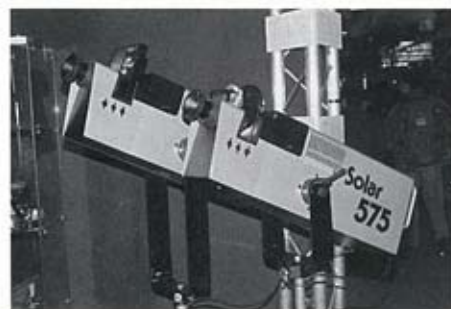
Coemar equipment on the Collins stand.



Inspecting Teatro's Colour Box.



No standing room on Manfrotto France.



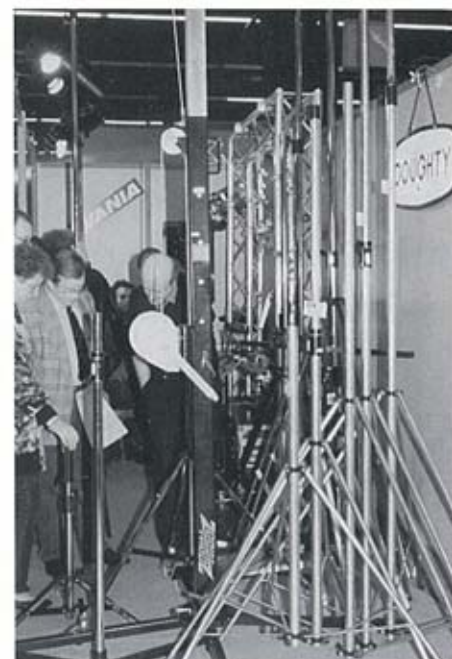
Two Optikinetics' Solar 575 in tandem.



The Bytecraft display.



Zero 88 line-up on LCB.



A close look at Doughty's stands.

AVAILABLE FROM BARNESLEY TO BARCELONA



**POWER
ENGLAND DRIVE**

Europe's leading professional
Equipment Stands

Wherever you are, the complete range of Powerdrive stands, fittings and accessories is available from an outlet somewhere near you. Write, phone or fax us at the address below for the name of your nearest stockist, or ask for Powerdrive by name, at your local dealer.

EXCLUSIVE WORLDWIDE DISTRIBUTOR



Cerebrum Lighting Limited,
Units 4/5, Shannon Commercial Centre,
Beverly Way, New Malden,
Surrey KT3 4PT, England.
Telephone: 081-949 3171.
Fax: 081-949 3649.

Fully illustrated literature available on request

in the event of a catastrophic breakdown at the desk. The dimmers are packaged in a pre-wired cabinet providing from 96 ways at 10 and 15A to 48 and 24 ways at 25 and 50A successively, although these values can, of course, be mixed. RVE also announced their programmable architectural lighting controller the AP Micro, which is already giving Electrosonic some competition in the cruise ship market.

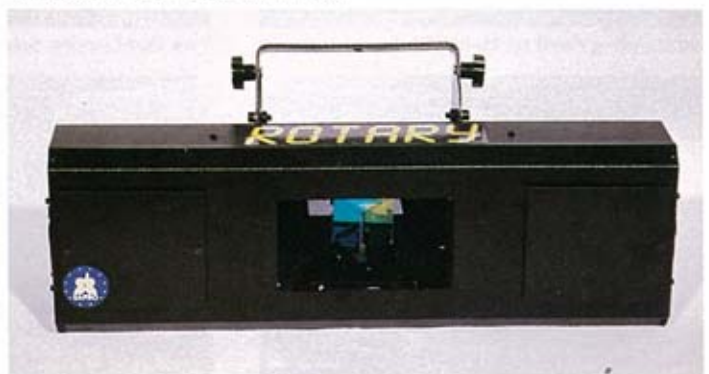
French manufacturers **Sapro** seem to produce new effects units like there's no tomorrow. They announced no less than 10 new products which included Nancy and Rotary. Nancy has two projecting 'eyes' of eight gobos and seven colours which multiply in rhythm, with the centre of the mirror moving in and out to adjust the light beams, along with a continuous change of gobos and colours. Get the idea? Rotary is a three-coloured prism of dichroic filters projecting a myriad of coloured beams. It has interchangeable gobos. Another unit of note was the latest version on 'Moving', Sapro's multi 'laser' effect unit. It has a wider range of facilities including bigger area of sweep.

Strand Lighting's Peter Ed ("over busy, but enjoying it all immensely") reported five new launches. Most important for the French market was the new Cantata 'Optique' luminaire, a condenser optic profile that gives a good flat field for gobo and shutter projection. A battery of 45 of these units ran a permanent projection show on stand. Aside from France, there is a lot of interest in the Optique from both Britain and Scandinavia. Next, Strand highlighted a move back towards their roots with the introduction of a new range of suspension units for both theatre and studio use, and developing further into the television field, their Reporter Lights - hand-held units and accompanying kits for news gathering camera work, were also seeing the first light of day. The EC90 is at every show now, and the French version of this digital dimming system comes ready flight-cased to attract business from the massive summer theatre festival market. The biggest thing for Peter was the Euro-launch of Mini-Light Palette 90, a mid-range control system for up to 578 channels and carrying all the essential functions of big brother used extensively on Broadway. This system came out of Strand in Los Angeles and is typical of the international linking now playing such an important part in the development and launch of the company's products world-wide. "Pulling together global expertise," is how Peter Ed put it.

Zero 88's David Catterall, based on the stand of LCB, was busily talking up the company's new LTC dimmer cabinet, though he was offering no cigars for the meaning of the product's initials. This neat package, which can easily be wall-mounted, provides 24 ways of dimming at 10A each way via four dimmer racks, which plug-in to the pre-wired cabinet. Each of the six-way dimmers, which have all breaker protection, has its own 1u control panel in the armoire which provides various test facilities, manual level settings and the possibility of adjustment to receive positive or negative analog control signals, which can be useful in retro-fitting situations. A demux option is provided for DMX512 enthusiasts. Zero is another company edging into architectural lighting controllers, with a tiny memory preset unit which, they say, takes the mystery out of such systems for Joe Public who don't want to read a manual in order to programme their lighting. Joe is not alone in that one! Also represented on LCB were Pan Command, Niethammer and Kupo.

We've left out talking about the major sound companies and their products for two reasons. In this issue you'll find a report from Tim Frost on Sound 92 in London, and in our next issue you'll have the full Frankfurt line-up to contend with. Between the two we shouldn't miss out much of what's new. Suffice to say that many of the major names in live sound were present at SIEL on their own or distributor's stands, including JBL, Soundcraft, AKG, C-Audio, Allen & Heath, RCF, Celestion, Cerwin-Vega, Kark Teknik, Sennheiser . . .

As usual with shows outside these shores, and especially in France where we all know they have their own special way of doing things, there were some wonderfully juicy exhibitors' names to juggle with. Aside from the delightfully verbose Chambre Syndicale des Cabarets Artistiques Salees et Lieux de Spectacle Vivants . . . (the three dots are theirs, indicating more to come!) we leave you with the following selection without comment: Froggy Audio, GBH Equipment, Necrophages, Orefice and Young Boys. The mind simply boggles. Au revoir.



Rotary - new from Sapro.

ONE MAN AND HIS MACHINES

(THE RAMSA UK STORY)

John Offord sets out to discover how a Japanese electronic giant reaches out to his customers



Panasonic UK HQ at Bracknell, Berkshire.

RAMSA equals Panasonic Business Systems equals Panasonic UK Ltd equals Matsushita equals Japan's largest manufacturer of consumer electronic products equals the world's 17th largest industrial corporation.

In Britain, Panasonic UK Ltd began operating from its head office in Slough in 1972 with 34 employees and its first-year turnover was £6m. Today, their Bracknell head office, on a 16 acre site, houses over 600 staff - part of a UK total of 4,000 personnel at various sites - and turnover is over £600m.

RAMSA (Research into Audio, Music and Sound Acoustics) is part of Panasonic Business Systems and the brand name of their professional audio equipment. And in pro-audio terms, there is only one further piece needed to complete the jigsaw: the name that fronts and is RAMSA in the UK.

Ian Sharpe (marketing manager) is at the end of the chain, or the first link in it, depending on how you look at the structure. At the same time, this is also the key to understanding how a tiny part of a massive organisation operates

successfully within its market.

Look at it from one direction and Ian Sharpe is at the head of the pro-audio pyramid of an organisation that spends six per cent of its annual world-wide \$46.8 billion turnover on basic and applied research activities. (Take the trouble to work out the sum - it comes to an enormous and incomprehensible figure.) Bear in mind also that the company is pushing him hard to promote and sell into the pro-audio market sector.

Look at it another way, and Ian Sharpe is the man who has to take on board all the critical comment from a prickly little industry, keep his dealers sweet, and produce the results the analysts watching their computer screens are waiting for.

I spent the best part of a day at Panasonic UK in Bracknell in an attempt to understand how the machinery worked. How did our quirky quagmire of an industry fit into the shape of things corporate? Or, possibly more pertinent, how did an economic giant cope with our flamboyant little sector? I came away amazed at the high-tech but sheer sophisticated simplicity of it all. The ideal machine in operation?

First of all, we need to remember that although RAMSA products are relatively new to



The latest from RAMSA: the new WR-S44 Series live sound 4-bus live mixing consoles. There are three models offering 12, 16 and 24 inputs.



New RAMSA power amplifiers were launched at the 1991 PLASA Show. Shown above is the WP1400, offering 400 watts per side.



Ian Sharpe: from a background in electronic organs and keyboard technology he was offered the challenge of introducing RAMSA products into the UK in 1986.



Ian Sharpe (left) with Steve Spencer (sales manager, Britannia Row) and David Panton (managing director, Nomis Studios) with the RAMSA S840 stage monitor console at Nomis Studios.

the UK and Europe, having commenced their move into our pro audio sector in the mid-eighties, Matsushita have many decades of experience in the business. RAMSA equipment was selected for the 1984 Olympics in Los Angeles: over 900 speakers, 250 microphones, 215 power amplifiers, 57 mixing boards and 19 miles of cable were orchestrated in 24 locations across a long stretch of Southern California. Their equipment is installed in Japan's National Opera House.

The Matsushita pattern of development travels a well-formulated path. Ian Sharpe: "Basically, the way the parent company in Japan grew on a policy of listening to the market. Having identified market demands and requirements we followed this route and came to the point where we were producing professional audio equipment in the sound contracting industry in Japan. Even to this day we take about 60 per cent of the domestic sound contracting equipment in the hotel industry in the country. Development continued and we became well known for arenas, auditoriums and recording - all within Japan.

"In the early sixties we started to export big sound systems for stadia - in those days the equipment was known as 'National'. The RAMSA name came on the scene around 30 years ago and that was about the time of the launch into the export market of various live sound reinforcement products - not the contracting side. Products were re-branded RAMSA with that in mind."

From there RAMSA attacked the American

market in the late seventies before progressively taking on the rest of the world.

So, having established the credentials, how does this small element of Matsushita and Panasonic sit within a massive corporate operation? One that has all the sometimes cynically commented upon trimmings of the highly energised Japanese corporate machine. And, one might well ask, why do they bother anyway?

"RAMSA itself, although small, is still very important, as all our product categories are," continued Ian Sharpe. "It's easier to become well-established within the television industry with its massive quantities and value every year, but you can only go so far with that, and after a while you run out of massive markets you can penetrate. You then start looking at the more specialist industries, and the needs of a marketing activity for a specialist industry are not that different from those of a huge consumer based product.

"So we already have the infrastructure - we also have the foundations and a great deal of experience - and Matsushita see professional audio as a vital part of its future development and its survival into the 21st century. Also, because of the systems within the company, an added benefit which is unusual for large companies, we are very flexible and sensitive to the market. With these assets we can operate like a very small company offering a very personal service but from a big company base where we have the additional advantage of the resource, the support, and of course the

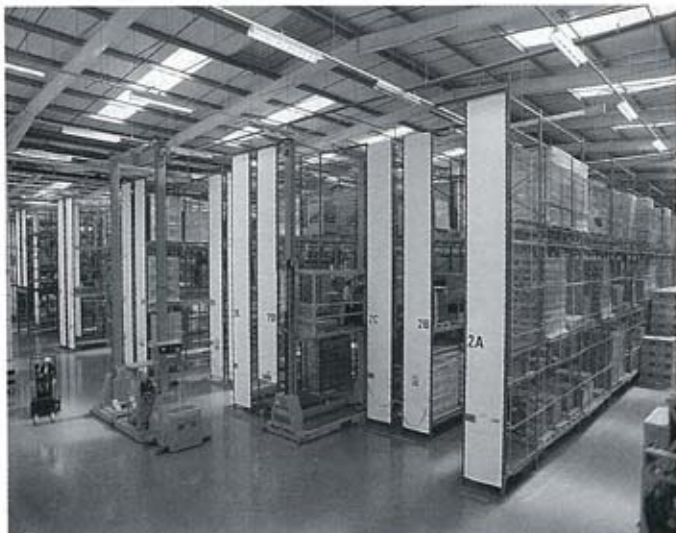


The mixer production line at the Yokohama manufacturing facility.

research and development back-up for the future. We can never go back. Whatever happens we will always go forward, but with care and with carefully thought-out steps."

So much for the policy, but how does it all work in practice? I'd seen for myself by now the splendid organisation and systems established across the Bracknell complex: corporate planning, training and learning areas, medical centre, the computer 'brain' room, accounts, library, service and spare parts - complete with the overhead message boards pushing for customer satisfaction ('Answer That Call Within 3 Rings') - test rooms, stores ('Zero Defects - PS UK Campaign') and despatch. There are 48 departments or 'activity sections' in all and the quality of management and dedication of staff is obvious even to the untrained eye.

Ian Sharpe again: "If we choose to import a new model from anywhere in the world, the early stages are vital, and cannot be circumvented by cutting corners. The product has to come in and be tested for safety and the relevant standards of that country, in our case British and European standards. We also have to look at the quality and image of the product, and whether it's a RAMSA power amplifier or a huge Astrovision screen going to a major stadium or wherever, the same rules apply; the same process, the same laboratories, the same people get involved. In some cases we will call in an outside expert if it's a product area where we don't have the specialist people on site, and this usually happens when we launch into a new market category. In the main, however, we can



Part of the huge computerised warehouse and despatch area at Bracknell



Matsushita's Central Research Laboratory, Osaka, Japan.

satisfy most of our own demands without any trouble at all.

"In this way we have total control over what product comes into the UK market. We are not forced to take anything from any factory around the world if it isn't suitable for our customers. It is my responsibility to find the right products, assess them, find out if they are what the market wants and how much they will pay for them. Then we will put them into the system."

Before this is done, the back-up support that a product will need has to be put in place. It's just not possible, within the company rules and regulations, to sell a product until an initial guidance parts stock is in place and all the circuit diagrams and any technical data are available - including special tests jigs if these are necessary.

"When we set up a model on our computer, with all its relevant information, there are two codes, covering service and sales, and one of my responsibilities is to make sure that these codes are not released until I'm satisfied that all the pre-requisites of the company's policy on product introduction have been met," continued Ian Sharpe. "No product can be invoiced or get out of the company until all the systems required are in place."

When it comes to service, and come to that anything from transport to spare parts, Panasonic have people in place responsible for various specialist categories of product, so there is always more than one person to cover a particular product. Specialised training and facilities are brought into play right through the system to cover all Panasonic products sold in the UK - and some from Europe as well. If a piece of equipment is likely to 'stray' across national borders during its working life, you can be sure it will receive service at Bracknell.

If one dare feel frustrated amongst all this super organisation, Ian Sharpe's one slight grudge is that he is not in total command of his own destiny. "I'm part of a massive company, and we are all very much reliant on what we get from the factory and the R and D people, and what I do in future relies very much on what product becomes available. If it isn't suitable then I won't take it. If I do find things that are suitable then I will obviously have a job to do as my part in Panasonic UK."

That was the down side, if you could call it that. But didn't the people in Japan listen to market feedback?

"One of the philosophies that has made Matsushita so successful is that it listens to the market. I know this isn't exactly news nowadays, but it was when they discovered it 90 years ago! The point is, they're not going to make anything

the market doesn't want, so communication in the early stages is quite vital and we're continually being asked to comment on ideas, product requirements and current trends. It is very much our responsibility to advise the factory, even if we're not asked to. Every now and then we all hit on a central idea or product that is exactly what we want. Sometimes a product has been worked on without us knowing and we were just about to ask for it anyway. It's amazing how it all works.

"Market trends are pretty clear now in our industry. We all know where we are going. More efficiency and compactness is the key, plus costs, of course. These are the guidelines for future products. As far as RAMSA's future is concerned one of the things likely to change is the image, in that it covers products going into the live sound area. We will be looking to other areas, and this effort will generally go under the banner of Panasonic Professional Audio Systems. DAT is something that comes to mind. In recent years it has been gaining a foothold in the industry and our system is well thought of. We've got some exciting digital products that will arrive during this year, and we will expand in that way."

Distribution is a common problem in most countries, at least establishing a network of good ones is, and often takes years of groundwork.

"The professional audio market isn't very large," explained Ian Sharpe, "and the actual amount of profit you can make in the industry is somewhat modest. This is illustrated by the lack of what I would call large well-established and dedicated distribution companies. In our industry distributors often have to do something else to survive. Another problem is that there is so much product available in the world it's almost possible for virtually every dealer in the UK to be a distributor as well.

"So the market didn't have a clearly defined structure, and Panasonic has to have one, we have to have a dealer on hand to support the product totally. He must also be the sort of dealer that calls on the services of Panasonic and benefits from them and knows how to use them. What we've done is to set up some regional distributors who in some cases do installation and design as well, but also to have a thriving dealer network of smaller companies who have gained sufficient business out of a small industry by becoming specialists in certain areas. This spans from broadcast right through to musical instruments and covers such things as training, government buildings, discotheques, bowling alleys, swimming pools - you name it. They are all addressed by slightly different types of dealer.

"Our distribution system is therefore one



WS-A240 (bottom) and WS-A200 speakers.



The WS-A70-EW speaker.



WM-P50E condenser microphone.



Liam Byrnes, professional audio service supervisor.



Sue Mellor, supervisor for the CCTV/professional audio department.



The spares reference library document every Panasonic product ever-produced for the UK market - and more.

single system, but two-tier. It hasn't left us with a massive network, but then it is a high quality one. Whilst in some cases a customer may be a little surprised that there isn't a dealer in his town, it's far better to have a dealer who knows the product very well and who knows about the

products and the policies that make them successful."

But getting to the real bones of it, Ian Sharpe's is the only name at Panasonic the industry knows, outside the distributor/dealer network. Wasn't this situation a little fragile?

"I don't feel this is a problem, it does us something of an injustice because it means people don't fully understand what it is that's behind that one guy or the way Panasonic works. My job is more one of guidance and management rather than sitting down with all the varied activities necessary for an individual in a small company."

With the launch of five new products at the 1991 PLASA Lighting & Sound Show last September, Panasonic made their first-ever appearance at the event.

"The new products shown were in two categories: two new power amplifiers and three mixing consoles," Sharpe continued. "We also took the opportunity to show our DAT machines as well. The most important development at that point was our entry into the mixer market. Whilst we've had some good products, in fact we've become quite famous for the 840 monitor console for concert touring, we've never really challenged the main part of the market and therefore this development probably turned some heads in the industry."

"In addition, another very important move, and one we've been targeting for some time now, is to attack the main body of the amplifier market. The problem of this sector is that it's saturated with product. The other problem, in my view, is that they don't really offer the market what the majority of customers want. They don't solve the simple problems and offer a budget price solution. They all offer very high-tech quality products that some customers need, but the majority of the market doesn't. What we've tried to do with our two new amplifier models is to address that bulk market area where the customer wants a simple, good quality and reliable product - a work-horse."

"It doesn't have to be super tough or very high-tech, or super light or super small. It just has to work every time it's switched on. It's got to be put in a rack, away in a room, and it's got to be forgotten about for as long as they need the thing to work."

"This changes the requirements of the

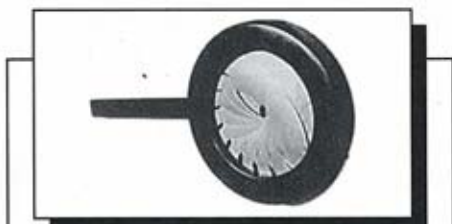


The spare parts department handles 2000 orders every day, 95% of which are despatched to dealers within 24 hours.

product quite considerably and enables us to build a product at a far more competitive price than if we, like many of our competitors, were trying to address some esoteric requirement of a specific market area, whether it be broadcast, studio, touring, and so on. So our winners for the year are without doubt the new amplifier models.

"DAT is an interesting development for us because we've gained the opportunity to offer these products through our network. They have become very well thought of in mastering areas and are becoming an industry standard. Coupled with that they are very programmable. With all the facilities available it makes it very easy to edit, control, cross-mix, control remotely, and so on."

Despite the obvious predictability of movement with a corporate giant the size of Matsushita, they've also shown they can be very nimble on their feet when it comes to introducing innovative electronic products. So don't be deceived whilst from one year to the next the RAMSA machine encroaches steadily into pro-audio territory. Every now and then, and perhaps ever more frequently in the future, they are going to present Ian Sharpe with some tasty products to sell, all set up and ready to go.



Wilkes Iris Diaphragm Co Ltd
 Wideo Works, London Road,
 Baxhill-on-Sea, Sussex, England
 Telephone: (0424) 217630
 Fax: (0424) 215406

Wilkes know a thing or two about iris diaphragms - they have been manufacturing them for over a century. In recent years they have carried that wealth of expertise into the Theatre and TV markets, and now supply some of the industry's leading companies. Find out why by calling Wilkes today

- Sachler Reporter & Producer Open-face Lighting
- Sachler Director Fresnel Lighting
- Rifa-Lite Softlights
- Rosco Products
- OpTex Filter
- OpTex Schwarzpack Dimmers and Desks
- Bytecraft Digital Dimming Systems
- ADB Lighting Dimming and Control Systems
- PAG Batteries and Chargers
- All Aspects of Studio Design and Consultancy

Many other industry-standard products available - please contact OpTex Lighting.

Optex
 lighting

Optex
 22-26 Victoria Road, New Barnet, Herts, EN4
 99F. Tel: 081-441 2199. Fax: 081-449 3646

The
**Fibre Optic
 Lighting
 People**

We manufacture and distribute all fibre optic lighting materials, Parglas harnesses and conduits, Parflex polymers, light sources, theatre curtain washers, spot ball and bullet lenses, side emitting fractured fibres, ceiling fittings and large bore fibre optics.

Examples of our fibre optics may be viewed at our Chiswick showroom, from subtle backgrounds to fibre optic fireworks. Leaflets available.

(PAR)

Trade & Export call PAUL RAYMOND
 Par Opti Projects Ltd
 Unit 9 The Bell Industrial Estate
 Cunnington Street, Chiswick Park, London W4 5EP
 Telephone: 081-995 5179
 Fax: 081-994 1102. Telex: 933718 PAROP G

PAROPTI PROJECTS

Primary manufacturers/
 suppliers worldwide of
 aluminium couplers (scaff
 clamps), aluminium snap hooks
 and many other aluminium
 fittings to fit either 2" (50.8mm)
 or 1.29/32" (48.4mm) tubes

Ask for collage of full range -
 custom design work undertaken

Unit 2, Hotspur Ind. Estate
 West Road, Tottenham
 London N17 0RJ
 Tel: 081-808 5005
 Fax: 081-801 9851

0
8
1
8
0
8
5
0
0
5

SOUNDING THE ALARM AT THE INDOOR ARENA

Tony Gottelier visits the National Indoor Arena and finds Audix' Orbit 'Smart' voice alarm system working away behind the scenes

Except in the very obvious extenuating circumstance, like Victorian children, alarm systems should be seen and not heard and certainly not speak unless spoken to. The problem with such systems, which are normally centralized, has been that they can be susceptible to error and, in large spaces, may cause panic in areas where there is no real danger - for example, when a small problem is restricted to a room where it can be easily dealt with by staff.

So, as with my earlier analogy, what is needed is an element of 'intelligence' where the system is constantly surveying, polling and reporting back from each risk area while maintaining its own security through self fault-diagnoses. Modern fire detection systems will do this, of course, but the alarm transmission system also needs to be more secure than a conventional centralized PA system, and independent of human error as far as possible.

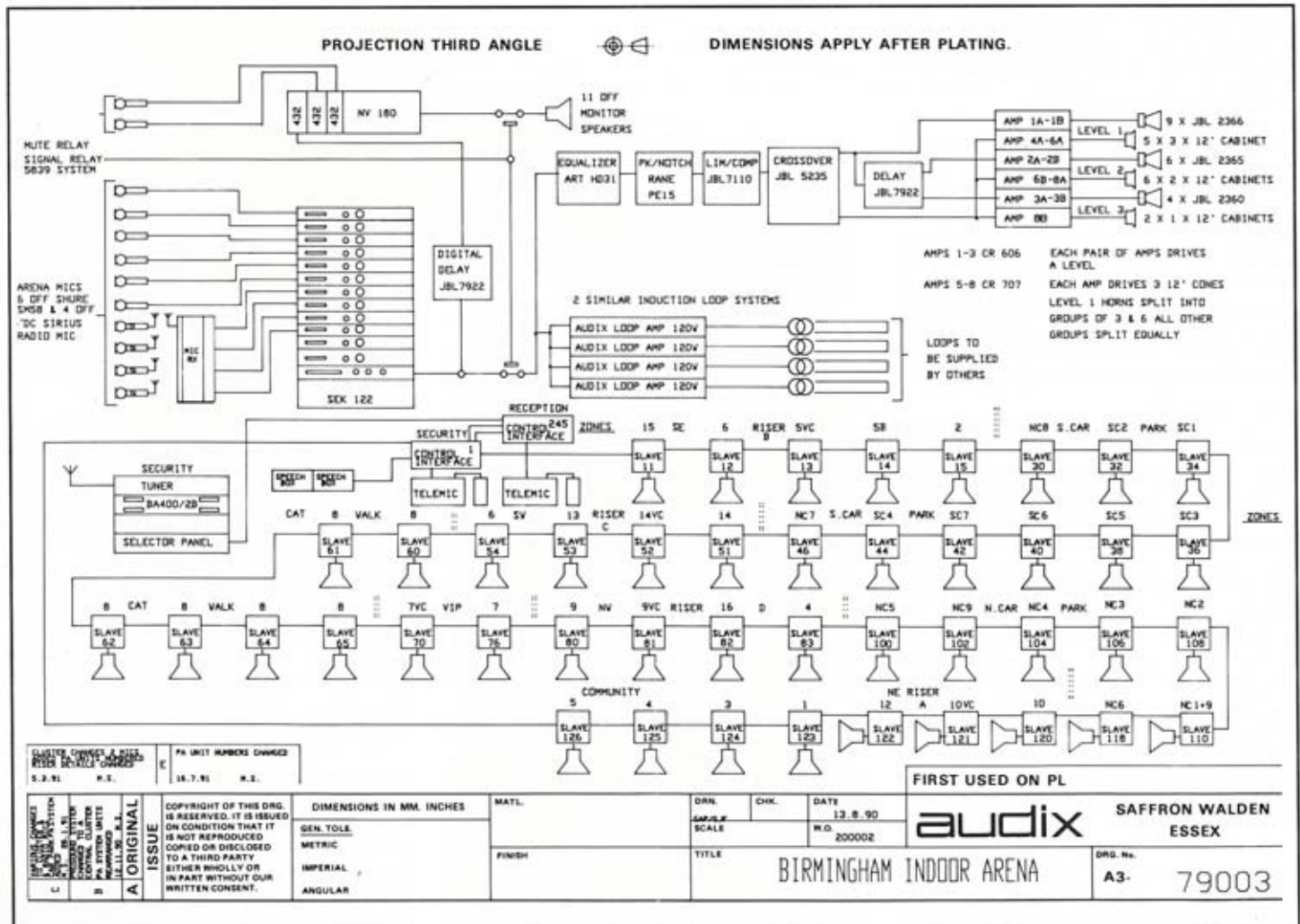
This, and the distribution of cabling to vast numbers of speakers necessary to deliver the appropriate messages, would have been very expensive to implement in the days before microprocessors and daisy-chained data links. If, however, you could have addressable amplifiers local to speaker locations, rather than a centralized system, considerable cabling economies could be made and altogether more efficient system result. This is precisely why Audix, a subsidiary of the TGI Group, are having



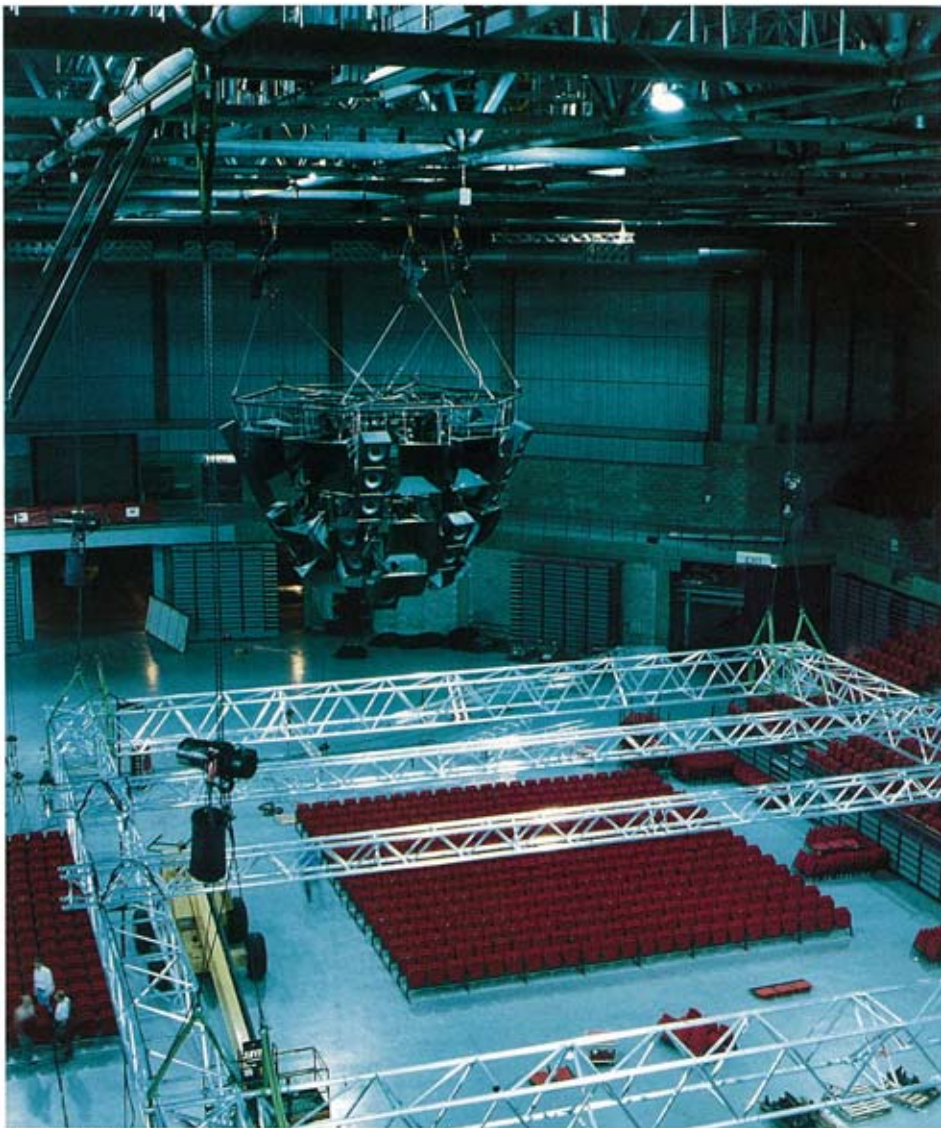
The Soundcraft 'Delta' mixing desk for the PA system.

some considerable success with the marketing of a system called Orbit, (but for which I would have used the acronym DEAVA for Decentralized Addressable Voice Alarm since, at least by its pronunciation, the allusion to a prima donna seems appropriate to the vox method of

evacuation messaging). The system, which consists of a small central console which can control and programme up to 240 remotes into any or each of 99 zones, operates on a single two-way data highway thus potentially saving miles of cable.



Synoptical diagram of the 'Orbit' voice alarm system at the NIA.



Central JBL loudspeaker cluster.

In the case of the National Indoor Arena, with a capacity of up to 13,000 many of the considerations outlined above would have been paramount. The NIA is another brick in the edifice of the City of Birmingham's campaign for international recognition. Already boasting the National Exhibition Centre, with its famous Symphony Hall, and the NIA on an adjacent site and with the most accessible motorway network in the country, the City can't be far off having the facilities it needs to distract foreign attention away from London.

The Indoor Arena is another of those flexi-halls, in the mould of the Sheffield Arena covered previously in this magazine, where the terraced seating can be rolled back and forth to create various different event formats, including concert configurations. In recent months they have staged the large-scale production of *Aida*, the *Moscow Circus*, *Disney on Ice* and *Eric Clapton*.

Clapton was appearing later also at the Sheffield venue and this is obviously set to be the pattern for the major tours of the future now that it has been recognised that Britain previously lacked halls of the circa 10,000 capacity to support such performers. It is surprising really that Harvey Goldsmith was unable to make more of a go of the London Arena in Docklands.

Following the well publicized difficulties incurred during the installation at the neighbouring ICC, Audix were determined to set the record straight at the Indoor Arena and it seems that they have succeeded in doing so. The

speech system, which is largely separate from the voice alarm system, was carried out by Audix with considerable input by Harman UK and vetted by Craig Jensen of Joiner Rose, the American acoustic consultants specializing in stadia who have since split up but who were also involved at Sheffield.

The decision to go for a central cluster, rather than a distributed system, was greatly aided by computer modelling provided by Harman which



A typical 'orbit' slave amp cabinet installed in the risers.

showed that such a system met the parameters laid down by the consultants and delivered the best capital value. This flying system, installed in good time for the opening event in October, incorporates eight C-Audio SR606 and 707 power amplifiers, 19 JBL Horns (10 x 365 and 9 x 2366), 19 Compression drivers (JBL 2445J) and 29 JBL 2206 HPL speakers. The cluster is trackable and demountable so that it can be stationed to suit the various different performance configurations. A technical booth high in the terracing houses the Soundcraft 'Delta' mixing desk and the Strand MX lighting board controlling the 'house' Parcans, though for sports events and broadcast the Arena relies on its 254, 2kW metal halide floods from Thorn Lighting which can be computer-controlled to provide three different lux levels depending on the event requirements.

The Orbit voice alarm system installed at the NIA supports 27 slave amplifiers in 16 defined areas which correspond to the hazard zones of the fire detection system. In the event of a risk situation occurring, the Orbit interface will issue an 'evacuate' message to that zone, while also passing a parallel general alert. These configurations are fully programmable in software to allow for up to 20 different occurrences and the hazard zones can be adjusted in the same way to provide a wider buffer.

At the Arena the bi-directional data link which connects the remote 50W amplifiers to the central control console was 2.5km long yet it saved a further 4km of conventional speaker cable.

The fact that this highway is a Daytona loop means that if a fault or break is detected anywhere in the diagnostic system, the data can simply be sent round the other way which makes it very secure. Each slave unit acts as a repeater for all data and audio functions, so in the event of a short or open circuit, the faulty section will be isolated between two slaves, each receiving its information from alternative directions on the loop.

In that event, the isolated slave automatically switches its output to an auxiliary monitored loop and is capable of putting out its own spoken message or an alert tone to the speakers if such a break in communication occurs. The use of large numbers of small amps, each with a unique address, also enables the overlapping of zones so that speaker distribution is shared by many slave amps and programmed accordingly. Thus the system is flexible, allowing additions at any time.

Conveniently, the building design in Birmingham provided four large walk-in risers at each corner of the structure into which the steel racks containing most of the amplifiers were installed by Audix and this also greatly helped with economizing on cable runs to the speakers. Others are located in the roof or in the car parks. The amps have two audio channels, one having priority and activated by command only, and this can facilitate background music transmission, or one channel can be used for evacuate messages and the other alert signals to other zones. An All-Call request overrides all other functions.

In keeping with BS5839, to which such systems have to conform, levels well in excess of 80dB, which is based on 20% above ambient, are required. Six Canadian Instrument PD60T speakers with BIA/100 horns, each driven by a separate amplifier, and located in the roof of the hall, achieve 95dBA. As is typical of such venues, in these days when corporate entertainment and commercial sponsorship is a vital financial



Animator

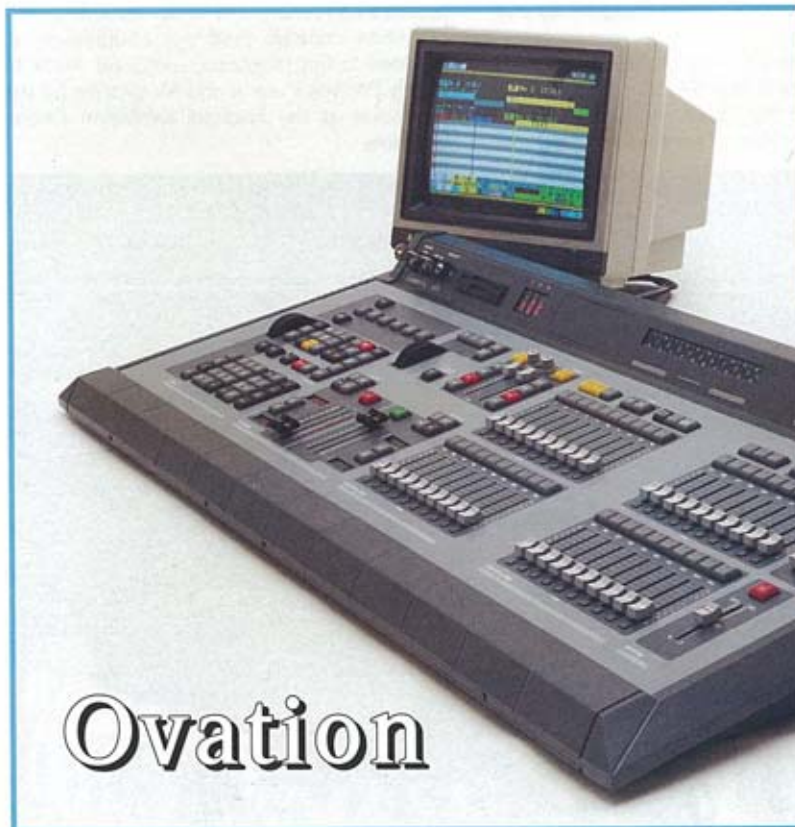


Smart

**Compulite Systems:
Absolute Control
Total Flexibility**

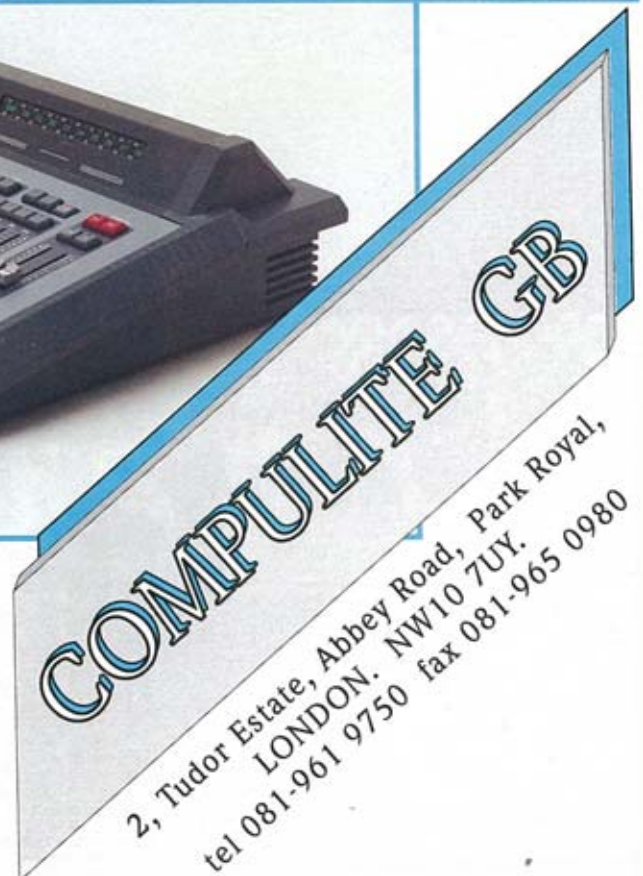


Applause



Ovation

The complete range of high technology computerised lighting controls, moving light controls, intelligent dimmers and colour changers now available in the UK from **Compulite GB.**



COMPUTLITE GB
2, Tudor Estate, Abbey Road, Park Royal,
LONDON. NW10 7UY.
tel 081-961 9750 fax 081-965 0980

ingredient, the upper tier of the NIA is surrounded by glass-fronted hospitality suites, into which the external atmosphere is re-injected via strategically placed ambient microphones, which relay the crowd noise from the PA.

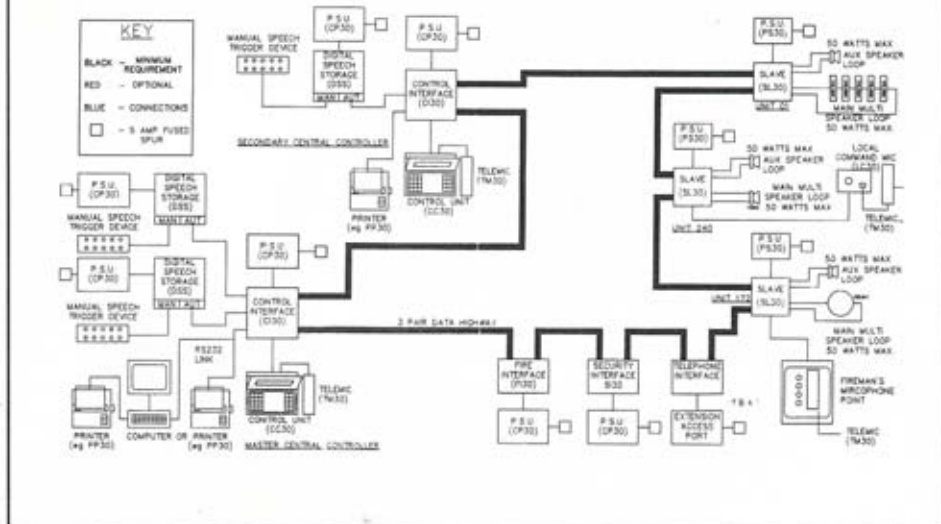
These suites have speakers dedicated to transmitting this external ambience, but they also have dual speakers for the alarm system so that background music can also be received and attenuated. The concourse area uses 29 projection speakers from which SPLs of 90dBA were measured in the area in pre-handover tests. In total, and including the car park, there are more than 500 speakers used in the entire Orbit security system.



The Orbit equipment package.

The battery-backed slave amps police their own condition and, in the event of incorrect data or in a variety of fault conditions, the status is reported to the central control unit appearing on an alpha numeric display and printed out via an RS232 port. In the event of a break in the main audio/data cable, the fault report will identify between which two units the problem exists and take appropriate action to secure the data to all other amps. This central unit addresses a monitored digital message store which allows

DE-CENTRALISED / ADDRESSABLE P.A. AND VOICE ALARM SYSTEM



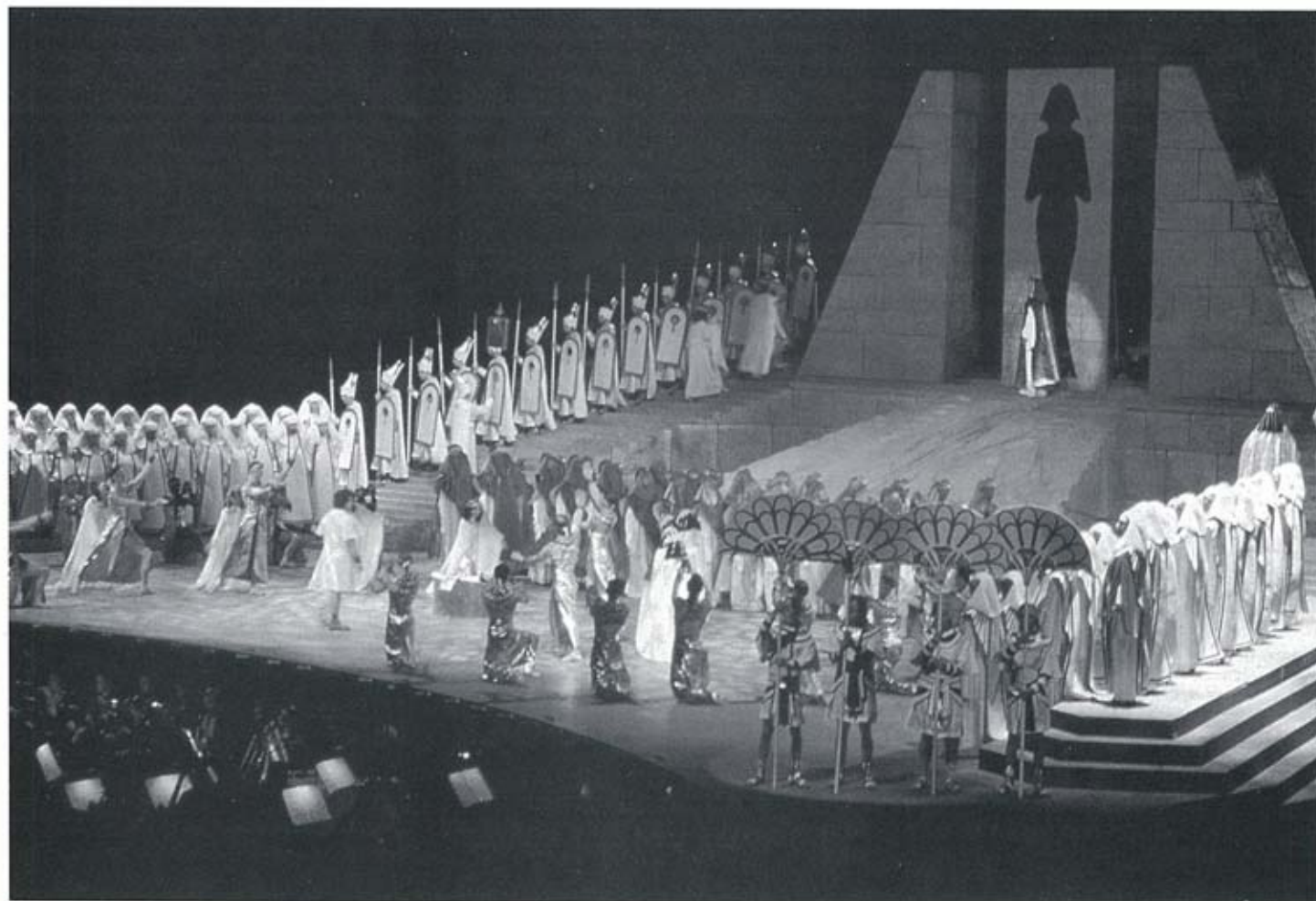
Schematic demonstrating all the 'Orbit' options.

recall of several different verbal messages from EPROM in any sequence.

The console, which looks not dissimilar to an office intercom station, uses a telemic handset which is polled for function and presence once per hour, in accordance with the BS standard. An input keyboard enables multi-zone paging announcements and a group of function keys operate various modes such as group set-up and time-set routines.

The system engineering and installation for the contract at the National Indoor Arena, which was given under the Laings and Crown House main contract, enabled Tannoy-Audix to prove

their real worth very quickly following the denouement earlier last year on the adjoining Conference Centre site. With that well behind them, though the legal ramifications rumble on, they are now in a good position to capitalize on their undoubted capabilities and the Orbit system seems an ideal product to spearhead that campaign. Clearly Crown House agree, as last month's announcement of the awarding of a £5million contract (and not £500million as reported in this magazine, sorry), for Audix to supply PA, voice alarm and AV systems for the expansion at the National Exhibition Centre indicates.



AIDA in performance at the National Indoor Arena.

BOSE IN A COLD CLIMATE

Tim Frost packs his skis and heads for Albertville to learn more about the sound system in use for the Winter Olympics

The 16 days in February stamped 'best in the world' on 57 athletes and teams as the 16th Winter Olympics unfurled in the Savoy area of France.

The event was billed as Albertville '92. In fact only the ice skating, ice dancing and speed skating events, together with the main opening and closing ceremonies were held in the town.

The other competitions were spread over another ten towns, mainly in the mountains with several hours drive between them. One thing they all had in common, and this for the first time at any Olympics, was that the sound systems were all organised by a single company - Bose.

The Olympics has always prompted a new sports venue building programme, and the sound systems have tended to be supplied by different companies for the different venues with some good and some rather perfunctory results.

Flushed from their success at the Calgary games in 1988, where the Bose Canada team supplied sound systems in the most obscure and difficult outdoor conditions, Bose France immediately tackled the '92 committee to sell them on the idea of quality sound rather than just any sound.

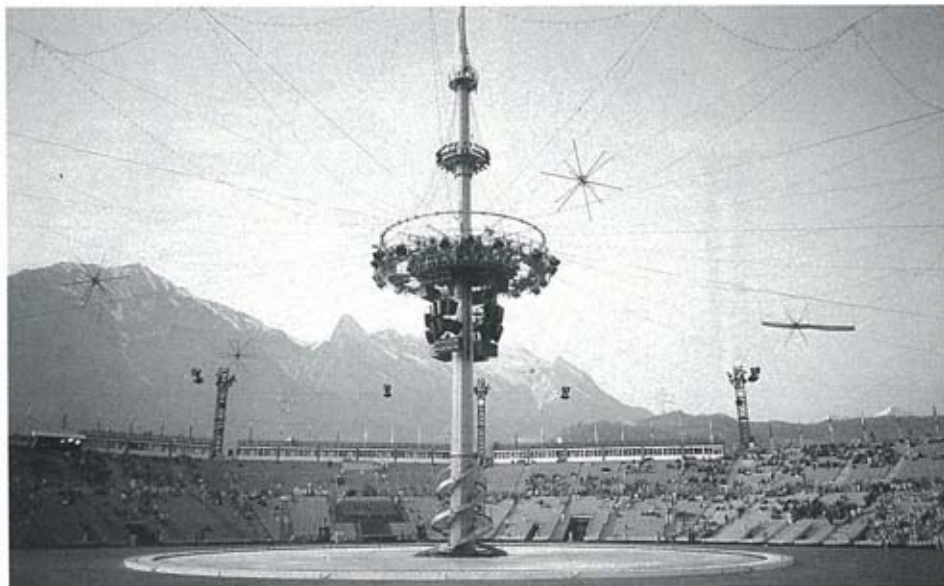
Something that is worth mentioning at this point, before the cynics really start getting their teeth into the project is that Bose became an 'official supplier' to the games, rather than an 'official sponsor'. The difference between the two is a simple one of cash flow. The sponsors' cash flows out to the committee as promotional money - Coke and Kodak were sponsors - but the supplier sells his product and gets cash from the committee.

To be realistic, it is unusual for a major supplier to make pots of money from an Olympic event, they are much more likely to work towards break-even or a nominal profit or loss on the job.

After all it is a major prestige contract, it has a healthy knock-on effect on business and allows the supplier to go into overdrive on corporate entertaining. In Bose's case they took a total of 500 customers, staff and press to the Games over the two weeks they were on.

But in the final analysis, like Calgary, the Albertville Games was a major commercial project undertaken primarily by the local subsidiary company, with an awful lot of product sold and a lot of unique design work undertaken to get it right.

David Bell, the plain speaking Australian (aren't they all?) that Bose employ as Pro



Ceremony stadium: central column with the sound system from US Sound.

Products general manager believes they got into the Olympics because their subsidiaries convinced the Olympic committees that they could do better than the 'poles on sticks' brigade and that the improvement was worth paying for.

"From our perspective the reason we really got the sound system in Calgary was that we could prove to the Olympic committee that there was a difference between the sound system that you would use normally for the Olympics and a quality sound system.

"Perhaps people have tried that before, but there is a price attached to doing it properly and it was a price that, until then, no-one wanted to pay.

"The guys in Canada not only got that over but also charged them for it, and the guys in France picked up from that."

Since the project was a bid from the local subsidiary and executed entirely by local installation companies, the requirement for a high local content was also satisfied. "It was more of a situation in Canada," Dave noted, "where they were even more sensitive about this great big monster on their doorstep called the United States. However it is interesting that it wasn't really an issue here. Andy Smaga, the MD of Bose France, has done such a good job of establishing Bose as an entity in France and he approached it from the quality sound platform.

Also the contractor element was large. As it was all local contractors, the same as in Canada, but a lot more of them, all the money stayed here."

The project was to supply sound into 18 different sites in 11 towns and villages. There were outdoor events including Nordic combined cross country, a big course requiring voice PA at designated spectator points; and artistic skiing which needed to place high quality music over both the spectators area and the ski slopes - and loud enough to let the competitors hear it over the noise of their skis.

The indoor events included ice skating and ice dancing, where music had to be thrown onto the ice as well as the audience; and ice hockey, where the system was more straightforward, delivering PA to the audience and keeping it clear of the playing area.

And, not forgetting, a sound system for the temporary outdoor 35,000 seater stadium that was used just for opening and closing ceremonies.

The negotiations started at the close of the Calgary games and continued through 28 versions of the bid documents to the start of installation work in October '91. Paul O'Leon, general manager for Europe wanted to be certain that they had total control of audio before they went ahead.

"We specified that Bose had complete control



The UK bobsleigh team directly beneath the distinctive black Bose 402.



The impressive bobsleigh course - enough to chill the bravest hearts.



The Olympic flame.



The silver-grey bob control tower.



HDTV in operation.

over the sound at all the venues and throughout the signal chain. It's our name on the line and as an official supplier Bose is very visible as a contractor - if it sounded bad because of other elements in the system beyond our control then people would still think it was down to our system."

On a three-day tour of the venues that took in the closing ceremony, it was possible to get some idea of the scale and range of the project, some of the problems and how close Bose came to their aim of providing 'quality sound' throughout the venues.

Outdoor events were in the majority and on day one I went to La Plagne for the four-man bobsleigh. The sky throughout the trip was absolutely cloudless, bright, and at 9.30 in the morning when the first bob hit the run, a somewhat brisk -12 degrees. The newly-built course wound around the site like a snake, with areas for spectators especially at the high banked corners.

At La Plagne the main function of the system was to provide announcements to the spectators and volunteers helping maintain the run.

'Bob on the run' was an essential warning as each team set off, as the chances of jumping out the way of a speeding bobsleigh is as close to zero as makes no odds.

Bruce Myers, Bose's best application engineer drew up the core plans for all the systems using

the company's own Mac-based 'Modele'r program. For the bob run, he closely analysed a couple of the corners to establish an overall method of working.

Bruce described how he designed the system on the computer.

"What we did for modelling was take a section of the course rather than the entire course - what we needed to do was verify our design philosophy. If we properly modelled two of the corners, the design could basically be extended to the areas that the spectators would be in for the whole track. There were areas where they didn't allow spectators so we didn't need to put speakers there at all."

The main system used 36 402 loudspeakers, mostly built into the top of the track, three or four metres up, and placed 15m apart. Additional 102 speakers were used for fill-ins in specific sectors such as the judges and officials' areas.

The spacing between speakers was set at the maximum distance that they could be without producing an echo effect at any point in the spectator area. The speakers were driven as a constant 100V line from nine bridged Bose 1800 MkIV amplifiers (from their very first production run). The amplifiers and the relatively simple control system consisting of an 8x2 mixer, six mics, one radio mic, a CD and cassette player and a tuner, were all installed in the main control

tower near the end of the run.

Since Bose was involved in the sound design from the outset, they were able to have the speakers set into the run rather than being put on poles. This pleased the Olympic committee and the TV companies, as it made the system much less visible. As well as the regular TV teams there was also a massive presence of High Definition TV cameras at La Plagne as at every other site. These gave continuous live coverage via satellite to those lucky few throughout the EC who have access to the experimental wide screen TVs.

Returning to the sound system, the 402s have a 120 degree horizontal coverage. This coupled with their relatively low mounting positions and the fact that spectator areas tended to be close to the runs, meant that the coverage, level and intelligibility remained measurably and audibly good over the total length of the run.

Other outdoor sites for the ski-related events were more open than the bobsleigh run. Again there were designated spectator areas which had to be properly covered. Seating areas were covered by 402s and as they went further up the pistes these became 802s placed on poles which had been set into concrete bases the previous summer. Powering for each of the ski sites was from 1800 MkIV amplifiers with fairly simple front-ends of a basic mixer, mics and tape/CD playback.

For most events, the requirement for the systems was simply to broadcast the results to the spectators. But as Bruce Myers had discovered from Calgary, when it comes to Olympics there are always the needs of the TV companies to be taken into consideration.

"We got beat up in Calgary because we thought what we had done in previous World Cup events was going to be acceptable for the Olympics.

"The fundamental difference is that there is a much greater intensity from the broadcasters. In World Cup events they want the entire aura of the environment which includes all the crowd noise, the flag waving and the PA.

"However CBS paid \$214 million for the rights to broadcast the Olympics in the US, and as far as they were concerned there shouldn't be a spectator or a sound system in site. For them this is a broadcast event and they want the sound of the skis on the snow and nothing else. If they want clapping and cheering they can just fold it in as an effect from tape.

"We knew we had to minimise the amount of energy on the slopes themselves. So what we did was design a more distributed sound system



The ceremony site with fireworks and US Sound cluster centre stage.

THE HIGH END SOLUTION

COLOR PRO
Revolutionary
Color-Changing
Spotlight

Color Pro
Analog or DMX
Interface

DATAFLASH
Programmable
Xenon Strobe
System

Ultra-efficient optical
systems and advanced
dichroic filtration for
unrivalled brightness
and color saturation

EMULATOR
High Power
Laser Simulator

DICHROIC FILTERS
Standard PAR or
MR16 (2x2") Sizes

VIPER
Dual Beam Laser

Advanced
Automated
Spotlight
INTELLABEAM 700HX

...The most electronically
sophisticated, yet user
friendly controllers in
the lighting industry

INTELLABEAM 700HX

**FIBER OPTIC
CURTAIN**

F-100
High-performance
High-reliability
Smoke Machine

High End
SYSTEMS

high end systems, inc.
2217 west braker ln • austin, tx. u. s. a.
phone 512 836 2242 • fax 512 837 5290
lighting • world • wide



Bruce Myers (right) applications manager and Andy Smaga MD of Bose France.

approach where we had loudspeakers mounted on poles on each side of the course, depending where the committee wanted spectators.

"We faced the speakers away from the slopes so we had 10 to 12dB lower levels on the course than in the audience area. If you were watching TV you wouldn't notice the PA at all, but the spectators could hear every word - intelligibility scored very high."

This year 'Artistic skiing' was added to the demonstration events, to become a full competitive event in two year's time.

This involves coming down the mountain side or flying through the air with an emphasis on elegance and style; and it is done to music. With the double demands of level and quality, the system has to be full-range, extending well beyond the speech bandwidth. It had to be loud enough for the competitors to hear the music over the sound of their skis, the wind noise and the blood rushing through their ears.

For these events, based around the slopes at Tignes, Bose brought in their larger self-powered AM-Pros, otherwise known as the Acoustimass, which have an integral sub-bass system. A total of 16 pole mounted AM-pros were used along the pistes and by the jumps to ensure coverage for the competitors and the 8000 strong audience.

So far, I had seen outdoor sites which worked well with the non-horn designs, but what about the ice stadiums with their high reverberation times? How did Bose fare in these very difficult venues?

There were two in particular, a 6000 seater hall in Meribel used for the ice hockey and the other, the 9000 seater Halle de Glace at Albertville, used for the ice skating. The requirements were quite different for the two. Meribel was primarily a voice PA system covering the seating areas, but the Halle de Glace demanded full range high quality music to both the seating areas and the ice surface.

Mirabel was by far the easier of the two. It is relatively small and well controlled due to the judicious use of ordinary acoustic panels. Since the new hall goes into general use after the Olympics, it was suggested that a central cluster of 802s be installed with an additional distributed system of 402s.

As on the bobsleigh run, a 15m spacing was set for the 402s but it turned out that there were convenient flying points every 6m, so a 402 was fitted to alternate points with a 12m spacing. The clusters used four stacked pairs of 802s, and Bruce knew that they would be run at very low levels during the matches.

"The ice hockey players prefer to have a lower amount of sound energy on the ice so the cluster was not a problem, but we needed to be certain that we had enough level to deal with the crowd noise.



Bose's John Dodson and the ubiquitous 402.

"I did some studies on crowd noise for similar venues at this facility. The French are a very polite people when it comes to watching hockey, the noise figures in Calgary were a good solid 8dB higher than here. We designed the system to provide 103dB continuous level with peaks of 107 to 108 dB. It is being run at a nominal 95 dB and although on a sleeper of a game that is a little too loud, it is very acceptable in a hotly controlled game where the crowd noise figures come above 86dB."

The room was fairly live (with a T60 reverberation time of around two seconds) which helped to smooth out already good coverage figures. These varied as little as +/- 1dB up to 4 kHz, with good intelligibility in all areas.

The Halle de Glace was not so easy. Designed and built by Eiffel Construction, it was a completely un-adorned metal walled hall with four parallel minimal weight bearing catwalks running along the length of the roof.



All you hear
from LLT-Dimmers
... are good Comments!

Professional Dimmer-Systems -
made in Germany.



MULTI-LITE Lichttechnik
Phone + 40/670 6154
Telefax + 40/670 6159

The T60 for the hall was 3 seconds empty and 2.5 seconds full and the choice of mounting points was limited to a central cluster position and the catwalks.

Since they wanted to place the amplifiers near the speakers, in other words on the catwalks, the Bose 1800s were ruled out because of weight, so the choice went to the lightweight Carver amps.

The cluster served the ice surface with six stacked pairs of 802s and a single separately EQ'd 802 pointing straight down. Bolted across the top of the cluster was a pair of Cannon sub-bass units. From previous experience Bose have found that they often need fewer sub-bass units than they expect. Even for this 9000 seater arena these two Cannons were running at only half power and providing ample, if marginally mono-tonal, bass end. But with so much reverberation and limited choice of speaker positioning, and using a non-horn speaker system, intelligibility was going to be the key problem.

"This project gave me more indigestion, more sleepless nights and more hand ringing than any other project I have been involved in the last two or three years," Bruce confided. "This is a very difficult room and I would have been very satisfied with 0.50 for STI (the Speech Transmission Index relating to 'fair' intelligibility).

"I was really concerned that this project was beyond our capabilities. So I got together with a consulting firm to design an appropriate centre cluster using conventional CD horns for comparison and the difference in intelligibility did not vary more than a couple of decimal points. What we determined out of that was that the room had taken over and the best you could do with horns we could do with Bose."

The end result was a centre cluster with two

rings of 802s set in seven separate speaker zones. Each zone was delayed relative to the central cluster by 15mS. The delay speakers were run so that at any seat their level could be as much as 10dB greater than the cluster, but the 15mS delay ensured that the sound still appeared to come from the cluster.

Intelligibility hit well over 0.6 STI, a 'good' rating, this was all the more impressive because it was a pretty difficult hall, and just the sort of venue in which accepted wisdom decrees the 802s won't work. I listened to it carefully and the performance more than matched the predictions.

The limiting factor to the sound reproduction was the source material. Bose had installed DAT players in the control room and helped with the transfer of competitors tapes to DAT. They used a myriad of devices to squeeze the last bit of quality out of what were often knackered cassettes.

The rusty razor-blade awards for rotten music editing went to tapes from the two most technologically equipped nations - the US and Japan - whilst many of the more 'backward' countries provided tapes of outstanding quality.

Dave, Bruce and his colleagues admit that not everything can be fixed with an 802 or a 402, and for the opening and closing ceremony these were just not going to fit the application.

The stadium was effectively a circle of raked scaffolding, holding 35,000 seats. In the centre of the circular performing area was a single tower which held, amongst other things, the main speaker cluster. It was the long distances involved that defeated them said Dave,

"In a stacked pair or a column of four, the 802 is good anywhere up to 150ft away from the listener. Once you get beyond that we have a problem particularly outdoors. For the ceremonies the primary cluster was to be 300ft

away and we took a look at that and said 'Agghh, wrong answer!'

"We won the contract on quality sound, so we felt obliged to supply the best sounding system we could for the opening and closing ceremony whether it was our product or not. So what happened then was an interesting quest for us.

"We started a bit of a witch hunt for a product and a design scenario that would work and found a company based in Philadelphia who have some attractive technology and an innovative way of arraying their product"

The company was US Sound, which provided their own unique compact horn-based systems in co-operation with the Bose engineers. Bose themselves are known to be looking at alternative strategies for 'long throw' applications and if this experiment is going to lead onto something new from Bose, then they kept tight-lipped about it. All Dave would say was: "It's the way they array these systems, they are really onto something. We had a lot of fun working with them, we've learnt a lot from them, they've learnt a lot from us and it was a very pleasant experience. We will probably do something again with these guys."

There was, in fact, a lot of Bose used for effects at the shows and as the amps were all 1800s, honour was maintained.

And the next Winter Olympics in Norway - are they going for the hat-trick? The answer according to Dave Bell, is probably not.

"In Norway they have a partnership between the government and the committee. Everything is going out to a bid, and price is becoming terribly important. And after two Olympic games we know that while we have to have cost effective solutions; quality sound and the lowest bidder do not typically work together.

"It can be done, but at this stage we don't know how to do it."

**"Selecon?
Sounds like
an implant."**

**"I've never seen them.
I've never used them.
So I don't like them."**

**"They're
from
where?"**

What's your excuse?

Frankly, we understand people's reluctance to specify an unfamiliar range of luminaires. But once you've seen them, you'll realise why they're becoming so popular.

Zoomspots are made by Selecon in New Zealand, and are now available from stock in this country. Among their many features are dual rotating shutters and unique no metal-to-metal lens movement, the result of the innovatory design engineering for which Selecon has become famous. With their simple and safe lamp access, interchangeable lenses and easy maintenance, they're a natural choice for both professional and amateur lighting designers. And for sheer good looks, the range is unbeatable.



But the most surprising fact about them is that, despite the high performance, they're so affordable. From the largest concert hall to the smallest theatre workshop, there's simply no excuse for not using Selecon.

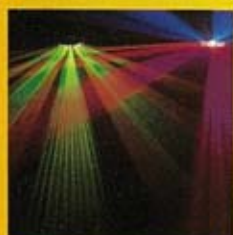
For details of the full range of luminaires from 650 Fresnel to the 1200 Zoomspots, including full technical specification, please contact

**Selecon NZ Limited, 26 Putiki Street,
Grey Lynn, Auckland 2,
New Zealand
Telephone (64) 9 3601718
Fax (64) 9 3601719**



Asia's Largest Professional Sound and Lighting Event Pro Audio & Light Asia '92

The 4th Annual International Trade Exhibition for Professional Recording, Sound Reinforcement, Duplication, Lighting, Lasers, Special Effects and Associated Equipments for the Leisure, Presentation, Entertainment and Related Industries for the Entire Asian Region



JULY 8-10, 1992
Singapore

Following the tremendous success of the 1991 event, space reservations for 1992 are already up by 41%. Once again, National Pavilions from the UK and Italy will be featured:

- **UK PRO AUDIO GROUP/PROFESSIONAL LIGHTING AND SOUND ASSOCIATION (PLASA)**
Organised by Sound & Communications Industries Federation (SCIF) with the support of the British Government
- **ITALIAN PAVILION**
Organised by the Italian Institute for Foreign Trade (I.C.E.) in co-operation with the Association of Italian Discotheque and Theatre Equipment Manufacturers (A.P.I.A.D.)

Exhibitors will also include prominent individual manufacturers from the USA, Germany, the Netherlands, Spain, Switzerland, Denmark, France, Australia, New Zealand, Japan, Singapore and Hong Kong.

If you wish to be part of the largest event ever staged in Asia, and meet the entire Regional users, then you must let us know immediately.

To exhibit/visit, please contact Alan Suen:
BUSINESS & INDUSTRIAL TRADE FAIRS LTD.
18/F First Pacific Bank Centre, 51-57 Gloucester Road, Wanchai, Hong Kong
Tel: (852) 865 2633 Telex: 64882 ASIEX HX Cable: BIPCCAB

FAX HOTLINE : (852) 865 5513, (852) 866 1770

ON TOUR

Catriona Forcer

10 Om Te Zien Special Sportpaleis, Antwerp. L.Ds: Arf & Yes

Arf & Yes are a unique design company with three main divisions - product design, lighting/set design and corporate identity. The company is based around one subject - creativity. It comprises seven people working from a loft in Ghent, Belgium and between them they produce a vast range of designs covering lighting plots to fishing rods!

In Belgium, Arf & Yes have had immense experience in presenting rock music on television and their reputation as highly creative professionals is second to none. Unfortunately, being from Belgium, they tend to be overlooked by the larger companies in the UK and USA. Now Arf & Yes are fighting back, determined to export their knowledge of presenting rock and roll on television to the international rock scene.

"For us it is an industry rather than just a game," explained Giovanni de Schampheleire, managing director of Arf & Yes. "We believe in a collective handling of creativity because nobody can do everything at the same time or you just lower your quality. The rock business today appears to be dominated by just a handful of lighting designers. We want to operate as a company rather than an individual. We think that we're capable of doing things very few people can do in this business. We can be an intermediate - we can handle rock and roll and present it on television the way it should be presented."

Arf & Yes admit that they are not so naive as to aim for the top bands yet, and they consider that to a certain extent, to be a no-go area. However, there is a layer of bands beneath that who they consider perform well musically but with inadequate lighting.

As a company, Arf & Yes earn money from many different areas of design and as a consequence they're able to commit themselves financially to more projects than an individual designer can. They can afford to carry the cost of a 'try out'. They've discovered that the best way to secure a large budget on important projects is to present a complete concept to the client as he is invariably motivated to go for what he has just seen. They compare themselves to Fisher Park in this area of extremely well-presented ideas.

Whilst in London, Giovanni de Schampheleire and lighting designer Ignace d'Haese visited Samuelsons to show them their capabilities and, by all accounts, the latter were duly impressed. Past projects are extremely well documented as the company also has its own photographic studio.

Last month Arf & Yes were responsible for lighting the '10 Om Te Zien Special '92' at the massive Sportpaleis in Antwerp. Belgian television has two channels, one state-owned and one commercial. Arf & Yes are responsible for lighting five shows a week for the commercial channel as well as the occasional 'spectacular' like 10 OTZ. This particular project is very important to the television channel as they use it as a vehicle to show advertisers that they are capable of producing such a show. The programme is comparable to the BBC's Top of

the Pops but there are 26 bands, only from Belgium, performing in front of an audience of 17,000 and the show goes out completely live. The key to success in executing the lighting for this show is speed.

"We read in *Lighting+Sound International* about shows that have six weeks of rehearsals and rig changes," said a surprised Giovanni. "I can tell you that on these things we never change anything as there'd never be time. Tina Turner had four weeks of rehearsals at the Sportpaleis before her last tour! We have one day of rehearsal and one dress rehearsal for a live, on tape show. We programme during the rehearsal including the Vari*Lites. It's amazing what we do for 17,000 people live on tape with nine television cameras."

In December Arf & Yes were presented with the first draft of the set which was designed by Paul de Gueldere. The final design was ready by January 1st and then there was one month to design the lighting rig and get all the gear together within the allotted budget. The main bulk of the equipment for this show was supplied by Belgian company EML, who in turn subcontracted a certain amount of gear from Samuelsons including, of course, the Vari*Lites. Five days before the show, the load in began. This proved a problem because at the Sportpaleis in Antwerp the entrance is where the stage is. As a result they had to keep the middle part of the stage open, only closing it when everything was inside.

The show cost a lot of money to stage so the more days the preparation is spread over, the smaller the budget. Although Arf & Yes would ideally like more time, they agree that it is much better to compact the time and hence have a larger budget. It was not until the day after the load in that the designers got the go ahead, at a budget meeting, to use Telescans.

The lighting was a joint design between Ignace d'Haese, Dirk de Clerq and Michiel Milbou with Ignace running the main control board. Ignace d'Haese started out in life studying architecture but gave this up to work for EML. He stayed there for many years, touring with

several bands as well as working with Showco, occasionally using his architectural skills to draw up stages.

"This show goes unbelievably quickly," said Ignace. "Unfortunately I was very ill at the time but with our company, if we do something big, there is always a back-up. There are several people in the company with the same style who can help out. For the client's sake you have to secure the whole thing. I was too ill to do the focusing but my co-designers Dirk and Michiel were there to take over."

"You have to work very fast with this show and you don't get much sleep! Also, like Top of the Pops, we don't know what songs are going to be included until the last moment. I work a lot with Rob Beerten, Vari*Lite operator, on TV shows and when we look at each other we can understand each other. With such short timing on a show that's important."

The set is comprised of five different 'areas' which are linked to make one complete stage. Ignace is careful to make sure that the panels between the five areas are always lit with the same colour to keep the continuity and give the impression of one long set. Basically, the lighting designers have 'mirrored' what is happening on the floor within the rig. The central point of the design is a pyramid of 90 Par cans, 81 with colour changers. Either side of the pyramid are two sets of six VL2Bs that go to the same perspective point. On one side of the set the scenery builds up quite high so the rig is not as heavy as on the other side where the set is much lower. The rig is impressive with about 600 Par cans and 150 Vari*Lites, including the audience lighting. Effects include megastobes, light curtains and a giant mirrorball.

"Normally, in television, fresnels are used for key lighting," explained Ignace. "The problem with this is that if you want to hang 10k fresnels from the front truss they have to be at quite a low angle and then they tend to get in the way of the shots. So we did all the key lighting with followspots, except for one number when all the artistes gather together on stage. Obviously, we couldn't do it all with followspots so we used



The lighting control nerve-centre during the one and only dress rehearsal.



Performers play to an audience of 17,000.



The special is taped for Belgium's only commercial television station.

two 6k and one 12k HMI just for that song."

Arf & Yes produced an excellent light show, under difficult circumstances, for the 10 Om Te Zien Special '92. The Belgians have a reputation in the UK for being boring but Arf & Yes certainly dispel that idea. After all, this is the company that once dared to fly ACLs from a series of kites at an outdoor show!

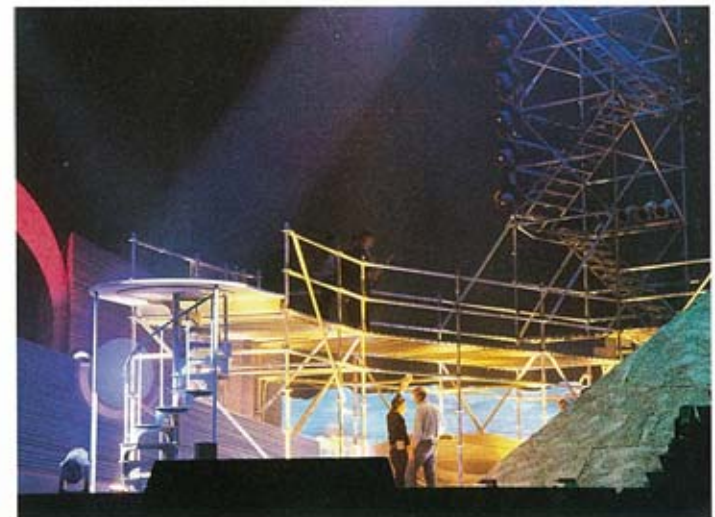
A more detailed review of the company Arf & Yes will appear in a future issue of L+SI.

Equipment List

413 x Par 64s	20 x 8-Lite	1 x Artisan control board
60 x Par 64 floorcans	95 x ColourMag	12 x Telescan MkII 1200w HMI
112 x Par 64 ACL	20 x Molemag	7 x Megastrobe
16 x Par 46 ACL	2 x Celco Gold linked	4 x 72-way Avo racks
5 x 5Ks plus colour scroller	2 x 6Ks HMI + shutter	1 x 48-way Digilight
20 x 2Ks	1 x 12K HMI + shutter	71 x 8' truss section TTR
7 x 1Ks	9 x Pani 1200W HMI long throw (truss underhang)	17 x 4' truss section TTR
4 x light curtain + scroller	2 x 3K Xenon followspot	2 x 2' truss section TTR
4 x 2Ks CCT Profile	64 x VL2b spot luminaires	4 x Oil Cracker
9 x Par 16 light battens	36 x VL4 wash luminaires	4 x ZR 20



Above and below: Scenes from the Om Te Zien Special '92



Eric Clapton
Albert Hall, London
L.D: Tom Kenny
Sound: Buford Jones

Eric Clapton recently returned to London to take up his habitual February residence at the Albert Hall and, as with last year, his lighting designer was Tom Kenny. Although Vari*Lite operator Andy Gibbs insists that the show was designed 'on the back of the proverbial fag packet in Preston', the results were up to Tom's usual standard.

Since the end of last year's tour with Eric Clapton, Tom has been busily steering his career towards film lighting. Nik Jackson of Light & Sound Design asked him to be their house film lighting director and to assist lighting designers such as Allen Branton and Patrick Woodroffe on the large film shoots. Tom gladly took up the role and his first task was a two week shoot assisting Allen Branton on a Gloria Estefan show that was shown on Disney Channel and HBO in America.

He continued working with Allen Branton as well as aiding Patrick Woodroffe at Donnington. In September he designed the Chesney Hawkes show which toured theatres in the UK. Although the budget was small, the lighting system looked good and received favourable reviews.

The last two months of the year were spent in Japan with George Harrison and Eric Clapton performing shows together. There were 13 shows culminating in three performances at the 50,000 seater Tokyo Dome. A larger lighting rig, which Tom Kenny and Andy Gibbs had to produce in 40 hours, was installed for these shows.



Eric Clapton - doing what he does best.

Rehearsals for the Eric Clapton tour began in January at Bray Studios. At the same time MTV filmed an acoustic set by Eric called 'Unplugged'. It was an interesting situation for Tom as he was relegated to assisting Allen Branton, who takes care of all of MTV's lighting, once more.

After a few shows in the UK, Eric and his entourage installed themselves in the Albert Hall. The show will shortly travel to the USA before joining up with Elton John for some spectacular summer stadium shows. These will be double headliners with each artiste taking it in turn to take the stage first. Tom will work closely with whoever is chosen as Elton John's lighting designer to produce a lighting system that works well for both bands.



This year's lighting rig comprises a series of 'stacked' single truss layers.

At a time of the year when tours are few and far between, Tom Kenny admits that he is fortunate to work with Eric Clapton who has already stated his intentions to return to the same venue next year. He also admits that it is difficult to come up with fresh ideas for songs that he knows so well.

"Obviously you have the same basics to each song but Andy and I are thinking about it all the time," said Tom. "It's such a good show that with Eric you could turn on two house lights and it would be great anyway."

The lighting rig this year is a series of 'stacked' layers of single truss complete with an array of Par cans, ColourMags, eight cell Moles, groundrows, six truss followspots and two front of house followspots. There are a few more Vari*Lites this year which are used particularly well on their own during the 20 minute acoustic set.

A special effort has been made in this show to black off the stage to keep it tidy. In anticipation of the USA gigs which are played in the round, the lighting system has also been kept very tidy with all cables concealed.

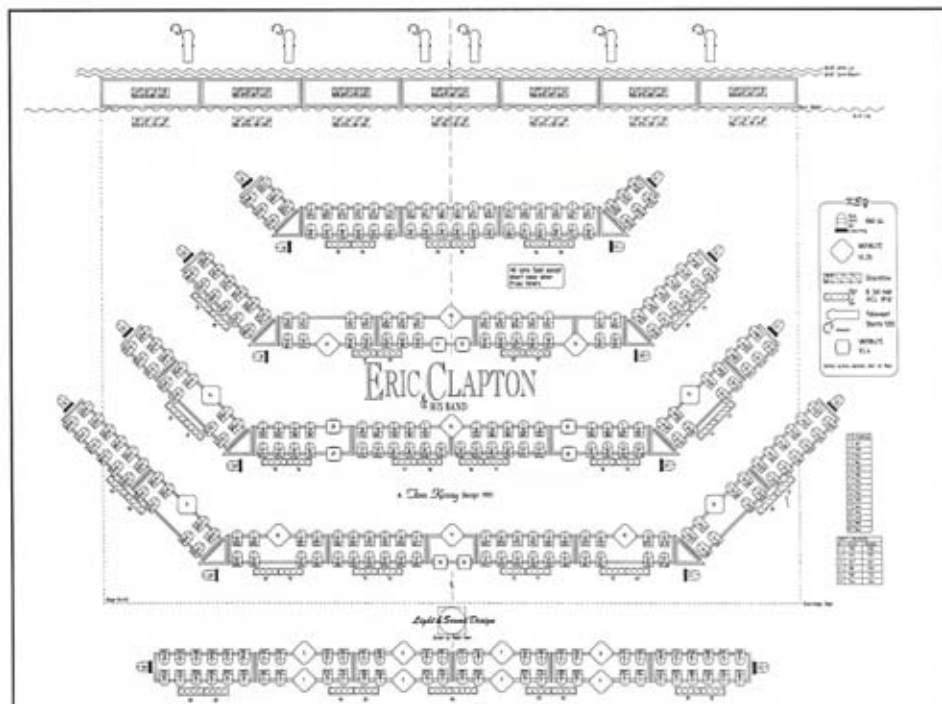
The sound is taken care of by Showco Inc.

who have contracted Buford Jones of Dallas as the sound mixer. Normally an independent sound mixer hired direct by the artistes, Buford Jones has worked on many prestigious tours including David Bowie's 'Sound & Vision' and Pink Floyd's 'Momentary Loss of Reason'.

Sound equipment consists of a Showco Prism system and a Harrison console with 32 inputs plus 20 expanders totalling 52 inputs. Added to that is a typical array of sound effects.

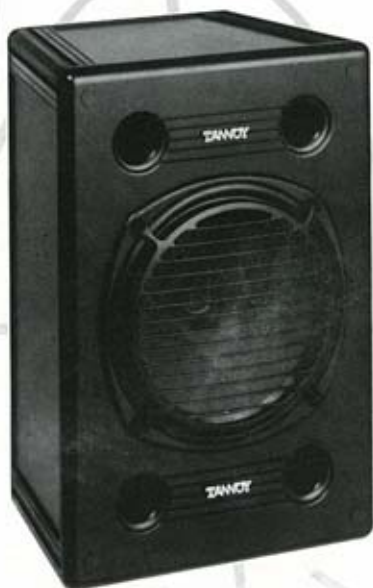
"It's a very straightforward show," said Buford Jones. "Placing the mix and finding the mix is not as difficult as some I've worked with. I don't particularly care for the Albert Hall although it's not as bad as I was led to believe before I came here. The low end is hard to control and define, kick drums and bass guitars are a little difficult. Some of the mid frequencies swim around a bit but it's not out of hand, it just requires a lot of attention."

In last month's On Tour we referred to the lighting designer for Joe Cocker as Robbie Morrow. This should have read Robbie Morrow.



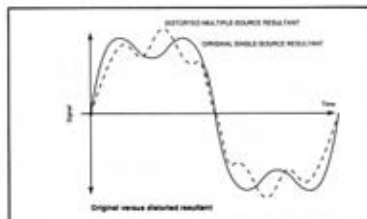
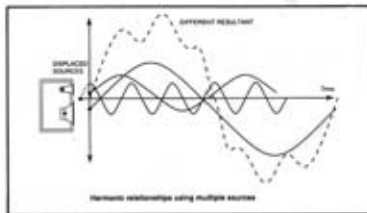
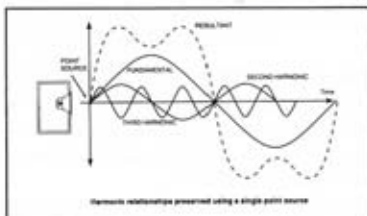
Tom Kenny's lighting design for Eric Clapton's recent Albert Hall appearance.

SOUND IN FOCUS



Every sound we hear contains a fundamental frequency with a number of harmonics. The harmonic structure differentiates one sound from another, one musical instrument from another, one voice from another. To reproduce a sound with realism the harmonic structure must be accurately preserved, or the human ear will recognise the sound for what it is ... a voice coming through a PA loudspeaker.

The harmonic structure of sound spans the crossover frequency of loudspeakers. Some harmonics are produced by the bass unit, others by the treble. Preserving the harmonic structure means preserving the time differences between harmonics. Only the Tannoy Dual Concentric with coincident acoustic sources will achieve this, heard from any point in the audience.



The top graph shows the harmonic structure preserved by the Tannoy Dual Concentric. All harmonics start off at the same time just as the original sound.

The middle graph shows how a normal speaker distorts the harmonic structure. Harmonics split between bass and treble start off at different times.

The bottom graph shows the difference. Tannoy Contractors Series – or just another PA sound. It's up to you.

TANNOY
CONTRACTOR
SERIES

Main UK Distributor
Avitec Electronics (UK) Ltd.,
80/81 Walsworth Road,
Hitchin, Herts SG4 9SX
Tel: 0462 458961
Fax: 0462 431019



Tannoy Ltd., Rosehall Industrial Estate, Coatbridge, Strathclyde ML5 4TF, Scotland. Tel: (0236) 20199 Fax (0236) 28230

A Member of the TGI plc Group of Companies

SOUND '92 AT THE HEATHROW PENTA

Tim Frost Reports on the First Showing of New Sound Products This Year



Neil Voce of Carter-Voce and Anthony Smith of AVX Systems with the AVX VxLAN total computer control system.

Sound '92 at the Penta Hotel was surprising not for how much new product was being shown, but more for the number of companies who have managed to better than survive the last year. Although industry growth has hardly been the order of the day, Sound '92 as an exhibition has continued to build up beyond its UK dominated roots. Where the PLASA Light & Sound Show generates the bigger crowds, and attracts the music related reinforcement business, Sound '92 is becoming the showcase for companies or divisions involved in speech and safety systems.

This area is adding a new dimension to the installation market. The sophistication and integration of system control is developing at exactly the same time that the users - the larger halls, exhibition spaces and sports facilities - are beginning to think about better safety and evacuation systems. In some cases they are being forced to think about it by legislation, but either way the technology and need are developing in parallel.

One of the more evident examples of this sort of system was the UK-developed VxLAN system from AVX systems, which got its debut at the

show.

VxLAN is a software/hardware system that can route audio complex zones defined within a building using PC-based electronics. The audio can be manipulated in many ways - routing and zoning, full system monitoring, manual and automated level changes, delay, tone control and full equalisation. It can then be sent around the venue on a twin ring of two-pair cables (one for use and one for back-up). The audio is transmitted using bitstream technology, the same as used on the better CD players. This converts the signal at a sampling frequency of 48kHz which gives a slightly better bandwidth than a CD.

Neil Voce, of the system's distributors, reckons that running the software under Windows and using a touch screen considerably adds to the system's ease of use. "It routes signals to zones just by touching the zone on the paging screen. The touch screen is very simple to operate and the advantage of Windows is that it has so much control power."

Running custom audio software under Windows, as VxLAN does, is something that we will see a great deal more of in the next year.



Independent consultant Jim Cousins with Sim II which is now available for sale as opposed to rental only.

The advantage of VxLAN and systems like it, is that the differing zoning requirements of paging, music and safety can all be handled with a single sound system from a single console. It integrates the emergency systems and the system monitoring and records all of the system activity, from the microphone to the speaker, so the user knows, and can prove in court if necessary, that the system is working correctly.

Shuttlesound, who have been involved in many major UK installations made their system design software commercially available for the first time at the show. Two things make this software welcome, first it shows that installers and distributors are willing, and able, to develop their own design software and not hoard it to themselves. Secondly, unlike the software from speaker manufacturers like Mark IV, Bose and JBL which is for overall system design, ShuttleCAD, as Brian May explained, is there to deal with the schematic and mechanical design of the system.

"The software can draw up the rack layouts including the amplifier and processor front panels, and it can also produce engraving layouts. The system will produce fully detailed



Phil Barrett with the AVX induction loop system on the Wigwam stand.



ShuttleCAD: installer's expertise now commercially available as a software package.



Bruno Wayte with JBL's new, compact, high power, arrayable speaker.



C-Audio amps on the Harman UK stand.



Reddiffusion's Admaster.



One down the BSS Varicurve with LCD panel.



DAS Amplifiers from Spain.



First of many new products from Metro Audio.



Phil Price with RCF's electronics line-up.

schematics and allow you to build up a parts list, which can be exported to other programs such as databases and spreadsheets*.

PC processors made another appearance, albeit buried inside a completely self-contained unit, on Autograph's stand.

Quite a few years ago Meyer started work on SIM, a system designed to aid the setting up of Meyer systems. SIM gained in power being able to analyse the sound system in real-time using music signals as well as the more traditional test tones. But although it was very clever it was also complex, expensive and could only be rented in with an operator. A new version, SIM II which seems to change most of that, had its European launch at the show. On the stand, Jim Cousins summed up the difference between old and new.

"It is less expensive, it is easier to use and it is available to anyone who wants to buy it. We don't think that it being a Meyer product will cause any problems with engineers using other speaker systems, because it is such an effective tool."

Autograph were also displaying a new flying system for small speakers produced by ATM. It is very neat and just clips together and was also to be seen on Harman UK's stand in the guise of JBL's S.A.F.E. flying system. What was attached to the flying hardware was more interesting though, a new JBL compact two-way reinforcement PA speaker.

With the Array series, JBL are getting into the small box/high power market pioneered by Meyer. The 4892 is the first of the series with more to come in the summer. It has been designed, as its name implies, for creating clusters. It has a set of completely new drivers and a new 45° horn, to allow arraying without too many interference effects between cabinets. Harman's Richard Moore pointed out their new piece of microprocessor electronics, the S52000 - "a completely digital controller which carries out the crossover equalisation and phase functions." The unit comes with factory settings to get the best out of the Array system.

D&B, the German reinforcement system manufacturer, which has built its name on integrating speakers and processors, showed the P600, a new processor/amplifier system specifically for their E1 speaker.

Yet more new processing on the Marquee stand, the BSS FCS-926 digitally-controlled equaliser. The unit has 12 'Varicurve' parametric

bands, a real time analyser and a processor to link the two for automated equalisation. The system can be set up manually or it can do it all on its own, setting the system to a flat response or user determined response without any human intervention. A useful feature of processor-based equalisers such as the BSS is that they have no knobs to twiddle, so once set-up in an installation, it is difficult for anyone else to come along and upset the system alignment.

At Sound '92, Reddiffusion, were primarily selling their background music all on their Star Sound 4 bit long play CDs. But the company has found in these recession-hit days that shops are looking to make money out of their background music by selling advertising space on it. Reddiffusion's new hardware offering therefore was a dual cassette unit with one drive for music tapes and the other for ad spots that can be dropped in at dozen different predetermined intervals.

In a completely different area, LMC's Radio Station got its first exhibition showing in its new stylish format. The Radio Station offers the reverse function of a radio mic. It is a belt pack receiver that takes foldback directly to the performer's ears. The high quality stereo playback that gives the performer total freedom of the stage has already attracted Cliff Richard and Sinead O'Connor as users, and LMC's Paul Ward is also planning on being able to supply a lower cost/quality unit for communications use in the near future.

Metro Audio, recently re-established with Hans Frietag, had on show its first new product for some time - the CBP low cost comms belt-packs. These came in dual and single channel versions starting at under £130 and the first of what Frietag promises to be a "stream of new products".

Very much out of their traditional guise of PA system supplier and hire company, Wigwam were promoting a new induction loop system for the hard of hearing.

It shouldn't be so surprising given Wigwam's close involvement with the church notes Phil Barrett. "We have been supplying induction loops for churches for many years, and because we install these things, we know what is needed." The system is defined by Wigwam and manufactured by AVX, previously detailed as the makers of the VxLAN system.

Japanese radio mics are on the increase with

both Toa and AT showing new units.

AT have been working towards MT approval, honourable fellows that they are, and have at last got it for their ATW 125/6 mic systems.

Toa, who more than any other exhibitor have shown the way to full system integration - audio - safety and video security systems, also had three new radio mic systems. These took in the full spread of handheld, lapel, diversity and non-diversity systems. Toa's list of new products ranged from background music systems, a CCTV camera, megaphones and ceiling speakers.

Both HW/Shure and Beyer had new microphones for similar applications. Beyer's MEM86 is aimed for conference and lectern usage and has the amplifier section separated from the capsule. Steve Bilford sees this type of mic as a useful addition to the range, especially with, "the conference and church installation market being one that we are moving into as there is a fair amount of building work going on, especially with churches."

Shure's response to the same market was the SM102, a microphone designed to be suspended above lecterns, therefore removing the possibility of floor and structure borne noise.

New mixers were less in evidence this year, with a console from Sennheiser and Klark-Teknik sneaking onto their stand the new Interface desk from sister company, DDA. By the look and feel of this new mixer, DDA are following the lead set by Soundcraft in compact mixers with high style. As Chris Gibbs on the stand put it: "the new desk adds style, and although it is relatively cheap it is still a professional desk designed by Dave Dearden."

Style also played an important part in RCF's current electronics line-up. Added to their range were more in the 2000 series, including a digital announcement unit which can handle up to 20 eight-second messages.

Although there was no new product on the stand, it was good to see Hill in attendance, now in more stable condition under the Millbank umbrella. And Millbank themselves were showing more computers and a solid state messaging system.

European and pan-European companies were also in evidence in increasing numbers at the show.

From Spain, Lightfactor Sales showed a new D.A.S 'bi-driver horn' a high power horn system for evacuation, signalling and speech uses, and an amplifier range which Lightfactor's Mike

TOUR DE FORCE



- Sheer Sonic Excellence
- High Power Handling
- Controlled Dispersion
- Compact Size
- Outstanding Value

These are just some of the qualities that have installed Wharfedale's Force Series sound reinforcement as the preferred choice of audio professionals world-wide. And now there's Force 9P with its tough polymer enclosure bringing the power and accuracy of the 'compact with impact' to touring, concert and mobile applications too. With its unique, interlocking cabinet design, the revolutionary new Force 9P ensures that, free standing or in trapezoidal arrays, it always stacks up to great sound.

Force 9 can be used full-range or interfaced with its own special Sub-Bass via the unique Bass Extender



for performance that brings audiences to their feet and the competition to its knees.

FORCE 9

WHARFEDALE LOUDSPEAKERS LIMITED, SANDLEAS WAY, CROSSGATES, LEEDS LS15 8AL, ENGLAND.
TEL 0532 601222 FAX 0532 600267



PROFESSIONAL

Hannaford reckoned gave the advantage, "of bi-polar quality at a reasonable cost, similar to that of MOSFETs."

The Swiss Uniton organisation took quite a large stand to show their full range of integrated paging, public address and background music systems, with an eye on attracting business at the show not only from UK clients but also, they said, from the middle and far east.

At the opposite end of the scale, the French Merlaud stand was one of the smallest, but looks were obviously deceptive. The company, established nearly 70 years ago produce a range of paging systems including the 'long line' PA system used for announcements on the Metro and now also being installed at Euro-Disney. Using digital coding and FM modulation Merlaud can send better than average audio quality to any one or a combination of 250 destinations on the line.

"Normally these long-line systems have a



Showing the Merlaud PA system, now breaking into the UK from France.

bandwidth of only 3kHz" said Merlaud's Gilbert Saliba. "By using frequency modulation we are the only company who can produce long-line systems that have a bandwidth of 8kHz"

And the message from Sound 92?

Computing and complex processing is beginning to make its mark. A large number of exhibitors have seen that sound systems are no longer fore, mid or background music or message carriers or paging systems or an element of the evacuation system - they have to do everything.

Clients are looking to meet evacuation and alarm system standards with as little cost as possible, which means integrating sound, security and alarms within the one system. There are exhibitors like Philips who have worked this way for years, and now companies who historically have concentrated on the music side of sound reinforcement and PA are beginning to see the light as well.



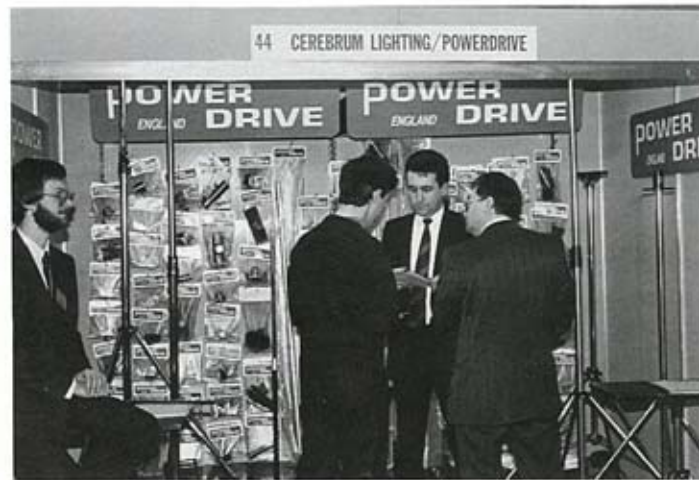
The Toa sound emporium.



Paul Ward with LMC's stylish new Radio Station now on its way to the US.



DDA's Chris Gibbs with their new Interface on its first UK showing.



Cerebrum and Powerdrive in combination.



Derek West with Hill Audio's power amplifiers.

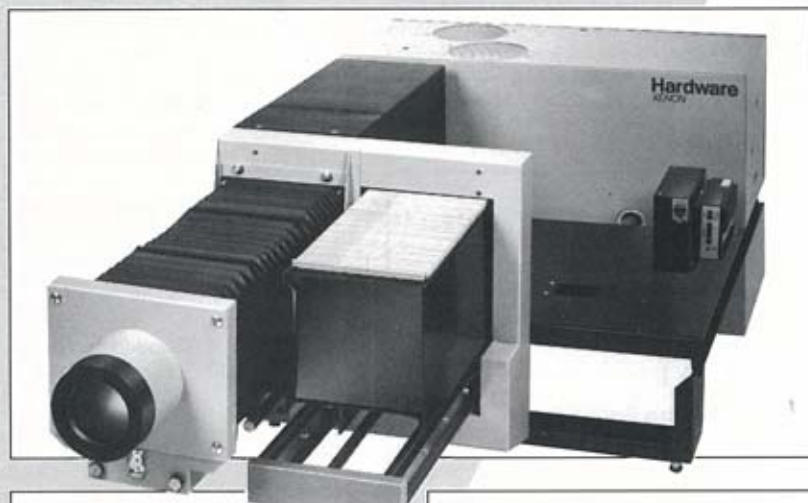


Marquee Audio's Spencer Brooks with the 'knobless' BSS Varicurve sandwiched amongst EMO and Yamaha racks.

Hardware Xenon

High power projection

SLIDE PROJECTORS FROM 600 TO 5000 WATTS



All Hardware Xenon projectors are portable and entirely automatic. The DHX models are also compatible with multi-image dissolve systems.

◀ **5000 Watts Xenon** - 75000 lumens

18 x 18,5 cm slides
Image up to 40 metres wide.
Designed for giant image projection in large auditoriums, onto monuments, châteaux, inflatable structures or any background created for special events.



▲ **600 Watts Xenon** - 4000 lumens
24 x 36 mm slides
Image up to 7 metres wide with this compact projector. Black-out not required, allowing ambient light to be used for note-taking during seminars.



▲ **1000 Watts Xenon** - 8000 lumens
24 x 36 mm and 6 x 6 cm slides
Image up to 10 metres wide, with a popular 24 x 36 mm version for multi-image use in conferences, sales conventions, etc...



▲ **XENON FOLLOW SPOTLIGHTS**

- high quality definition, thanks to 5-element lenses,
- optimized cooling of coloured filters, iris and gobos.

2000 Watts Xenon
Use range from 15 to 150 metres.

5000 Watts Xenon
Use range from 15 to 300 metres.

◀ **SKY LIGHTS**

Hardware Xenon Sky Lights are either fitted to mobile mountings slaved to microprocessors, with obturator and colour change commands from 0 - 10 volts, or to a DMX 512, or fixed to adjustable supports.

2000 Watts Xenon
5000 Watts Xenon



**Hardware
Xenon**

**SALES AND
RENTALS**

PLASA NEWS

Barcode for Safety . . .

A full day seminar has been organised by the PLASA office to discuss the use of portable appliance testers, computerised bar coded recording and labelling all electrical stock to inform on quality checks.

A comprehensive recording system, showing when each product passed safety checks is necessary under the new HSE rules. The system discussed will prevent unsafe equipment being used by staff and customers, will satisfy the HSE and ensure the latest BS5750 Quality Control standards are met. The day will commence with a debate on the current situation led by members from PLASA companies who are already establishing suitable systems. Following the debate there will be a demonstration from a leading computer company who will describe their system and explain further requirements and finally, Le Mark will show you bar coding and other labelling systems in action.

To register your place fill in the booking form below and return to the PLASA office.

Welcome In . . .

At the February meeting of the Executive Committee, approval was given for **Canon Audio** to join the Association as a full member. In the newly introduced International Membership Group **Strong International, Inc.** of the USA was provisionally approved. **Samuelson Communications**, **Samuelson Concert Productions** and **Vari-Lite Europe** were all granted corporate status under the **Theatre Projects** membership and **United Kingdom Distributors** became corporate members, being part of **Leamington Sight and Sound**.

Show Up!

Philbeach report that the PLASA Light and Sound Show '92 is already 500sq.m larger than last year and no less than 18 first-time exhibitors will be at the Show. Philbeach recommend that if you haven't already done so, then you should book now to avoid disappointment. Telephone 071-370 8215.

ANOTHER PLASA SEMINAR!

To All Employers And Hirers

COME AND SEE PAT

at the Forte Posthouse, South Mimms, Potters Bar,
(at junction of M25 and A1M)

on 6th APRIL 1992

PAT IS PORTABLE APPLIANCE TESTING USING BAR-CODING



Under the Health & Safety at Work Act (1974) the Electricity at Work Regulations (1989) and the forthcoming Workplace (Health, Safety & Welfare) Regulations (199-), employers and hirers have a duty to ensure that all equipment supplied by them for the use of others is safe to use - which means it must be tested, properly maintained and records kept. This seminar will show you how to do all this at once by the use of a computer-based system which reads bar codes on all your appliances, carries out safety tests, and records the results.

PROGRAMME

- 10.30 Coffee and Registration
 - 11.00 **Welcome and Introduction to Appliance Safety**
George Thompson (PLASA Standards Officer)
 - 11.05 **Facing up to the Problems**
Peter Coleman (Midland Theatre Services)
John Watson (Theatre Projects Sound)
 - 11.30 **The Need for PAT**
Val Dawson (Seaward Electronics)
 - 12.00 **Demonstration of System**
Peter Nelson (Barron-McCann)
 - 12.30 **Lunch**
followed by opportunity to examine system
 - 14.00 **Bar Coding**
Stuart Gibbons (Le Mark TVS)
- Followed by Summary and Open Forum

Members £30.00 + VAT • Non Members £45.00 + VAT • Two Delegates from same company £50.00 + VAT

Please reserve _____ tickets at _____ for the PLASA 'PAT' Seminar, April 6th, 1992

I enclose a cheque made payable to 'PLASA Ltd' for £ _____ (NOTE: charges include lunch)

Name _____ Position _____

Company _____ Address _____

Tel _____

Please return this slip with your remittance to the PLASA office as soon as possible

PLASA OFFICE: 7 HIGHLIGHT HOUSE, ST. LEONARDS ROAD, EASTBOURNE, SUSSEX BN21 3UH
0323 410335 FAX: 0323 646905 L+SI: 0323 642639

EXHIBITION DIARY

USITT Conference & Stage Expo 92

March 4-7, 1992 - **Seattle** - USITT, Suite 5a, 10 West 19th Street, New York NY 10011-4206, USA. Telephone (212) 924 9088

Frankfurt Musik Messe

March 11-15, 1992 - **Frankfurt, Germany** - Collins & Endres, Morley House, 314/322 Regent St, London W1R 5AB. Telephone 071-323 6570

SIB/MAGIS

March 22-25, 1992 - **Rimini, Italy** - PLASA, 7 Highlight House, St Leonards Road, Eastbourne, BN21 3UH/Knights Management Services, 1 Knights Garden, Hailsham, East Sussex BN27 3JR. Telephone (0323) 442747

ABTT 92

April 2-3 - **Royal Horticultural Halls, London** - Theatrical Trading Ltd, 4 Great Pulteney Street, London, W1R 3DF. Tel 071-434 3901.

Pub Club Leisure Show 92

April 7-9, 1992 - **London** - Angex Ltd, Times House, Station Approach, Ruislip, Middx, HA4 8NB. Telephone (0895) 677677.

Expo Musica 92

April 22-26, 1992 - **Madrid** - IFEMA, Recinto Ferial, Casa de Campo, Avda. de Portugal, s/n., 28011 Madrid, Spain. Telephone (91) 470 10 14

Pro Light & Sound Expo 92

May 14-16 1992 - **Sydney** - PO Box 913, Adelaide, South Australia 5001. Telephone (08) 296 4189

Showtec 92

June 2-4, 1992 - **Berlin** - Overseas Trade Show Agencies Ltd, 11 Manchester Square, London W1M 5AB. Telephone 071-486 1951

APRS 92

June 3-5, 1992 - **London** - APRS Ltd, 2 Windsor Square, Silver Street, Reading, RG1 2TH. Telephone (0724) 756218

Sound and Light 92

June 20-22, 1992 - **Martigny** - Boston Production, Case postale 30, CH-1880 Bex. Telephone 025 633 752.

World Lighting Fair Tokyo 92

June 24-26, 1992 - **Tokyo** - Zenshyokyo, Kombaba Neo-Palace-501, 3- 1-1 Ikejiri Setagaya-Ku, Tokyo 154, Japan. Telephone 03-3706-2001

Pro Sound & Light Asia 92

July 8-10, 1992 - **Singapore** - Business & Industrial Trade Fairs Ltd, 28/F Harbour Centre, 25 Harbour Rd, Wanchai, Hong Kong. Tel (852) 575 6333.

PLASA Light & Sound Show 92

September 6-9, 1992 - **Earls Court 2, London** - Philbeach Events Ltd, Earls Court Exhibition Centre, Warwick Road, London SW5 9TA. Telephone 071-370 8215.

Photokina

September 16-22, 1992 - **Cologne** - KölnMesse, Messe-und, Ausstellungs, Ges.m.b.H.Köln, Messeplatz 1, Postfach 21 07 60, D-5000 Köln 21

Lighting Dimensions International 92

November 20-22, 1992 - **Dallas** - PLASA, 7 Highlight House, St Leonards Road, Eastbourne, BN21 3UH. Tel (0323) 410335.

Hogatec 92

November 30- December 4, 1992 - **Dusseldorf** - Dusseldorfer Messgesellschaft m.b.H., NORWEA, Stockumer Kirchstrasse 61, Postfach 32 02 03, D-4000 Dusseldorf 30.



UK Member Companies

ABRACADABRA (SALES) AND HIRE LTD
314 Nelson Road, Whittin, Middx TW2 7AH.
Tel: 081-898 1127
Fax: 081-898 1126
Contact: Darryl Hayden

A.C. LIGHTING LTD
Unit 3, Spearhead Industrial Park,
Lane End Road, Sands, High Wycombe,
Buckinghamshire HP12 4JC.
Tel: (0494) 446000
Fax: (0494) 461024
Contact: David Leggett

ADB UK THEATRE AND STUDIO LIGHTING DIVISION
Siemens (Tollbridge), Siemens House,
Windmill Road, Sunbury-on-Thames,
Middlesex TW16 7HS.
Tel: (0932) 752885
Fax: (0932) 752883
Contact: Russell Dunsire

ADDA SUPER CASES LTD
P.O. Box 366, Cambridge CB4 5AX.
Tel: (0223) 233101
Fax: (0223) 233080
Contact: Monica Saunders

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

ALLEN & HEATH
Mill Street, Slough, Berks SL2 5DD
Tel: (0753) 576911
Fax: (0753) 535306
Contact: Glen Rogers

ANCIENT LIGHTS
The Old Maltings, Ditton Walk,
Cambridge, Cambs CB5 0QD.
Tel: (0223) 410249
Fax: (0223) 411300
Contact: Peter Nesbitt

ANYTRONICS LTD
Units 5&6, Hillside Industrial Estate,
London Road, Horndean, Hants PO8 0BL.
Tel: (0705) 599410
Fax: (0705) 598723
Contact: Bob Hall

AREA ENTERTAINMENTS
4 Hinton Road, Hereford HR2 6BL.
Tel: (0432) 355407
Fax: (0432) 354342
Contact: Robert Symonds

ARENA THEATRE LIGHT & SOUND
(Cables & Flexibles Ltd)
R&D House, Unit 17, Fairway Drive,
Greenford, Middlesex UB6 8PW.
Tel: (0800) 525162
Fax: 081-566 6350
Contact: Mandy Perchard

ARRI (GB) LTD
1-3 Airlinks, Spitfire Way, Heston,
Middlesex TW5 9NR.
Tel: 081-848 8881
Fax: 081-561 1312
Contact: Dee Reed

AUDIO TECHNICA LTD
Technica House, Royal London Distribution Centre,
Old Lane, Leeds LS11 8AC.
Tel: (0532) 771441
Fax: (0532) 704836
Contact: Shig Harada

AVITEC ELECTRONICS (UK) LTD
80/81 Walsworth Road, Hitchin,
Herts SG4 9SX.
Tel: (0462) 458961
Fax: (0462) 431019
Contact: Tony Kingsley

AVOLITES LTD
184 Park Avenue, London NW10 7XL.
Tel: 081-965 8522
Tel: 081-965 0290
Contact: Steve Warren

BATMINK LTD
Clastonbury Warehouse, Silver Street,
Clastonbury, Somerset BA6 8BT.
Tel: (0458) 833186
Fax: (0458) 835320
Contact: David Churches

BOSE (UK) LTD
Unit G2, Trinity Trading Estate,
Stittingbourne, Kent ME10 2PD.
Tel: (0795) 475341
Fax: (0795) 427227
Contact: Colin Cartwright

CANON AUDIO
Unit 6, Genesis Business Park, Albert Drive,
Woking, Surrey GU21 5RW.
Tel: (0483) 740005
Fax: (0483) 740054
Contact: Sean Martin

CANFORD AUDIO
Crowther Road, Washington,
Tyne and Wear NE38 0BW.
Tel: 091-417 0057
Fax: 091-416 0392
Contact: Iain Elliott

CARLSBRO TECHNICAL SERVICES LTD
Unit 8, Anglia Way,
Southwell Road West, Mansfield,
Nottinghamshire NG18 4LP.
Tel: (0623) 656390
Fax: (0623) 420893
Contact: Ivor Green

CELCO DIVISION, ELECTROSONIC LTD
Hawley Mill, Hawley Road,
Dartford, Kent DA2 7SY.
Tel: (0322) 222211
Fax: (0322) 282282
Contact: Colin Whittaker

CELESTION INTERNATIONAL LTD
Foxhall Road, Ipswich, Suffolk IP3 8JP.
Tel: (0473) 723131
Fax: (0473) 729662 Telex: 98365
Contact: Phil Pell

CEREBRUM LIGHTING LTD
Units 4 and 5, Shannon Commercial Centre,
Beverley Way, New Malden, Surrey KT3 4PT.
Tel: 081-949 3171
Fax: 081-949 3649
Contact: Mike Fisher

CHRIS JAMES & CO
Unit 7, North Western Commercial Centre,
75 Broadfield Lane, York Way,
London NW11 9YJ.
Tel: 071-284 2221
Fax: 071-284 2156
Contact: James Phelan

CITRONIC LTD
Halifax Road, Bowerhill Estate,
Melksham, Wiltshire SN12 6UB.
Tel: (0225) 705600
Fax: (0225) 709639
Contact: Mike Gerrish

CLOUD ELECTRONICS LTD
140 Stanforth Road, Sheffield S9 3HF.
Tel: (0742) 447051
Tel: (0742) 425462
Contact: Roy Millington

CYBERDESCENCE LIGHTING LTD
63 Lancaster Road, New Barnet,
Hertfordshire EN4 BAS.
Tel: 081-447 1010
Fax: 081-447 0419
Contact: Del Trew

DATABEAT DIGITAL MUSIC SYSTEMS LTD
Craven House, 2 Craven Road,
Newbury, Berks RG14 5NE.
Tel: (0635) 521353
Fax: (0635) 550710
Contact: John Leefe

DE SISTI LIGHTING (UK) LTD
15 Old Market Street, Tetford,
Norfolk IP24 2EQ.
Tel: (0842) 752909
Fax: (0842) 753746
Contact: William Smilie

DHA LIGHTING LTD
3 Jonathan Street, London SE11 5NH.
Tel: 071-582 3600
Fax: 071-582 4779
Contact: Wyatt Enever

DIAL SOUND AND LIGHTING
Unit 4C, Wharfedale Road, Eourway
Trading Estate, Bradford, West Yorks BD4 6SG.
Tel: (0274) 651600
Fax: (0274) 651190
Contact: Andy Blackwell

DISCO CLUB & LEISURE INTERNATIONAL
35 High Street, Sandridge, St. Albans,
Herts AL4 9DD.
Tel: (0727) 439955
Fax: (0727) 44417
Contact: Jerry Gilbert

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

DISCO NEON
Unit 11, Ashmead Business Centre, Ashmead Road,
Keynsham, Bristol BS18 1NH.
Tel: (0272) 864818
Fax: (0272) 866227
Contact: Sean Beech

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

DONMAR LTD
Donmar House, 54 Cavell Street,
Whitechapel, London E1 2HP.
Sales and Hire - Tel: 071-790 1166
Service and Installation - Tel: 071-790 6624
Fax: 071-790 6634
Contact: Nick Weeks

DOUGHTY ENGINEERING LTD
Crow Arch Lane, Ringwood,
Hampshire BH24 1NZ.
Tel: (0425) 478961
Fax: (0425) 474481
Contact: George Chiverton

DRAMATEC EFFECTS LTD
15 Hutton Bridge Hill, Hutton Bridge,
Kings Langley, Herts WD4 8PX.
Tel: (0923) 263751
Fax: (0923) 261727
Contact: James Douglas

EFFECTS LIGHTING (LEICESTER) LTD
All Saints Road, Leicester LE3 5AB.
Tel: (0533) 516662
Fax: (0533) 516386
Contact: Malcolm Robertson

ELECTRONIC LIGHTING AND MUSIC
Unit 8, Scorrer Workshops, Redruth,
Cornwall TR16 5AJ.
Tel: (0209) 820599
Contact: Eric Matthews

ELECTROSONIC LTD
Hawley Mill, Hawley Road,
Dartford, Kent DA2 7SY.
Tel: (0322) 222211
Fax: (0322) 282282
Contact: Kevin Murphy

ELECTROVISION LTD
2 Anglezarke Road, Sankley Valley Ind Estate,
Earlestown, Merseyside WA12 8DJ.
Tel: (0925) 220855
Fax: (0925) 220856
Contact: Mark Benyon

EMO SYSTEMS LTD
Durham Road, Ushaw Moor,
Durham City DH7 7LF.
Tel: 091-373 0787
Fax: 091-373 3507
Contact: Mike Gentle

EURLIGHT GROUP
Unit 3, Maple Industrial Estate,
Maple Way, Feltham, Middx TW13 7AW.
Tel: 081-751 6400
Fax: 081-751 3334
Contact: Nick Mobsby

EXCITING LIGHTING & DECOR
Unit 72, Dunlop Industrial Estate,
1 Balloo Link, Bangor,
Co. Down BT19 2JL.
Tel: (0247) 462338
Fax: (0247) 271755
Contact: Harry Filmer

FARRAHS
11 Ferris Street,
London SW18 1SN.
Tel: 081-870 3979
Fax: 081-870 3955
Contact: Paul Gosling

5 STAR CASES
PO Box 36, Wisbech,
Cambs PE13 2RT.
Tel: (0945) 474080
Fax: (0945) 64416
Contact: James Willis

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

G E INTERNATIONAL LTD
3 Shortlands, Hammersmith, London W6 8BB.
Tel: 081-741 9900
Fax: 081-846 8815
Contact: Terry Rentzich

GERRIETS GREAT BRITAIN LTD
J412 Tower Bridge Business Square,
Drummond Road, London SE16 4EF.
Tel: 071-232 2262
Fax: 071-237 4916
Contact: Brian Downie



EXECUTIVE COMMITTEE

CHAIRMAN

Tony Kingsley (Avitec Electronics UK Ltd)

VICE-CHAIRMAN

Paul Adams (P A Installations)

TREASURER

Matthew Griffiths (TSL)

MEMBERS

Tony Akers (Citronic Ltd)

Andy Collier (Strand Lighting Ltd)

Ian Sharpe (Ramsa Panasonic Ltd)

Daryl Vaughan (Theatre Projects Svcs Ltd)

Colin Whittaker (Celco Ltd)

Mike Wood (JEM Theatrical)

STANDARDS OFFICER

George Thompson

Join PLASA and have the backing of the world's premier entertainment technology trade association and receive numerous technical, trade and back-up services, all for £210 per year.

PLASA is now inviting membership enquiries throughout the world, so wherever you are, contact Anna Pillow or John Offord for more details and an application form:

Professional Lighting and Sound Association
7 Highlight House
St Leonards Road
Eastbourne
East Sussex
BN21 3UH, England
Tel: (0323) 642639 Fax: (0323) 646905

Corporate membership at £70.00 per year is available for UK Group companies wishing to provide PLASA facilities for their associate or subsidiary operations.



PROFESSIONAL LIGHTING AND SOUND ASSOCIATION

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

HARMAN AUDIO UK LTD
Mill Street, Slough, Berks SL2 5DD.
Tel: (0753) 376911
Fax: (0753) 535306
Contact: Groy Hawley

HAZEL GROVE MUSIC COMPANY LTD
Battersea Road Industrial Estate, Heaton Mersey
Stockport, Cheshire SK4 3EA.
Tel: 061-431 4061
Fax: 061-431 4723
Contact: David Tippman

HOWARD EATON LIGHTING LTD
Winterlands, Resting Oak Hill, Coolesbridge,
Lewes, East Sussex BN8 4PR.
Tel: (0273) 400670
Fax: (0273) 401052
Contact: Howard Eaton

I-LASER SOUND & VISION LTD
32 Lexington Street,
Soho, London W1R 3HR.
Tel: 071-437 8992/1444
Fax: 071-494 0386
Contact: Jon Vogel

JAMES THOMAS ENGINEERING LTD
Station Approach, Plinvin, Nr Pershore,
Worcester WR10 2DB.
Tel: (0386) 553002
Fax: (0386) 552321
Contact: Mervyn Thomas

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

JULIANA'S LEISURE GROUP
5 Putney Bridge Approach,
London SW6 3JD.
Tel: 071-371 7575
Fax: 071-371 7687
Contact: Peter Clarke

KAM ELECTRONICS (LAMBDA PLC)
Albion Mills, Albion Road, St. Albans,
Herts AL1 5EB.
Tel: (0727) 40527
Fax: (0727) 837811
Contact: Neil Drain

KELSEY ACOUSTICS LTD
28 Powis Terrace, London W11 1JH.
Tel: 071-727 1046
Fax: 071-243 0211
Contact: Richard Vickers

KEN DIBBLE ACOUSTICS
Old Rectory House, 79 Clifton Road,
Rugby, Warwickshire CV21 3QC.
Tel: (0788) 541133
Fax: (0788) 541314
Contact: Ken Dibble

KENNETH BURR ASSOCIATES
19 Woodland Rise, Sevenoaks,
Kent TN15 0HZ.
Tel: (0732) 64132
Fax: (0732) 62281
Contact: Kenneth Burr

LABTEK
Unit 7, Denton Drive Industrial Estate,
Northwich, Cheshire CW9 7LU.
Tel: (0606) 40447
Fax: (0606) 40448
Contact: Andrew McLuckie

LASER CREATIONS LTD
55 Menthay Terrace, Barnes,
London SW13 9DL.
Tel: 081-741 5747
Fax: 081-748 9879
Contact: Marilyn Weeks

LASER MAGIC LTD
Unit 39, Cradle Hill Industrial Estate,
Seaford, East Sussex BN25 3JE.
Tel: (0323) 890752
Fax: (0323) 898311
Contact: Stephen Harvey

LASERPOINT COMMUNICATIONS LTD
44/45 Clifton Road, Cambridge CB1 4FD.
Tel: (0223) 212331
Fax: (0223) 214085
Contact: Sarah Bradford

LASER SYSTEMS LTD
Unit 11, Llantarnam Park, Cwmbran,
Gwent NP44 3AX.
Tel: (0633) 838280
Fax: (0633) 838218
Contact: Geoff Jones

LE MAITRE (SALES) LTD
312 Purley Way, Croydon CR0 4XJ.
Tel: 081-686 9258
Fax: 081-680 3743
Contact: Dick Carrier

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

LEE FILTERS LTD
Central Way, Walworth Industrial Estate,
Andover, Hants SP10 5AN.
Tel: (0264) 366245
Fax: (0264) 355058
Contact: Ralph Young

LEISURETEC
Unit 15, Portland Road Industrial Units, Kingsway,
Luton, Beds LU4 8HA.
Tel: (0582) 23300
Fax: (0582) 400237
Contact: Mike Hendon

LIGHT & SOUND DESIGN LTD
201 Coventry Road, Birmingham B10 0RA.
Tel: 021-766 6400
Fax: 021-766 6150
Contact: Simon Austin

LIGHT ENGINEERING LTD
64 Eden Road, Walthamstow, London E17 9YJ.
Tel: 081-520 23367
Fax: 081-509 1332 Telex: 898005
Contact: Steve Demeza

LIGHT RELIEF
Ellar House, Alexandra Industrial Estate,
Wentloog Road, Rummey, Cardiff CF3 8EE.
Tel: (0222) 779555
Fax: (0222) 778575
Contact: Simon Baker

LIGHT SUPPORT LTD
121 Lovelock Road, Reading,
Berks RG3 1DZ.
Tel: (0734) 393955
Fax: (0734) 505964
Contact: Colin Morton

LIGHT WORKS LTD
2a Greenwood Road, London E8 1AB.
Tel: 071-249 3627
Fax: 071-254 0306
Contact: Charlie Paton

LIGHTFACTOR SALES LTD
11 Fairway Drive, Fairway Industrial Estate,
Greenford, Middlesex UB6 8PW.
Tel: 081-575 5566
Fax: 081-575 8678
Contact: Mick Hannaford

LIGHTING AND SOUND SERVICES
Ashfield, 126 Chester Road, Helsby,
Cheshire WA6 0CS.
Tel: (0928) 723502
Fax: (0928) 725012
Contact: Phil Johnson

LIGHTING TECHNOLOGY GROUP LTD
2 Tudor Estate, Abbey Road,
Park Royal, London NW10 7UY.
Tel: 081-965 6800
Fax: 081-965 0950
Contact: Ron Kneil

LMC AUDIO SYSTEMS LTD
Unit 10, Acton Vale Industrial Park,
Cowlsey Road, London W3 7QE.
Tel: 081-743 4680
Fax: 081-749 9875
Contact: Paul Hinkly

LONDON ACOUSTICAL DEVELOPMENTS LTD
31 Hartfield Crescent, Wimbledon,
London SW19 3RZ.
Tel: 081-946 6063
Fax: 081-946 5743
Contact: Gaj Pyndiah

LUTON SOUND & LIGHTING LTD
86-88 Wellington Street, Luton,
Bedfordshire LU1 5AA.
Tel: (0582) 411733
Fax: (0582) 391102
Contact: Eamon Hailes

LYNX LIGHTING LTD
5 Oxford Road, Pen Mill Trading Estate,
Yeovil, Somerset BA21 5HR.
Tel: (0935) 29290
Fax: (0935) 79439
Contact: Nick Searle

LYTEMORE LTD
Unit 3, Maple Industrial Estate,
Maple Way, Feltham, Middx TW13 7AW.
Tel: 081-751 5449
Fax: 081-751 3334
Contact: Graham Bowen

M&M LIGHTING LTD
Unit 2, Cameron House, 12 Castlehaven Road,
London NW11 8QW.
Tel: 071-284 2504
Fax: 071-284 2503
Contact: Michael Goldberg

MARQUEE AUDIO LTD
Shepperton Studio Centre, Studios Road,
Shepperton, Middx TW17 0QD.
Tel: (0932) 566777
Fax: (0932) 565861
Contact: Spencer Brooks

MARTIN AUDIO
Cressex Industrial Estate, 19 Lincoln Road,
High Wycombe, Bucks HP12 3RD.
Tel: (0494) 535312
Fax: (0494) 438669
Contact: David Bearman

MEMOTECH COMPUTERS LTD
Unit 8, Thorney Leys Park, Witney,
Oxfordshire OX8 6BA.
Tel: (0993) 778691
Fax: (0993) 704728
Contact: Christopher Vlassopoulos

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

MIDDLESEX SOUND & LIGHTING LTD
6 Village Way East, Rayners Lane,
Harrow, Middlesex HA2 7LY.
Tel: 081-866 5500
Fax: 081-866 3757
Contact: Mike Olivier

MIDLAND THEATRE SERVICES
Junction 1 Industrial Estate,
Dartmouth Road, Smethtwick,
Birmingham B66 1AX.
Tel: 021-525 4545
Fax: 021-525 2413
Contact: Mike Savage

MIDNIGHT SALES LTD
Unit 1, Chelsea Bridge Business Centre,
326 Queenstown Road, London SW8 4NP.
Tel: 071-498 7272
Fax: 071-498 8845
Contact: David Rose

MODE ELECTRONICS LTD
Chelshing Lodge, Tonwell, Ware,
Hertfordshire SG12 0LB.
Tel: (0920) 462121
Fax: (0920) 466881
Contact: Andrew Morris

MODELBOX
57 Filmer Road,
London SW6 7JF.
Tel: 071-731 7021
Fax: 071-371 0806
Contact: Chris Toulmin

MSL PRO LIGHT & SOUND
125 Blackstock Road, London N4 2JW.
Tel: 071-354 2254
Fax: 071-226 9994
Contact: Martin Prescott

MULTIFORM LIGHTING
Bell Lane, Uckfield,
East Sussex TN22 1QL.
Tel: (0825) 763348
Fax: (0825) 763310
Contact: Iain Price-Smith

MUSHROOM LIGHTING SERVICES LTD
76 Tenier Road, Moulton Park Ind. Estate,
Northampton NN3 1AX.
Tel: (0604) 790900
Fax: (0604) 491118
Contact: Paul Butler

NEON LITE ASSOCIATES
Unit 1, Clovelly, Chapel Road,
Meppenshall, Bedfordshire SG17 5NQ.
Tel: (0462) 811843
Fax: (0462) 817352
Contact: Neon

NIGHT FLIGHT SOUND & LIGHTING
Tonwood, 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
Contact: Keith Greenwood

NORMAN GRAY CHARTERED DESIGNER
Fairland House, 22 Newbridge Road,
Bath, Avon BA1 3JZ.
Tel: (0225) 312716
Fax: (0225) 444942
Contact: Norman Gray

NORTHERN LIGHT
39/41 Assembly Street, Leith,
Edinburgh EH6 7RG.
Tel: 031-553 2383
Fax: 031-553 3296
Contact: John Allen

NORTHERN LIGHTS
89 Scotforth Road, Lancaster LA1 4SD.
Tel: (0524) 845584
Fax: (0524) 845583
Contact: Ray Wilkinson

OHM INDUSTRIES LTD
Wellington Close, Parkgate Ind. Estate
Knutsford, Cheshire WA16 8DX.
Tel: (0565) 654641
Fax: (0565) 755641
Contact: Darryl Thorpe

OPTICAL & TEXTILE LTD (OPTEX)
22-26 Victoria Road,
New Barnet, Herts EN4 9PF.
Tel: 081-441 2199
Fax: 081-449 3646
Contact: Ian Lake

OPTIKINETICS LTD
38 Cromwell Road, Luton LU3 1DN.
Tel: (0582) 411413
Fax: (0582) 400613
Contact: Neil Rice

OPUS PRO-AUDIO
35 Parker Lane, Burnley,
Lancashire BB11 2BU.
Tel: (0282) 20795
Fax: (0282) 52525
Contact: Jim Garlick

ORPHEUS PUBLICATIONS
Fourth Floor, Centro House,
Mandela Street, London NW1 0DU.
Tel: 071-387 3848
Fax: 071-388 8532
Contact: Charles Ward

OSRAM LTD
P.O. Box 17, East Lane, Wembley,
Middlesex HA9 7PG.
Tel: 081-904 4321
Fax: 081-904 1178
Contact: Andre Mussett

OXTRON DIGITAL SYSTEMS
Sucklings Yard, Church Street,
Ware, Hertfordshire SG12 9EN.
Tel: (0920) 460542
Fax: (0920) 460543
Contact: Geoff Kingston

P.A. INSTALLATIONS LTD
26-28 Inkerman Street, Llanelli, Dyfed SA15 1SA.
Tel: (0554) 752490
Fax: (0554) 777848
Contact: Paul Adams

PAR OPTI PROJECTS LTD
Unit 9, The Bell Industrial Estate,
Cunnington St. Chiswick Park, London W4 5EP.
Tel: 081-995 5379
Fax: 081-994 1102 Telex: 933718
Contact: Paul Raymond

PARK VISUAL INTERNATIONAL
Unit 131, The Commercial Centre, Picket Piece,
Andover, Hants SP11 6LU.
Tel: (0264) 364200
Fax: (0264) 364200
Contact: R Studens

PEAVEY ELECTRONICS (UK) LTD
Hutton House, Hunters Road,
Corby, Northants NN17 1JE.
Tel: (0536) 205520
Fax: (0536) 69029
Contact: Ken Achard

PEGASUS SOUND & LIGHT
23-25 Canongate, The Royal Mile,
Edinburgh EH8 8BX.
Tel: 031- 556 1300
Fax: 031- 557 6466
Contact: David Hunter

PENN FABRICATION LTD
3 Armstrong Road, Armstrong Industrial Estate,
District 2, Washington, Tyne and Wear NE37 1LH.
Tel: 091-416 1717
Fax: 091-419 3715
Contact: Frank McCourt

PLAYLIGHT HIRE LTD
67 Aynes Road, Old Trafford,
Manchester M16 7QN.
Tel: 061-226 5858
Fax: 061-232 9510
London: 081-965 8188
Birmingham: 021-328 1591
Contact: Barry Hampson (Manchester)

POWERDRIVE DRUM CO. LTD
Unit M1, Cherrycourt Way,
Stanbridge Road, Leighton Buzzard,
Bedfordshire LU7 8QH.
Tel: (0525) 370292
Fax: (0525) 852126
Contact: Keith Dowzell

PRIMARC (MARKETING) LTD
121 Lovelock Road, Reading,
Berks RG3 1DZ.
Tel: (0734) 596777
Fax: (0734) 505964
Contact: Donald Major

PULSAR LIGHT OF CAMBRIDGE LTD
Henley Road, Cambridge CB1 3EA.
Tel: (0223) 66798
Fax: (0223) 460708
Contact: Derrick Saunders

RAINBOW INTERNATIONAL
448 Uxbridge Road, Shepherds Bush,
London W12 0NS.
Tel: 081-743 9999
Contact: Mervyn Thomas

RAMSA PROFESSIONAL AUDIO SYSTEMS
Willoughby Road, Bracknell,
Berks RG12 4FP.
Tel: (0344) 853176
Fax: (0344) 853705
Contact: Ian Sharpe

R.G. JONES SOUND ENGINEERING
Beulah Road, Wimbledon, London SW19 3SB.
Tel: 081-540 9881
Fax: 081-542 4368
Contact: Mark Adams

R.K. LIGHTING LTD
4 Steep Hill, Sreatham, London SW16 1UL.
Tel: 081-769 5714
Fax: 081-677 7463
Contact: K.M. Ahmed

ROSCOLAB LTD
Blanchard Works, Kangley Bridge Road,
Sydenham, London SE26 5AQ.
Tel: 081-659 2300
Fax: 081-659 3153
Contact: Joanne Shapley

ROSSULA LTD
11 Fairway Drive, Fairway Industrial Estate,
Greenford, Middlesex UB6 8PW.
Tel: 081-575 2288
Fax: 081-575 8678
Contact: Mick Hannaford

SAMUELSON COMMUNICATIONS
20-22 Fairway Drive, Greenford,
Middlesex UB6 8PW
Tel: 081-575 8888
Fax: 081-575 0105
Contact: Melville Davis

SAMUELSON CONCERT PRODUCTIONS
20-22 Fairway Drive, Greenford,
Middlesex UB6 8PW
Tel: 081-575 0212
Fax: 081-575 0424
Contact: John Coppen

SHUTTLESOUND LTD
4 The Willows, Willow Lane,
Mitcham, Surrey CR4 4NX.
Tel: 081-640 9600
Fax: 081-640 0106
Contact: Tony Oates

SLICK SYSTEMS INTERNATIONAL LTD
Portland Street North, Leek,
Staffs ST13 6LA.
Tel: (0538) 372109
Fax: (0538) 381315
Contact: Paul Marsh

SMITHFIELD ELECTRONICS
3 Ermine Road, Hoole,
Chester CH2 3PN.
Tel: (0244) 349062/349158
Fax: (0244) 347331
Contact: Chris Aberdeen

SOFISCOTECH
1440 Leeds Road, Bradford,
West Yorkshire BD3 7AA.
Tel: (0274) 661406
Fax: (0274) 666463
Contact: Keith Walker

SOUND ELECTRONICS (NEWCASTLE) LTD
201-205 Jesmond Road,
Newcastle Upon Tyne NE2 1LA.
Tel: 091-281 4248
Fax: 091-281 1194
Contact: Ray Scott

SPECIALIST LAMP DISTRIBUTORS LTD
10 Sovereign Enterprise Park, King William Street,
Salford, Manchester M5 2UP.
Tel: 061-873 7822
Fax: 061-873 8089
Contact: John Edwards
83 Lomond Grove, Camberwell, London SE5 7QZ.
Tel: 071-708 0751
Fax: 071-708 2251
Contact: Jane Grater

SQUIRE SOUND & LIGHT LTD
93 Chertsey Road, Woking, Surrey GU21 5XY.
Tel: (0483) 776099
Fax: (0483) 750853
Contact: Paul Enderby
Branches: Birmingham 021-520 4545
Glasgow 041-946 3303
Cullford (0483) 502121
London 081-451 5556
Manchester 061-866 8075

STAGE ELECTRICS
Cotton Road, Marsh Barton,
Exeter, Devon EX5 2NG.
Tel: (0392) 55868
Fax: (0392) 410592
Contact: James Bishop

STAGE TWO LTD
197 Watford Road, Croxley Green,
Rickmansworth, Herts WD3 3EH.
Tel: (0923) 230789
Fax: (0923) 255048
Contact: Terry Douris

STAR HIRE
Blackburn Hall, Milton Road, Thurleigh,
Bedfordshire MK44 2DG.
Tel: (0234) 772233
Fax: (0234) 772272
Contact: Roger Barrett

STARDREAM AUDIO VISUAL LTD
Party House, Mowbray Drive,
Blackpool, Lancashire FY3 7JR.
Tel: (0253) 302602
Fax: (0253) 301000
Contact: John Barnett

STARSTRUCK PRO SOUND & LIGHT
Block 2, Unit 2, Tollcross Industrial Estate,
Causewayside Crescent, Tollcross, Glasgow G32 8LY.
Tel: 041-778 4848
Fax: 041-763 0015
Contact: Hardy Mattu

STRAND LIGHTING LTD
Grant Way (off Syon Lane), Isleworth,
Middlesex TW7 5QD.
Tel: 081-560 3171
Fax: 081-568 2103
Contact: David Brooks

SUPERMICK LIGHTS
119-121 Freston Road, Holland Park,
London W11 4BD.
Tel: 071-221 2322
Fax: 071-727 8693
Contact: Peter Clarke

SYLVANIA LTD
Otley Road, Charlestown,
Shipley, West Yorkshire BD17 7SN.
Tel: (0274) 595921
Fax: (0274) 597683
Contact: Ken Rickman

TANNOY LTD
Rosehall Industrial Estate, Coatbridge,
Strathclyde, Scotland ML5 4TF.
Tel: (0236) 420199
Fax: (0236) 428230
Contact: Derek West

THE MUSIC COMPANY LTD
Unit 3E, Hillam Road Industrial Estate,
Canal Road, Bradford, West Yorkshire BD2 1QN.
Tel: (0274) 370966
Fax: (0274) 308706
Contact: Miles Marsden

THE SOUND DEPARTMENT LTD
Lower Green, Cuxham,
Oxon OX9 5NH.
Tel: (0491) 613901
Fax: (0491) 613440
Contact: Steve Smith

THEATRE PROJECTS SERVICES LTD
20-22 Fairway Drive, Greenford,
Middlesex UB6 8PW.
Tel: 081-575 5555
Fax: 081-575 0105
Contact: Alan Thomson/Daryl Vaughan

THEATRE SOUND AND LIGHTING (SERVICES) LTD
3 Wigton Place, Kennington, London SE11 4AN.
Tel: (071) 582 8009
Fax: 071-820 9584
Contact: Matthew Griffiths

TOA ELECTRONICS LTD
Tallon Road, Hutton Ind. Estate,
Brentwood, Essex CM13 1TC.
Tel: (0277) 233882
Fax: (0277) 233566
Contact: Harry Greenaway

TRANTEC SYSTEMS LTD
Unit 30, Wates Way,
Willow Lane Industrial Estate,
Mitcham, Surrey CR4 4HR.
Tel: 081-640 0822
Fax: 081-640 4896
Contact: Chris Gilbert

TRIPLE E LIMITED
B3 Tower Bridge Business Square,
Clements Road, London SE16 4EF.
Tel: 071-237 6354
Fax: 071-237 7650
Contact: David Edelstein

TUNEWELL TRANSFORMERS LTD
31 Commercial Road,
London N18 1TN.
Tel: 081-807 3671
Fax: 081-345 6770
Contact: Tony Heaney

TURBOSOUND LTD
Star Road, Partridge Green,
West Sussex RH13 5EZ.
Tel: (0403) 711447
Fax: (0403) 710155 Telex: 878723
Contact: Amanda Stormont

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

UNITED KINGDOM DISTRIBUTORS
Rigby Close, Heathcote Industrial Estate,
Leamington Spa, CV34 6TJ.
Tel: (0926) 314878
Fax: (0926) 883120
Contact: Ian Potter

UNUSUAL RIGGING LTD
4 Dalston Gardens, Stanmore,
Middlesex HA7 1DA.
Tel: 081-206 2733
Fax: 081-206 1432
Contact: Adam Wildi

VARI-LITE EUROPE
20-22 Fairway Drive, Greenford,
Middlesex UB6 8PW.
Tel: 081-575 6666
Fax: 081-575 0424
Contact: David March

VESTAX (EUROPE) LTD
19 Haslemere Road, Fernhurst,
Haslemere, Surrey GU27 3EA.
Tel: (0428) 653117
Fax: (0428) 61021
Contact: Rob Peck

VOLT LOUDSPEAKERS LTD
Enterprise House, Blyth Road,
Hayes, Middlesex UB3 1DD.
Tel: 081-573 4260
Fax: 081-573 4260
Contact: David Lyth

VSI CLUBLIFE
116-118 Croydon House, 1 Peall Road,
Croydon CR0 3EX.
Tel: 081-689 2299
Fax: 081-684 8812
Contact: Philip Dinis

W.B. LIGHTING LTD T/A COEMAR (UK)
4 Tenter Road, Moulton Park Industrial
Estate, Northampton NN3 1PZ.
Tel: (0604) 499331
Fax: (0604) 499446
Contact: Roman Walenta

WEMBLEY LOUDSPEAKER CO LTD
Unit 4, Askew Crescent Workshops,
Askew Crescent, London W12 9DP.
Tel: 081-743 4567
Fax: 081-749 7957
Contact: Paul MacCallum

WHARFEDALE LTD
Sandless Way, Crossgates, Leeds,
West Yorkshire LS15 8AL.
Tel: (0532) 601222
Fax: (0532) 600267
Contact: Gary Orell

WHITE LIGHT (ELECTRICS) LTD
57 Filmer Road, London SW6 7JF.
Tel: 071-731 3291
Fax: 071-371 0806
Contact: John Simpson

WHITE LIGHT (NORTH)
Corporation Street, Sowerby Bridge,
Nr Halifax, West Yorks HX6 2QQ.
Tel: (0422) 839651
Fax: (0422) 839773
Contact: John Anderton

WYNE WILLSON GOTTEUER LTD
The Old Mission House, Ide Hill, Sevenoaks,
Kent TN14 6BZ.
Tel: (0732) 75204
Fax: (0732) 75617
Contact: Tony Cottelier

XYLO LTD
35 Britannia Row,
London N1 8QH.
Tel: 071-359 3509
Fax: 071-359 6921
Contact: Tim Davies

YAMAHA-KEMBLE
Mount Avenue, Bletchley, Bucks MK1 1JE.
Tel: (0908) 371771
Fax: (0908) 368872
Contact: Steve Williamson

ZERO 88 LIGHTING LTD
Hart Road, St. Albans, Herts AL1 1NA.
Tel: (0727) 833271
Fax: (0727) 43676
Contact: Freddy Lloyd

International Members

CLAY PAKY SRL
Via Pascoli 1, 24066 Pedrengo (BG) Italy
Tel: 035 663965
Fax: 035 665976
Contact: Pio Nahum

POWER LIGHT PRODUCTIONS LTD
Fabrikmattenweg 8, CH-4144 Arlesheim
Switzerland
Tel: 41 61 701 8228
Fax: 41 61 701 8338
Contact: Nicholas de Courten

PRODUCTION ARTS LIGHTING INC
636 11th Avenue, New York NY10036, USA
Tel: 212 489 0312
Fax: 212 245 3723
Contact: Steve Terry

STRONG INTERNATIONAL INC
4350 McKinley Street, Omaha NE 68112, USA
Tel: 402 453 4444
Fax: 402 453 7238
Contact: Jack Schmidt

WYBRON INC
1096 Elkton Drive, Suite 200,
Colorado Springs, CO 80907, USA
Tel: 719 548 9774
Fax: 719 548 0432
Contact: Robert Gordon

Trade Show '92

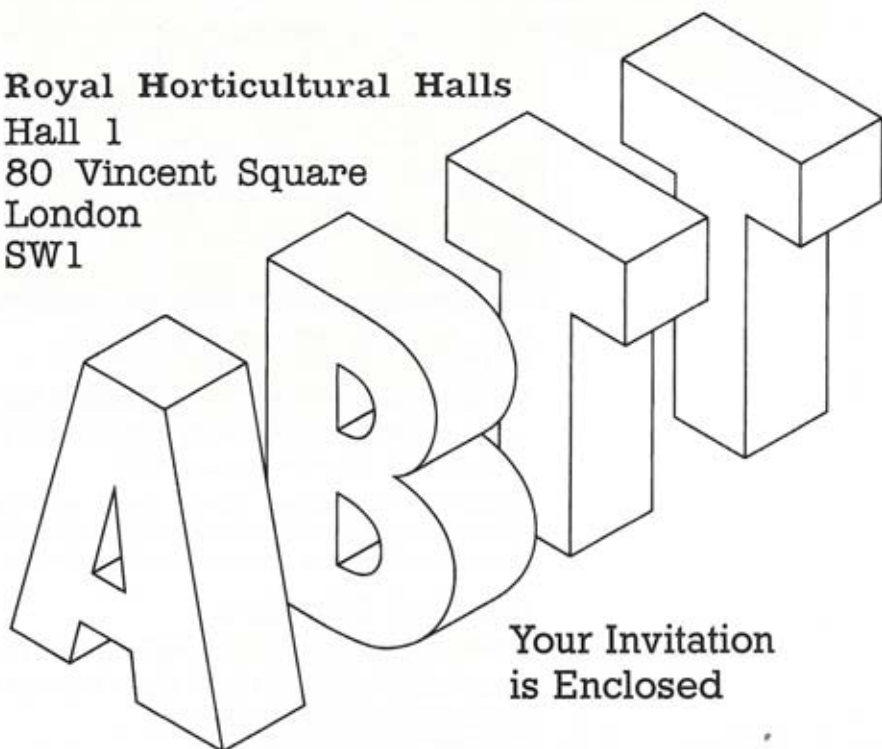
Exhibition of
Backstage
Equipment &
Supplies

Thursday 2nd April
11.00am - 7.00pm

Friday 3rd April
10.00am - 4.00pm

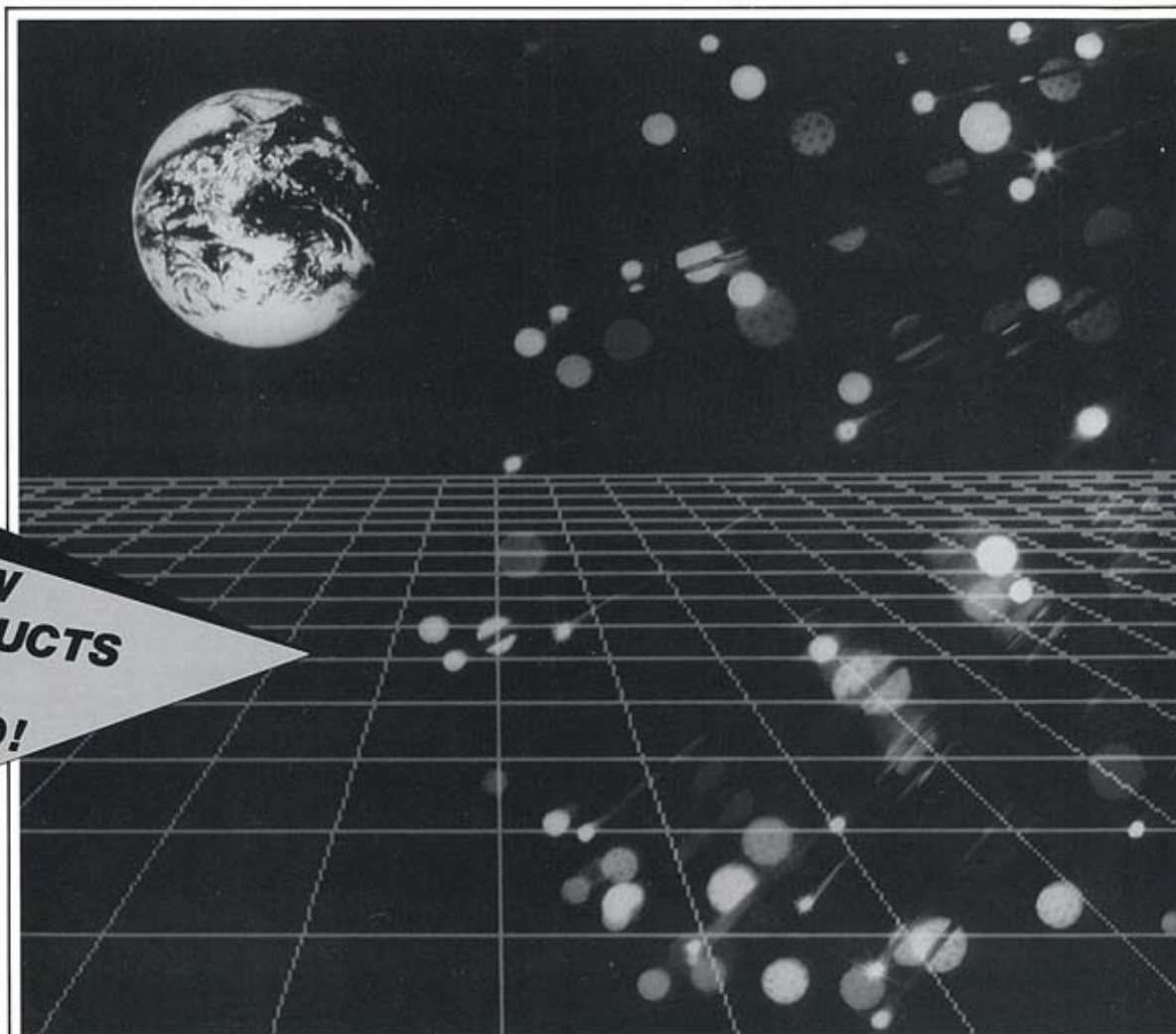
Association of British
Theatre Technicians
4 Great Pulteney Street
London W1R 3DF
Telephone: 071-434 3901

Royal Horticultural Halls
Hall 1
80 Vincent Square
London
SW1



Your Invitation
is Enclosed

WORLD LIGHTING FAIR in TOKYO '92



**COME SHOW
YOUR PRODUCTS
TO
THE WORLD!**

24-26 JUNE 1992

NIPPON CONVENTION CENTER (MAKUHARI MESSE) INTERNATIONAL EXHIBITION HALL

APPROX. 50 MINUTES BY TRAIN FROM TOKYO STATION / 40 MINUTES BY CAR FROM CENTRAL TOKYO AREA /
30 MINUTES BY CAR FROM NARITA AIRPORT

*THE BIGGEST PROFESSIONAL LIGHTING TRADE SHOW FOR THEATER, STAGE, TELEVISION, FILM,
EVENTS AND CONCERTS ETC, IN JAPAN. EXHIBITIONS WILL INCLUDE SPECIALIST LIGHTING
EQUIPMENT AS WELL AS A RANGE OF SPECIAL EFFECTS.*

ORGANIZERS: ZENSHYOKYO

INQUIRIES: WORLD LIGHTING FAIR IN TOKYO '92 INTERNATIONAL OFFICE

ADDRESS: KOMABA NEO-PALACE-501 IKEJIRI SETAGAYA-KU TOKYO 154 JAPAN

PHONE: 03-3706-2001 FAX: 03-3706-7733

ATTENTION: Yoko Yuyama (Ms.)

EQUIPMENT *News*

Hot Solutions

As fire safety regulations become stricter, the use of flame retardant materials in both public and work environments is of paramount importance. Rosco has developed a flame retardant primer, which enables the scenic artist to prime all textiles or wood surfaces to maintain safety regulations for fire protection. Base materials treated with Rosco F.R. White Primer prevent fire spread and conform to BS476 parts 6 and 7. The Primer, which comes ready for use from the bucket, is a matt emulsion paint which can be thinned with water if necessary.

Rosco Flamex C30 is a versatile flame retardant solution for fire protection of man-made and natural textiles and fabrics. Water-based it is odourless and non-crystalline and forms a continuous layer to treat the fabric.

Full technical data sheets are available from Roscolab Ltd in London, telephone 081-659 2300.

Electronic Ballast



Enersave is a range of energy-saving electronic ballasts that has recently been introduced by Acma Marketing, and manufactured by their parent company in Singapore. The units are fully approved for use in the UK and designed to run on both argon and krypton linear and PL lamps, say Acma.

For further details contact Acma Marketing in Petersfield, telephone (0730) 894455.

Strand Launch Theatrical Luminaires

New stage lighting luminaires have been added to Strand's range, and old favourites have been revived and upgraded for 1992. The popular Cantata range has been expanded by the addition of two new condenser-optic profiles. Named Cantata Optique Profiles, the spotlights cover a wide range of beam angles in just two versions: the 8/17 degrees and the 15/44 degrees.

A compact floodlight, the Mini Flood, has been launched, aimed at both the architectural and stage lighting markets. This uses a 78mm double-ended linear lamp, available in 100W, 150W and 250W ratings. The floodlight comes complete with wire mesh, safety glass and a colour filter frame, but the lamp is not included.

Strand's Minim F and PC, withdrawn from production last year, are now back with an up-to-date specification. A new rear handle incorporates the cable entry and clamp, and wiring has been upgraded to meet the latest European safety standard.

The Prelude has been significantly improved by upgrading the specification of the lenses, by adding lens-cleaning access, improving the durability of the power socket and adding a new design of tilt and lock. The new lenses used in Prelude give a whiter light and improved focusing. Fresnel and PC versions also benefit from improved performance and are being upgraded with the new power socket and tilt clamp.

For further information contact Strand in Isleworth, telephone 081-560 3171.

Peavey Launch Unity SM Series

Peavey have recently launched the Unity Series 1000SM and 2000SM mixers. The SM 2000 offers channel expansion capability in the form of eight additional unbalanced line level inputs that may be assigned and mixed into the master stage as eight additional channels. Each input features a 1/4 inch phone jack, limit LED, mute switch, pan control, and a level control. There are also master levels for left, right and monitor for the overall level of the eight additional inputs. The SM 1000 offers the same features with a six channel line mixer expansion.

Effects returns may be mixed back into the monitors via the 'effects to monitor' control in the master section, and effects return panning is provided for the mains. The mixers are also equipped with tape outputs and tape inputs with level control, and these patch points are accomplished with RCA jacks. The Unity Series 1000SM is available in 8 and 12 channel versions and the 2000SM is offered in 12 and 16 channels.

For further details contact Peavey in Northants, telephone (0536) 205520.

Supermick Twin Head

Supermick has developed a twin head version of its Serious Mark 1 mist machine. The cracked oil machine, launched last year in a single head version produces an even amount of mist over the stage set. Supermick told L+S that the mist is 'environmentally friendly' because it doesn't involve burning or heating elements to produce the smoke.

Both the single and twin head versions are available for hire from the company, with an optical remote control. For more information contact the company in London on 071-221 2322.

Kremesa Upgrade

Kremesa's CR1AL pinspot has been upgraded in its new Mark 2 form to incorporate Kremesa's own Spotlux sealed reflector unit coupled with an M32 12v 50 watt lamp, and a captive mains lead is now fitted as standard.

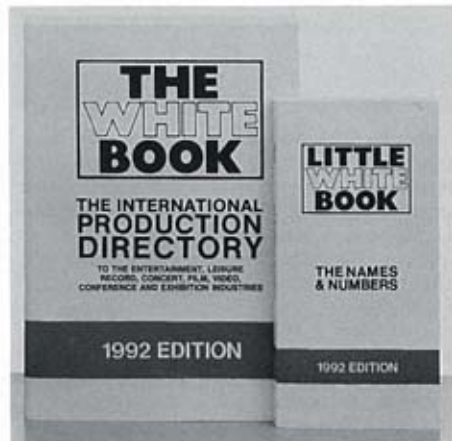


Claimed advantages include a low lamp replacement cost, a 2,000 hour rated lamp life and a higher light output than from a normal sealed beam Par 36 30 watt lamp but with similar beam pattern.

Further information is available from Avitec, Kremesa's UK distributors, telephone Hitchin (0462) 458961.

1992 White Book

The 1992 edition of The White Book has recently been published. The ninth annual compilation of this international production directory has more than 35,528 entries and includes several new categories. In the midst of all that lot, on page 566, you'll discover all you need to know about PLASA and Lighting and Sound International. It's also complemented, once again, by The Little White Book, a comprehensive pocket-sized reference of every UK entry's telephone number.



The publication is available from The White Book, P O Box 55, Staines, Middlesex TW18 4UG. For further information contact the editor on (0784) 464441.

Yamaha Launch at AES

With the launch of the DEQ5 digital equalizer at this year's AES Show in Vienna, Yamaha have added to their line of digital pro-audio products.

The 2u rack is operable either as a dual channel, one-third octave graphic equalizer or a six band parametric equalizer, and has a 1,300 millisecond delay, adjustable in 20 microsecond increments.

For the processing of analog signal, the wide dynamic range (more than 10dB) is maintained by the use of 19-bit delta-sigma A/D converters with reduced low level distortion, as compared to PCM techniques. The output stage employs 20-bit D/A conversion, with a peak level of +24dBm. Analog inputs and outputs are all XLR, electronically balanced, while digital ins and outs conform to both AES/EBU and Yamaha Y2 formats. Programming is via an LED screen that graphically displays the eq curve, together with a text display of utility menus. Up to 40 user memories are available for storing eq settings and these may also be transferred to another DEQ5 or stored to a computer via Midi or RS-485.

Yamaha also launched the MC0411 live reinforcement consoles, to replace the MC04 series. The consoles offer four primary mix-groups plus stereo, and four auxiliary send buses. The 4-band eq section is sweepable on both mid-band pots and features a switchable 80Hz high pass filter. All channels are equipped with XLR and 1/4" phono inputs and phantom power. Two stereo auxiliary returns and two stereo tape inputs accommodate inputs from effects processors. Two mix-matrices have been included, normally the preserve of Yamaha's high end consoles.

Further new products launched at AES include the Q1131, 31 band single channel graphic equalizer, and the D2040 digital channel divider.

For further details on all these products contact Yamaha in Milton Keynes, telephone (0908) 366700.

Strand Resource Pack

An 'all you need to know about lighting' resource pack aimed at school teachers and students has been launched by Strand Lighting. It follows the move by education authorities in Britain to put lighting on the exam syllabus, as part of drama and theatre arts courses. Up to 8,000 schools throughout the UK are being targeted initially, with plans to extend the scheme to Canada, Australia and other countries later. It is also felt that amateur theatrical companies will find the pack of value.



Strand's Education Resource Pack contains a series of 15 posters providing graphic illustrations for separate subjects which are covered in a detailed booklet. Subjects range from the development of stage lighting over the years, to descriptions and functions of modern luminaires, control and dimming systems, through to creation of light plots.

In addition a lighting design kit provides a step-by-step guide to creating lighting plans. The resource pack also includes a professional-quality lighting stencil with the main symbols needed for a 1:25 scale lighting plan and a quality 0.25mm Staedtler 710 stencil pen.

Further detail on the pack are available from Strand Lighting in Isleworth, telephone 081-560 3171.

Professional Sound Corporation

California-based Professional Sound Corporation recently introduced a number of new products.

The MilliMic lavalier microphone is a high output mic with a low inherent noise floor and shielding against magnetic interference. The company's RF Booster Amp has been designed to allow RF transmission of audio over greater distances. It operates over a wide frequency range from 1MHz-250MHz. A 300mW output is supplied from any standard 50mW input. An LED functions as a low voltage indicator.

The PSC DigiSlate offers three high intensity, sunlight-readable seven segment displays. The counter display can be controlled in either automatic or manual mode. The unit includes an internal reference oscillator and slate microphone. In situations where a DAT machine is used, the DigiSlate allows interrupting audio without sacrificing one of the DAT inputs for this purpose.

Further information on these and other products is available from Professional Sound Corporation in California, telephone (818) 760 6544.

G E Kolorarc MBI-T

G E Thorn have extended their Kolorarc family of metal halide discharge lamps with the introduction of the MBI-T 250W.

Kolorarc was developed out of Arcstream technology and operates on standard SON control gear. It has a clear tubular outer envelope and a small arc which facilitates accurate optical control. With high lumen output, it has a colour rendering index of Ra70 and a neutral white appearance (4200K). It is available in 250W (and 400W by April) and has a rated life of 6,000 hours, according to the company.

For further information contact G E Thorn in Mitcham, telephone 081-640 1221.

E.S.P. with R.V.E.

Herts-based Events, Services & Productions (E.S.P.) have recently been appointed the sole UK distributors for the R.V.E. range of dimming equipment which has recently been extended with the addition of new products (see SIEL report).

The E.S.P. Mini Pack is a small portable dimmer available in 6 x 3kW, 6 x 2kW or 3 x 5kW versions. A small rack-mounted dimmer, the E.S.P. Compact is available in 12 x 3kW, 12 x 2kW or 6 x 5kW versions. E.S.P. Touring Racks are 12 pluggable HDS double dimmer modules, flight-cased and giving 24 x 3kW of power. Access Pro is a compact console with 96 control channels and completing the line-up is the range of Diafora colour changers.

Further details are available from E.S.P. in Letchworth, telephone (0462) 482411.

PICBOX Real-Time Videowall Control

Electrosonic has released a new addition to the PICBLOC videowall display range. PICBOX is a real-time intelligent hand control, which offers a wide range of pre-programmed videowall effects. In addition to its range of standard stand-alone effects, each with independent speed settings, PICBOX is also supplied with a pre-defined random show of effects that can be reconfigured by the user and saved to loop continuously - again on a single command.



Designed principally to work with Electrosonic's PICBLOC videowalls, the unit can be configured to control all or part of a videowall, and can also be used to provide synchronised effects control. Acting as a simple tone generator and reader, cues can be recorded onto the audio track of even the simplest low-cost VHS or SVHS video tape and read back into PICBOX for cue sync.

For more information contact Electrosonic in Dartford, telephone (0322) 222211.

Microstar Metal Halide

The Microstar surface-mounted flood is suitable for use when high ambient light levels need to be overcome, wide areas need illuminating from a distance or when an even flood of powerful white light is needed, according to Microstar's manufacturers, Microlights.

The unit is lamped with single-ended metal halide capsule lamps of either 70W or 150W output, with a choice of colour temperatures.

For more information contact Microlights in Marlborough, telephone (0672) 515611.

Sachtler On-Board Lamps

As a follow-on to the Reporter Open-Faced Handlamp series, Sachtler have turned their attention to the cameraman who needs an on-board camera or 'eye light' and come up with two even smaller profiles than those previously offered, and which are now available from OpTex. The Reporter 20H and 50H are ultra-lightweight at 315g/11.1oz complete. The integrated reflector is designed to produce a high output and even light distribution through the combined diffuser/safety glass, and is continuously focusable.

Further details are available from OpTex in New Barnet, telephone 081-441 2199.

Uptown System 600M

New from Uptown Automation, System 600M is a MIDI-based moving fader controller that interfaces with screen-orientated mixers to create an additional hands-on facility for digital mixing and editing systems. System 600M is self-contained and consists of eight moving faders with associated electronics in a desk-top enclosure. Each system has MIDI in, out and through ports. Two systems connected together will provide the user with 16 controllers in all.

For further information contact Audiomation in Co. Durham, telephone (0207) 282880.

Belazaire Lamplighter

Belazaire Trading, the Milton Keynes lighting control specialists, have launched a totally new programmable lighting control which is both designed and made in the UK. The basic concept behind the Lamplighter control was that it had to be simple to install, and when installed it should blend with traditional interior fittings. To this end, all the programming controls which do not need frequent attention are located behind the front plate, available in patterns to match most switchplate designs.

Four fully programmable scenes are provided along with full on and off. With the exception of full on, all other settings have adjustable fade rates.

Remote dimmers are utilized and no local power point is required for the control panel, which is powered via the control line from the dimmers.

For further details contact Belazaire in Milton Keynes, telephone (0908) 564464.

Radio Mics from Toa

Fully-approved by the Department of Trade and Industry, a range of VHF high-band radio microphones have been introduced into the UK by Toa Electronics.

The choice of either a high performance Toa head or a Shure SM58 head for the new WM-280 vocal-use, hand-held model is a major feature of the range. According to Toa, performers will benefit from a system that has been designed with no external aerials, allows up to 12 hours use from a single battery and has a 'robust' metal casing.



Products included within the range are the WM-370 compact lavalier bodypack transmitter, the 19" WT-870 rack-mountable diversity tuner module, the WT-770 non-diversity two channel system and the WT-780 single channel receiver. Microphones include the WM-280 dynamic model (with original Toa head), the WM-290 dynamic model (with Shure SM58 head) or the WM-270 electret condenser microphone. A range of optional accessories include tuner panels, antennas and rack-mount adapters.

For further details contact Toa in Brentwood, telephone (0277) 233882.

INTERNATIONAL DIRECTORY

World-wide contact information for import/export, concert touring, exhibitions, etc.

AUSTRALIA

L.S.C. ELECTRONICS P/L
4-6 Junction Road, Surrey Hills
Victoria, AUSTRALIA 3127
Tel: (61) 3 836 9111
Fax: (61) 3 830 5187

AUSTRIA

SYLVANIA
Special Products Group
Licht GmbH
Tel: (49) 9131 996 222 Fax: (49) 9131 996 418
MTEC Vertriebsges.m.b.H
Tel: (43) 7242 60 860 Fax: (43) 7242 60 740
LTV Lampen u. Leuchten Vertriebsges.m.b.H.
Tel: (43) 222 83 81 27 Fax: (43) 222 85 87 43

litestructures
Astralite Bilite Quatralite Minilite
LEMAN TEL 813 59 90

LUDWIG PANI
A1070 Vienna, Kandelgasse 23
Tel: (1) 932462 Fax: 526 4287
Range of follow-spots and projectors
Exclusive Agent for Strand

BELGIUM

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
P.P.V. Lighting N.V.
Tel: (32) 2 648 70 45 Fax: (32) 2 648 69 97
Pro-Light
Tel: (32) 2 216 04 66 Fax: (32) 2 216 05 44

litestructures
Astralite Bilite Quatralite Minilite
LA ROY B.V.B.A. TEL 091 86 12 99

EVER RADIO VIOLETTE
Rue de Ribaucourt, 154-156, 1210 Brussels
Tel: (32) 2 428 31 00 Fax: (32) 2 428 21 65
Disco and stage equipment - Import and Export

Trilite
Tel (02) 4283100 Fax (02) 4282165

CANADA

Trilite
Tel (613) 836 5856 Fax (613) 836 6491

DENMARK

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
BICO A/S
Tel: (45) 42 84 54 45 Fax: (45) 42 84 20 55

FINLAND

EASTWAY
SHOW SERVICES OY LTD
ATOMITIE 5 B HELSINKI
Tel: 358-0-503 1022 Fax: 358-0-503 1023
Professional lighting and sound equipment
and services in a place you never thought
they would appear. Thomas, Sky-Tracker,
Celco, Avo, Verlinde, Yamaha, EV, JBL, etc.

TFP MARKKINOINTI OY
Import and Export of Lighting and Scenic
Equipment. Exclusive distribution in Finland for
Jands, CCT, Rosco and Tomcat. Always interested
in new product ranges for theatre, concert and
television.
Contact Juha Ihanamaki, telephone INT
+31-143933. Fax INT+31-133077. Address:
Hatanpääntie 4A, 33100 Tampere, Finland

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Industriepark B-3300 TIENEN
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45

litestructures
Astralite Bilite Quatralite Minilite
COH OY TELEPHONE 931 133 038

FRANCE

Clay Paky and Pulsar Sarl
10 Avenue du Fresno, 14760 Bretteville sur Odon
Tel: (31) 741001

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Loplux
Tel: (33) 1 34 10 43 43 Fax: (33) 1 34 10 49 63
L.T.M.
Tel: (33) 1 39 98 44 50 Fax: (33) 1 39 98 44 99
ESL
Tel: (33) 67 69 27 17 Fax: (33) 67 69 00 89
Vollirage
Tel: (33) 1 30 86 21 75 Fax: (33) 1 30 86 21 77

VARI*LITE
VARI-LITE FRANCE
Tel: (33) 1 45 07 97 09 Fax: (33) 1 45 07 96 79

litestructures
Astralite Bilite Quatralite Minilite
S.E.D. FRANCE TEL 27 25 48 38

coemar
TEL : 27.21.12.22 - FAX : 27.21.11.30

EVER Diffusion
TEL : 27.21.12.22 - FAX : 27.21.11.30

High End
SYSTEMS
TEL : 27.21.08.18 - FAX : 27.21.08.19

Trilite
Tel 20 31 85 06 Fax 20 78 18 37

GERMANY

Clay Paky and Pulsar Vertriebs GmbH
An Der Taille 26, 4790 Paderborn
Tel: 05251/409051 Fax: 05251/409931

litestructures
Astralite Bilite Quatralite Minilite
HAERLE LICHTTECHNIK TEL 0 73 91 60 59

VARI*LITE
VARI-LITE GERMANY
Tel: (49) 221-582088 Fax: (49) 221-5801979

The complete range
of professional
lighting equipment
for: Stage, Touring,
Discotheque,
Trade Shows and
Exhibitions.

LMP
Lichttechnik
Gildestraße 55
W-4530 Ibbenbüren
Germany
Telefon 05451 59000

AMPTOWN LICHTTECHNIK GmbH
Wandsbeker Str. 26, 2000 Hamburg 71
Tel: (49) 40-64600440
Fax: (49) 40-6412503

SYLVANIA
Special Products Group
Licht GmbH SPSG
Tel: (49) 9131 99 62 22 Fax: (49) 9131 99 64 18
Steffens Lighting
Tel: (49) 4031 13 35 Fax: (49) 31 72 96
Coemar Teatro
Tel: (49) 731 60 12 05 Fax: (49) 731 62 85 2
Eckert Bühnenlicht
Tel: (49) 202 59 20 58 Fax: (49) 202 59 15 03
L.T.M. GmbH
Tel: (49) 221 49 10 23 Fax: (49) 221 49 10 25
Zitz Concerts GmbH
Tel: (49) 221 58 30 31 Fax: (49) 221 58 43 99
Panther GmbH
Tel: (49) 89 613 10 07 Fax: (49) 89 613 10 00
Feldmann
Tel: (49) 8142 53 037 Fax: (49) 8142 86 97
Kobold Licht GmbH
Tel: (49) 8171 70 81 Fax: (49) 8171 20 367
LMP
Tel: (49) 5451 59000 Fax: (49) 5451 590059

VARI*LITE
VARI-LITE FRANCE
Tel: (33) 1 45 07 97 09 Fax: (33) 1 45 07 96 79

litestructures
Astralite Bilite Quatralite Minilite
LMP LICHTTECHNIK TEL 05451 59000

TOUR SERVICE LICHTDESIGN

Hanse Str. 9,
D-4800 Bielefeld 11
Tel: 0 5205 22 800 Fax: 0 5205 22 889
Concert, stage, TV and industrial lighting
Design and Production Services
Representative of PanCommand systems

Trilite
Tel (0221) 534081 Fax (0221) 534083

HONG KONG

VARI*LITE
VARI-LITE HONG KONG
Tel: (852) 715-7878 Fax: (852) 761-1593

ENGINEERING IMPACT LIMITED
6/F, Blk 6, Tien Chu Ctr.
1E Mok Cheong St. Kowloon
Tel: (852) 711-0222 Fax: (852) 761-0633

ITALY

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Ari Italia
Tel: (39) 6 737 07 37 Fax: (39) 6 723 15 41
Tecnitron Elettronica
Tel: (39) 831 39 21 36 Fax: (39) 831 39 28 41
Teclumen
Tel: (39) 376 77 92 00 Fax: (39) 77 93 83

litestructures
Astralite Bilite Quatralite Minilite
SPOTLIGHT S.A.R.L. TEL 39 2 714078

TEATRO
Teatro Sri, via Inghilterra 2
46042 Castel Goffredo (MN), Italy
Tel: +39 (0)376 780702
Fax: +39 (0)376 780888
Manufacturers of stage lighting, Profile, fresnel,
PC, flood, cyclorama, followspot
"With a touch of Italian elegance"

Trilite
Tel (031) 773539 Fax (031) 773798

JAPAN

litestructures
Astralite Bilite Quatralite Minilite
H.I.T.O TEL 81 33 667 3268/9

NETHERLANDS

SYLVANIA
Special Products Group
Sylvania N.V. SPSG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Ultrax B.V.
Tel: (31) 2503 41 724 Fax: (31) 2503 41 220

LIGHTING SOUND RIGGING

Flashlight®

Flashlight Utrecht Holland B.V.
Gietijzerstraat 5,
3534 AV, Utrecht
Tel: 030-44 48 42
Fax: 030-44 76 06



Tel (013) 638585 Fax (013) 638435

JANSEN & JANSEN



light sound & rigging

Isolatorweg 36, 1014 AS
Amsterdam-Sloterdijk, Holland
Tel: (32) 20 6 821 821
Fax: (32) 20 6 828 326

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
STAGE TELEPHONE 03402 45780

NEW ZEALAND

SELECON NEW ZEALAND

40 Drake Street, Freemans Bay, Auckland 1
Tel: (64) 9 792 583 Fax: (64) 9 770 116
Manufacturers of high quality stage and display
luminaires - Zoomspots; fresnels; PC; Cyc; floods.
LV and metal halide display spots. Distribution in
Australia and Asia. Rental and production; project
design and management

NORWAY

SYLVANIA

Special Products Group

Sylvania N.V. SPSPG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Lars Farnes A/S
Tel: (47) 2 16 29 30 Fax: (47) 2 16 47 39



litestructures

Astra/lite Bilite Quatra/lite Mini/lite
AVAB NORGE A/S TEL 47 2 11 30 30

PORTUGAL

SYLVANIA

Special Products Group

Sylvania N.V. SPSPG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Sylvania Electronica LTDA
Tel: 351.14 18 62 17 Fax: 351.14 18 69 25



SINGAPORE

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
STAGE PROFESSIONAL TEL 2963939

SPAIN

SYLVANIA

Special Products Group

Sylvania N.V. SPSPG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Grau Luminotechnica
Tel: (34) 9 3 32 57 611 Fax: (34) 9 3 42 63 029
Kremesa
Tel: (34) 9 1 41 62 100 Fax: (34) 9 1 41 32 814



Tel (1) 3270966/1536 Fax (1) 3049165

**VARI*LITE
VARI-LITE SPAIN**

Tel: (34) 1 470 23 30 Fax: (34) 1 479 58 25

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
SPOTLIGHT S.A. TEL 34 3 4008117

SWEDEN

**VARI*LITE
VARI-LITE SCANDINAVIA**

Tel: (46) 8 64 44418 Fax: (46) 8 70 20016

AVAB

Västra Hamngatan 1,
411 17 Goteborg, Sweden
Tel: (46) 31 179240

SYLVANIA

Special Products Group

Sylvania N.V. SPSPG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Teaterteknik AB
Tel: (46) 8 640 92 90 Fax: (46) 8 640 93 94



litestructures

Astra/lite Bilite Quatra/lite Mini/lite
TEATERTEKNIK A.B. TEL 08 40 92 90

SWITZERLAND

POWER LIGHT

Fabrikmattenweg 8, CH-4144 Arlesheim
Tel: (41) 61 701 82 28 Fax: (41) 61 701 8338
Equipment rental and services. State-of-the-art
lighting equipment for TV, stage and concert
productions, exhibitions and product launches
throughout Europe: Xenon Trouters, Panis, Avo,
Celco, Thomas, Verlinde, Strand, CCT,
Sky Trackers and searchlights
At the heart of Europe!

SYLVANIA

Special Products Group

Sylvania N.V. SPSPG
Tel: (32) 16 80 03 66 Fax: (32) 16 81 89 45
Licht GmbH
Tel: (49) 9131 99 62 22
Fax: (49) 9131 99 64 18



litestructures

Astra/lite Bilite Quatra/lite Mini/lite
A.S.ELECTRONICS TEL 061 35 22 20

UNITED KINGDOM

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
CEREBRUM LIGHTING TEL 081 949 3171

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
LITESTRUCTURES TEL 0924 200622

SYLVANIA

Special Products Group

Lighting Ltd SPSPG
Tel: (0274) 595921 Fax: (0274) 580632
Action Lighting
Tel: 081-965 6800 Fax: 081-965 0950
Lighting Technology Group
Tel: 081-965 6800 Fax: 081-965 0950
Valliant Electrical
Tel: 071-736 8115 Fax: 071-731 3339
Specialist Lamp Distributors
Tel: 061-873 7822 Fax: 061-873 8089
AC Lighting
Tel: (0494) 439076 Fax: (0494) 461024
DC Lighting
Tel: (0235) 770715 Fax: (0235) 770720
Technical Lamps Ltd
Tel: 081-979 6652 Fax: 081-979 9007
Primarc
Tel: (0734) 596777 Fax: (0734) 505964



litestructures

Astra/lite Bilite Quatra/lite Mini/lite
Tel (0582) 411413 Fax (0582) 400613

USA



New York
Tel: (914) 942 0075 Fax: (914) 942 0099
Orlando
Tel: (407) 855 8060 Fax: (407) 855 8059

litestructures

Astra/lite Bilite Quatra/lite Mini/lite
NESS IMPORTS TEL 201 646 9522

TMB ASSOCIATES

PRODUCTION SUPPLIES & SERVICES

2915 Floyd Street, Burbank
California 91504
Tel: 818-842-9652
Fax: 818-842-1064



Staging, Lighting and Support Systems
Serving your tour and fabrication
needs in the USA
Tel: (915) 686-7029
Fax: (915) 683-5426



STRONG INTERNATIONAL, INC.
FOR THE WORLD'S BEST FOLLOWSPOTS
4350 McKinley Street - Omaha - Nebraska 68112
Tel: 402-453-4444 Fax: 402-453-7238

THE SCROLLER

SETTING THE STANDARD FOR ROLLING COLOUR CHANGERS™

WORLDWIDE SALES:
Wybron US 818/880-9329 Fax: 818/880-9107
AC Lighting UK 0494-446-000
Fax: 0494-461-024



Tel (516) 249 3662 Fax (516) 420 1863

**TO ADVERTISE
IN THIS
SECTION RING
ALISON HUNT ON
(0323) 642639
OR FAX
(0323) 646905**

**CONDITIONS FOR ADVERTISEMENT IN
LIGHTING+ SOUND INTERNATIONAL**

The Publishers reserve the right to refuse any advertisement - whether pre-paid or not - and without reasons being given for any such refusal. The publishers accept no liability for any loss or damage by error or inaccuracy in the printing of any advertisement.

DIRECTORY

Lighting + Sound
Equipment Sale/Hire
Installation and Design

TSL

Theatre Sound & Lighting
(Services) Ltd

U.K. DISTRIBUTORS
FOR

Clear-Com

Intercam Systems

67 DRURY LANE,
LONDON WC2B 5SP
Phone 071-836 7877/8

BDS CASES

Designers and manufacturers
of flight cases

BDS Tel: 061 873 8181
Northern Fax: 061 876 6599

LIGHTING HIRE SALES SPECIAL F/X

STAGE CONTROL LTD.

STATION PARADE,
WHITCHURCH LANE,
EDGWARE, MIDD. HA8 6RW

TEL: 081 952 8982
FAX: 081 951 4178
TELEX: 924896

LIGHTING HIRE & SALES

Philip L. Edwards
(Theatre Lighting)

5 Highwood Close, Glossop,
Derbyshire SK13 9PH.
Telephone: 0457 862811.

The Fibre Optic Lighting People

We manufacture and distribute all fibre optic lighting materials, Paryles harnesses and conduits, Purflex polymers, light sources, theatre curtain washers, spot ball and buller lenses, side emitting fractured fibres, ceiling fittings and large bore fibre optics.

Examples of our fibre optics may be viewed at our Chiswick showroom, from subtle backgrounds to fibre optic fireworks. Leaflets available.



Trade & Export call PAUL RAYMOND
For Opti Projects Ltd

Unit 9 The Bell Industrial Estate
Cunnington Street, Chiswick Park, London W4 5EP
Telephone: 081-995 5179
Fax: 081-994 1102 Telex: 933718 PAROP G

DONMAR Ω

ELECTRICAL CONTRACTING
LICENSING CERTIFICATION
NATIONWIDE SUPPLY & SERVICING:
ARRI, GREEN GINGER, PULSAR
STRAND LIGHTING & ZERO 88

Technical Support Mon-Sat until 23.00 hrs.

DONMAR LTD. 54 CAVELL STREET LONDON E1 2HP
INSTALLATION & SERVICE 071-790 6624
SALES 071-790 1166 FAX 071-790 6634

NICEIC
APPROVED
CONTRACTOR

Dial Sound & Lighting

Wholesale Distribution for

CITRONIC BOSE RAMSA
SOUNDSHOP OPTIKINETICS zero 88
ROSCO coemar 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

LUFF

LIGHT & SOUND

SALES, HIRE & SERVICE FOR
LEADING BRANDS OF
TECHNICAL EQUIPMENT
FOR THE PROFESSIONAL
& AMATEUR THEATRE.

081 659 7770

Kangley Bridge Road, Sydenham, London SE26 5AQ



FUTURIST LIGHT & SOUND

HIRE
0924
455586

SALES
MAKES
AND
SERVICES AGENT
Strand Lighting

SERVICE
0924
468183

HOYLE HEAD MILLS,
NEW STREET
EARLSHEATON, DEWSBURY
WEST YORKSHIRE. WF12 8JJ

NORTHERN LIGHTS

Sound & Lighting

Distributors

Trade representation for

DATA DISPLAY
OPTIKINETICS
POWERDRIVE
ANYTRONICS
LE MAITRE
MULTIFORM
FABTRONIC
ZERO 88
PULSAR
AVITEC
CLOUD
SHURE
MODE
ICE

89 Scottforth Road, Lancaster
Tel: (0524) 845584

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: 071-582 3600 Fax: 071-582 4779
Telex: 935639 GOBOCO G

ANYtronic

manufacturers of
high quality:-

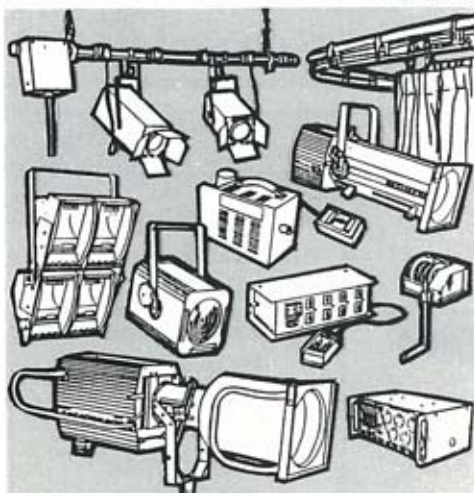
- ★ Strobes
 - ★ Lighting Control Equipment
 - ★ Amplification
- trade & export
enquiries most
welcome

Anytronics Limited
Units 5 & 6 Hillside
Industrial Estate
London Road, Horndean
Hants PO8 0BL, England

Tel: (0705) 599410
Fax: (0705) 598723

CCT

FOR ALL YOUR STAGE EQUIPMENT NEEDS...



- Complete range of stage lighting
- Control systems
- Colour change
- Optical effects
- Stage equipment
- Spot bars
- Rigging
- Stage curtains
- Maintenance & Engineering services
- Mobile service teams

HIRE & SALES

4 Tudor Court, Brighton Road,
Sutton, Surrey SM2 5AE

Telephone: 081-770 3636 Fax: 081-643 9848

ELTEC

Drama Lighting Control Systems

Now made by

THEATRE CRAFT

Phone 051-334 0831

For list of stockists

The Professional People

Lighting sales and hire to the Entertainment, Conference, Exhibition and Leisure Industries. From Sales Conference to Car Launch, Fashion Show to Exhibition Stand. Contact the specialists in lighting.



MUSHROOM LIGHTING

76 Tenter Road, Moulton Park Industrial Estate,
Northampton NN3 1AX

Telephone: (0604) 790900 Facsimile: (0604) 491118

BOB MASSEY ASSOCIATES

Technical Theatre
Courses, Advice, Planning, Design
and Consultancy

9 Worrall Avenue, ARNOLD
Nottingham NG5 7GN
Tel/Fax 0602 673969



LIGHTEC ELECTRONICS

MANUFACTURERS AND DISTRIBUTORS OF LOW COST QUALITY LIGHTING EFFECTS

DEALERS REQUIRED THROUGHOUT EUROPE

LIGHTEC ELECTRONICS

CHURCH ROW, PRESTON
LANCASHIRE
TEL AND FAX:
0772 883864

MICO

LIGHTING

The specialist for LAMPS used in the THEATRE and ENTERTAINMENT industries.

Excellent Trade terms available.

Mico Lighting Ltd.
Troydale Lane, Pudsey,
Leeds, West Yorkshire.

Telephone: (0532) 567113
Fax: (0532) 572358
Telex: 556469 (MICO G)

TO ADVERTISE IN THESE PAGES
FAX (0323) 646905

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) 722468
Hire and Sales Northwest:
051-334 8991

DC LIGHTING LTD
UNIT 9, W+G ESTATE
EAST CHALLOW
WANTAGE
OXON OX12 9TF
TEL: (0235) 770715
FAX: (0235) 770720

TRAFALGAR LIGHTING LTD.

081-443 4960

LIGHTING
SALES-HIRE
SECONDHAND KIT
BOUGHT & SOLD

081-443 4960

HIRE AND SALE
Of Sound, Lighting and Effects
IN THE MIDLANDS

Central Theatre Supplies

021 778 6400

HOWARD EATON LIGHTING LIMITED

DESIGN AND MANUFACTURE OF SPECIALIST LIGHTING EQUIPMENT and EFFECTS

LIGHTING DESIGN AND CONSULTANCY

DIGITAL DIMMING SYSTEMS

Telephone: (0273) 400670
Fax: (0273) 401052



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

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: 081-743 4567

Fax: 081-749 7957

NIGHT FLIGHT

Sound and Lighting

THE BIG ONE IN SCOTLAND

Installation, Design,
Hire, Repair and Service
0389-79261

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 Glasgow 041-440 1771
(Fax 031-553 3296) (Fax 041-445 4406) *

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

081 560 3171

For annual advertising rates in the directory section of **LIGHTSOUND International** Telephone (0323) 642639

SMITHFIELD ELECTRONICS



LIGHT & SOUND SYSTEMS SALES & INSTALLATION

As well as being U.K. distributors of Matamp, McGregor Amplification, Scott Sound Systems, Labtek and Starlight we carry an extensive stock of equipment from the ranges of most major manufacturers

SMITHFIELD ELECTRONICS
3 Ermine Road, Hoole, Chester CH2 3PN
Tel: (0244) 349158 (0244) 349062
Fax: (0244) 347331

VILLA AUDIO

Professional Systems House

THE COMPLETE PRO-AUDIO SERVICE

Hire

EV Deltamax concert system, Bi-Amped monitors, Soundtracs boards. Large dry hire stock.

Installations

Theatre, Clubs, Churches, Hotels

CHELMSFORD
(0245) 361694

POWER RENT

GENERATORS-CABLE TRANSFORMERS

Hire or Sale—New or Used
1 to 3000 KW-50/60 Hertz

Silent Sets—Mobile—Multi Voltage
24 hr. Emergency Service Worldwide
Depots throughout UK and USA

Main Depot:

Telephone: (0304) 813555

Telefax: (0304) 813502 Telex: 965324 Power G

Specialist Outside Engineers

LIVE AID U.K. & U.S.A. • GENESIS 1987 EUROPEAN TOUR
AIDA EGYPTIAN OPERA • RUSH U.K. TOUR 1988
BRUCE SPRINGSTEEN EUROPEAN TOUR 1988

Over 40 years' experience in
ENTERTAINMENT POWER SUPPLY

THE COMPLETE POWER SERVICE GROUP

"Our name speaks for itself"

STARDREAM



S.A.V. LIMITED
AUTHORISED WHOLESALE DISTRIBUTORS FOR

ND

zero 88

PULSAR

SONY

OPTIKINETICS REVOX

J E M

POWER DRIVE

Party House, Mowbray Drive,
Blackpool Lancs.
Tel.: (0253) 302602 Fax.: (0253) 301000

TOA
LeMaitre

Hill



LIGHTING

HIRE
DESIGN
ENGINEERS

London 081-891 4755



837 Garratt Lane
London SW17 0PG
Tel: 081-944 1400
Fax: 081-944 0141

- ★ Sales
- ★ Service
- ★ Hire
- ★ Design
- ★ Manufacturing
- ★ Installation
- ★ Consultancy

"Experts in Sound and Light"

LHS

Leslie Hire & Sale

For Stage and TV Lighting and Stage Equipment, phone

081 871 5132

L.H.S. Limited, The Business Village, Broomhill Road,
Woodsword, London SW18 4JG.
Telex 917003 LPCG

PENN TRUSS
PENN FABRICATION



Penn, Tyne & Wear

Tel: 091-416 1717

Fax: 091-419 3715

LIGHT & SOUND Productions

EQUIPMENT RENTAL & SERVICES

6 Vine street, St. Helier,
Jersey, Channel islands.
Tel. 0534 78351
(0860 740584)

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: 071-582 3600 Fax: 071-582 4779
Telex: 935639 GOBOCO G

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

LASER GRAFIX

THE CREATIVE FORCE IN LASERS

UNIT 15, ORCHARD ROAD
ROYSTON, HERTS SG8 5UD
TEL: (0763) 248846 FAX: (0763) 246306



**SHOW BROCHURE
NOW AVAILABLE**

Ring Philbeach For Your Copy
on 071-370 8215



WHITE LIGHT
57 FILMER ROAD LONDON SW6 7JF
FAX: 071-371 0806 TEL: 071-731 3291

NORTHERN BRANCH
CORPORATION STREET SOWERBY BRIDGE
NR HALIFAX WEST YORKSHIRE HX6 2QQ
FAX: 0422 839773 TEL: 0422 839651

**Entertainment Lighting
Hire & Sales**

LIGHTING DIMENSIONS (WL) LTD
LONG LANE DUBLIN 8 IRELAND
FAX: DUBLIN 530808 TEL: DUBLIN 530204



MODELBOX COMPUTER AIDED DESIGN
FAX: 071-371 0806 TEL: 071-731 7021



**SUPPLIERS OF PROFESSIONAL
LIGHTING AND EFFECTS EQUIPMENT
TO THE ENTERTAINMENT INDUSTRY**



COMPREHENSIVE CATALOGUE LISTING 1,000s OF PRODUCTS - AVAILABLE ON REQUEST


Midnight Sales Ltd, Unit 1, Chelsea Bridge Business Centre,
326 Queenstown Road, London SW8 4NP. Tel: 071-498 7272 Fax: 071-498 8845

NOVA 

MANUFACTURERS OF
QUALITY STAGE
LUMINAIRES AND AURORA
LIGHTING CONTROL
SYSTEMS

AGENTS REQUIRED IN
SOME AREAS

Novalight (International) Ltd
Foxes Bridge Road
Forest Vale Ind. Est.
Cinderford,
Glos GL14 2PQ
Telephone: 0594-823197
Fax: 0594-826045



LIGHTING SALES/HIRE
Designers, Technicians and Installers
to the Entertainment and Promotion Industries

NEON LITE ASSOCIATES
Unit 1, Clovelly
Chapel Road, Meppershall, Bedfordshire SG17 5NQ
Tel: 0462 811843 Fax: 0462 817352



**PROFESSIONAL LIGHTING
AND SOUND ASSOCIATION**

JOIN US!

For full details
and a Membership
Application Form
please write to:

Sheila Bartholomew
PLASA
7 Highlight House,
St. Leonards Road,
Eastbourne,
BN21 3UH

**UNITED KINGDOM
DISTRIBUTORS**
Appointed sole UK distributors for ProgramSistem

Trade Suppliers of Professional Sound,
Lighting and Special Effects Equipment
Telephone: (0926) 314878
Fax No: (0926) 883120
MOBILE No: (0860) 544934



Situated in the heart of England gives us the right con-
ditions to serve you via the
M1, M6, M65, M66, M67 and the M40 with these
facilities.

- Wholesale trade supply to retailers, installers, contractors etc.
- Extensive stock on all major manufacturers and some minor ones too.
- Some own brand products, concentrating on quality and availability.
- Manufacturers trade prices used, sometimes bettered considering delivery service.
- Vehicles travelling the country carrying orders and stock.
- Regular personal contact.
- Regular visits averaging 5/6 weeks to Wales, S.E., S.W., London, East coast, N.W., N.E., Scotland and of course the Midlands.
- No delivery costs when orders coincide with visits (nominal in between times).
- No minimum orders.
- Use of our technical staff - for enquiries and help.

If you are not being offered these facilities at the moment, but would like to and would like to know more, we will be only too pleased to hear from you.

Rigby Close, Heathcote Industrial Estate
Leamington Spa CV34 6TJ England

THE EUROLIGHT GROUP

EUROLIGHT LTD
081-751 6400

- ☆ Lighting controls, Intercom, loudspeaker paging systems, working light controls, socket boxes, lighting bars, patch panels, colour scrollers and turnkey contracting.

GREEN GINGER LTD
081-751 5449

- ☆ Portable and permanent dimmers and control desks including Wallrack, Wallpack, Micropack and Microset.

LYTEMODE LTD
081-751 5449

- ☆ Architectural and specialist lighting controls for most applications including Lytemaster and Compli.

ODEUM LIGHT AND SOUND
0403 752775

- ☆ Complete systems for the small to medium size venue including Teatro luminaires.

Full installation support, sales literature available
Agents in UK and worldwide Group Fax No 081-751 3334

Specialist Technical Equipment and Services for the Entertainment and Allied Industries

TRIPLE E

CURTAIN AND SCENERY TRACKS

A comprehensive range available for sale or hire, from a wall plaque to a 500-metre system for a product launch at the N.E.C.

ABTT Award winners
1984 "Product of the Year" -
Purpose-made LOOSE PIN HINGE
1988 "Product of the Year" -
UNITRACK system with linear motors
Catalogue available on request



Triple E Limited
B3 Tower Bridge Business Square,
Clements Road, London SE16 4EF
Telephone: 071-237 6354
Facsimile: 071-237 7650

Trilite HIRE

- Autocad Design Service
- Natural aluminium or white finish
- Experienced riggers
- Delivery - collection
- Competitive rates

Occasional used stocks available for purchase.

For further details contact:

OPTIKINETICS LTD
38 Cromwell Road
Luton LU3 England
Telephone 0582 411413
Facsimile 0582 400613



7 WESTERHAM
TRADING CENTRE
THE FLYERS WAY
WESTERHAM
KENT TN16 1DE

Tel: (0959) 562254
Fax: (0959) 564564



THE EFFECTS CO.

contact us for full details of this great range of special effects smoke machines and pyrotechnic equipment and accs.

Now Available

THE TOTAL PACKAGE

- Lighting, sound, communications, rigging, audio visual, conference and projection.
- For theatres, halls, studios, leisure and presentation.
- In-house electrical contracting service.
- Schemes prepared.
- UK and worldwide.



GLANTRE
ENGINEERING LTD.
2 Cremyll Road,
Reading, Berks
0734 509711
Fax: 0734 505808



EDC ELECTRONIC DESIGN CENTRE

THEATRE & STUDIO CONTROL SYSTEMS

We design, manufacture and install

- Hoist Control Systems
- RF and Infra-Red systems for movement and DMX control
- Variable Speed Drives
- Wireless Cuelight Systems
- Curtain Control Systems
- Standard Position Control Modules for most applications

We can provide solutions to your control problems however large or small

EDC Ltd, Unit 1, Bentley Industrial Centre
Bentley, Farnham, Surrey GU10 5NJ
Tel: 0420 23355 Fax: 0420 23757

THINK

Dramatec Effects Ltd

CONTROL

- Products to get you moving
 - From simple AC, DC and Linear motor drives to computer controlled sets
 - The Electronic Control Experts

15 Hunton Bridge Hill, Hunton Bridge
Kings Langley, Herts WD4 8PX
Tel: 0923 263751
Fax: 0923 261727

THEATRICAL AUTOMATION



Knobs LTD, 152 St Matthews Rd
Burntwood, Walsall, WS7 9EL.
Telephone: 05436 75500

If you're reading this, then you can be sure that any one of 8,000 potential clients for your company is reading it too.

GET YOUR COMPANY NOTICED

It pays to
advertise

Find out how by
calling us on:
(0323) 642639
NOW!

GERRIETS

GREAT BRITAIN LIMITED

MADE TO ORDER &
CUT GOODS SERVICE

ALWAYS IN STOCK:

FILLED CLOTH
SHARKSTOOTH GAUZE
SCENIC COTTON
BLACK WOOL SERGE

plus

PROJECTION SCREEN
MATERIALS IN SINGLE &
DOUBLE WIDTH

And much much more
call us

071 232 2262

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

THE RAT[©] MUSIC STAND



- ergonomically designed
- high quality
- fingertip adjustment
- spillage free lighting
- range of accessories
- immediate delivery

send for details to:
R.A.T. (Manufacturing) Limited
41 High Street
Brentford
Middlesex
TW8 0BB
Telephone 081 847 3331
Fax 081 568 1059

CREATIVE SOLUTIONS FOR EVERY BUDGET

Make the world's most advanced lighting system part of your production. Vari-Lite can help you devise creative solutions imaginatively, effectively, economically.

Vari-Lite is the leader in automated lighting technology. We are here to help you create the look you want. And back you up with experienced operators, reliable service, and support that's unmatched throughout the UK and Europe.

Each of the six Vari-Lite European locations is staffed by experts who understand their local markets, and each site is fully stocked with Vari-Lites' advanced consoles and luminaires.

For creative solutions that match your budget and your style call Micky Curbishley, Jim Douglas, Lee Frankcom or Kahren Williams on: (081) 575 6666 or Fax: (081) 575 0424.

*VARI*LITE, the finest automated lighting system for concerts, television, film, theatre, trade shows and conferences.*

VARI*LITE

VARI-LITE EUROPE Ltd.

20/22 Fairway Drive
Greenford
Middlesex UB6 8PW
Tel: (081) 575 6666
Fax: (081) 575 0424

A MEMBER OF THE LIGHTING AND SOUND
DIVISION OF SAMUELSON GROUP PLC

PARIS - SUB-DISTRIBUTOR

Tel: 33/1/45 07 97 09
Fax: 33/1/45 07 96 79

MADRID - SUB-DISTRIBUTOR

Tel: 34/1/470 23 30
Fax: 34/1/479 58 25

SEVILLE - SUB-DISTRIBUTOR

Tel: 34/5/428 36 25
Fax: 34/5/418 30 66

COLOGNE - SUB-DISTRIBUTOR

Tel: 49/221/582 088
Fax: 49/221/580 1979

STOCKHOLM - SUB-DISTRIBUTOR

Tel: 46/8/654 18 55
Fax: 46/8/652 83 58

VARI*LITE® automated lighting equipment is made in the U.S.A. under U.S. Pat. No. 3,845,351. Protected by U.S. Pat. Nos. 4,095,139; 4,392,187; 4,602,321; 4,688,161; 4,701,833; 4,779,176; 4,800,474 and 4,709,311. All other worldwide patents granted or pending.