

# LIGHTING+SOUND *International*



SHIMMERING ON THE MOUNT: JEAN-MICHEL JARRE AT MONT ST. MICHEL

- Cover Story: Rock, on the Rock - Jean-Michel Jarre's Son et Lumiere
- Ken Dibble pits his wits against the Exterminator: the Sabine FPX-900
- Spirit of London - Madame Tussauds' new Dark Ride
- Italian Collection: Tony Gottelier spotlights Griven
- Software solutions from ShuttleCAD
- Plus news, news, news on the PLASA Light & Sound Show

**SEPTEMBER 1993**

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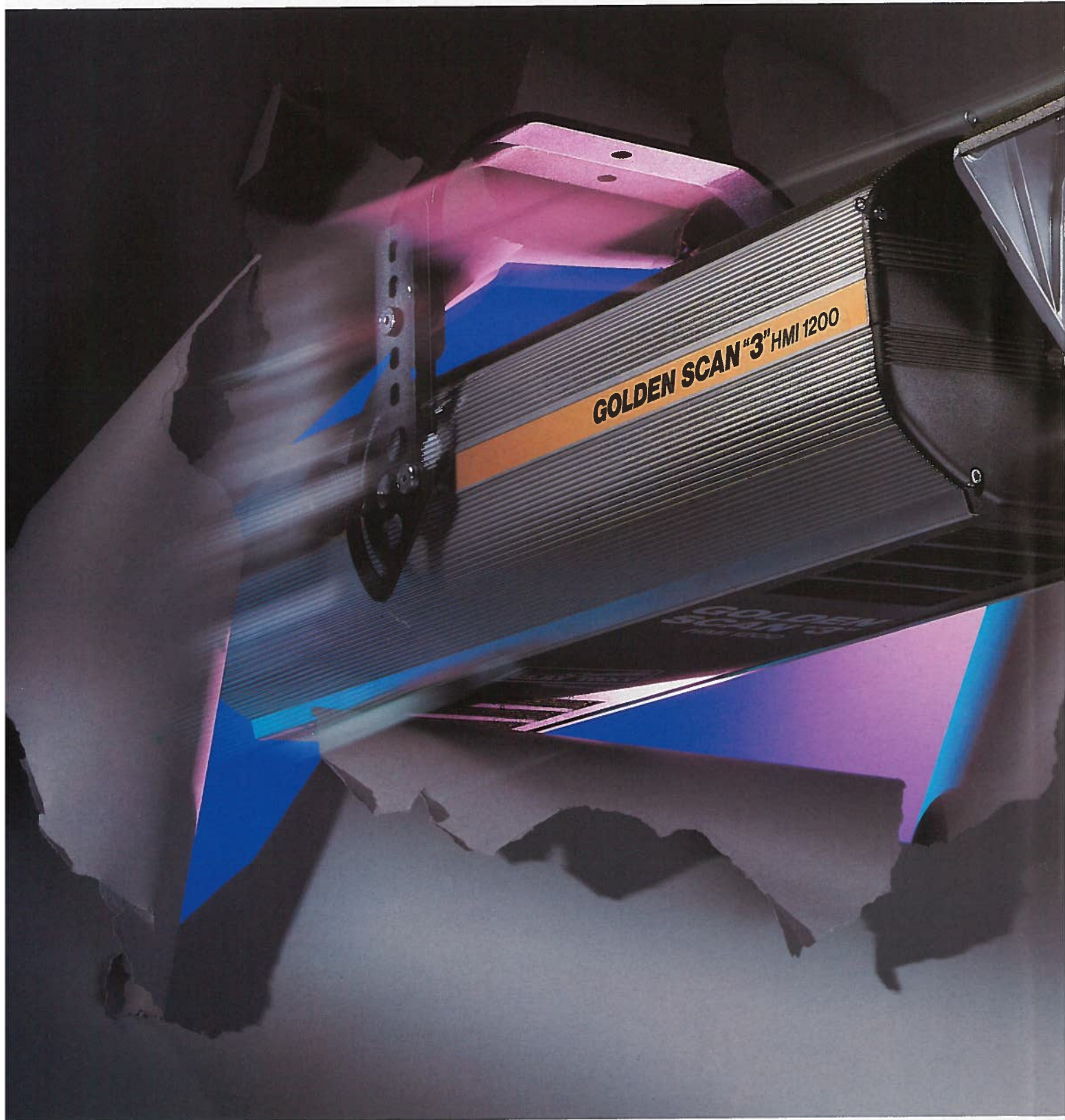
- ▶ 12 CHANNELS 2 PRESETS
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# den Scan

Golden Scan "3",  
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The VL2C spot luminaire features the same colour and pattern functions that have made the VL2B™ spot luminaire the professional industry standard. In addition, the VL2C spot luminaire incorporates a new, highly efficient optical system coupled with a 600 watt HTI source. When compared to 400 watt fixtures, this combination provides twice the brightness, twice the lumens, higher colour temperature and improved optical performance.

Further developments to the

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4,688,161; 4,701,833; 4,779,176; 4,800,212; 4,759,311; 4,973,306;  
4,989,896; 5,010,269; 5,031,078; and 5,073,847. Japan Patent No.  
1,742,923. All other worldwide patents granted or pending.

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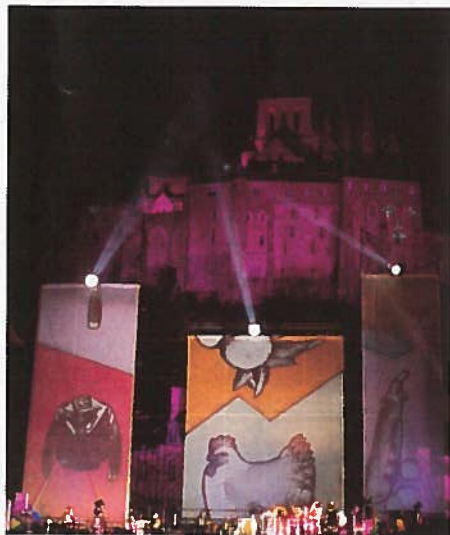
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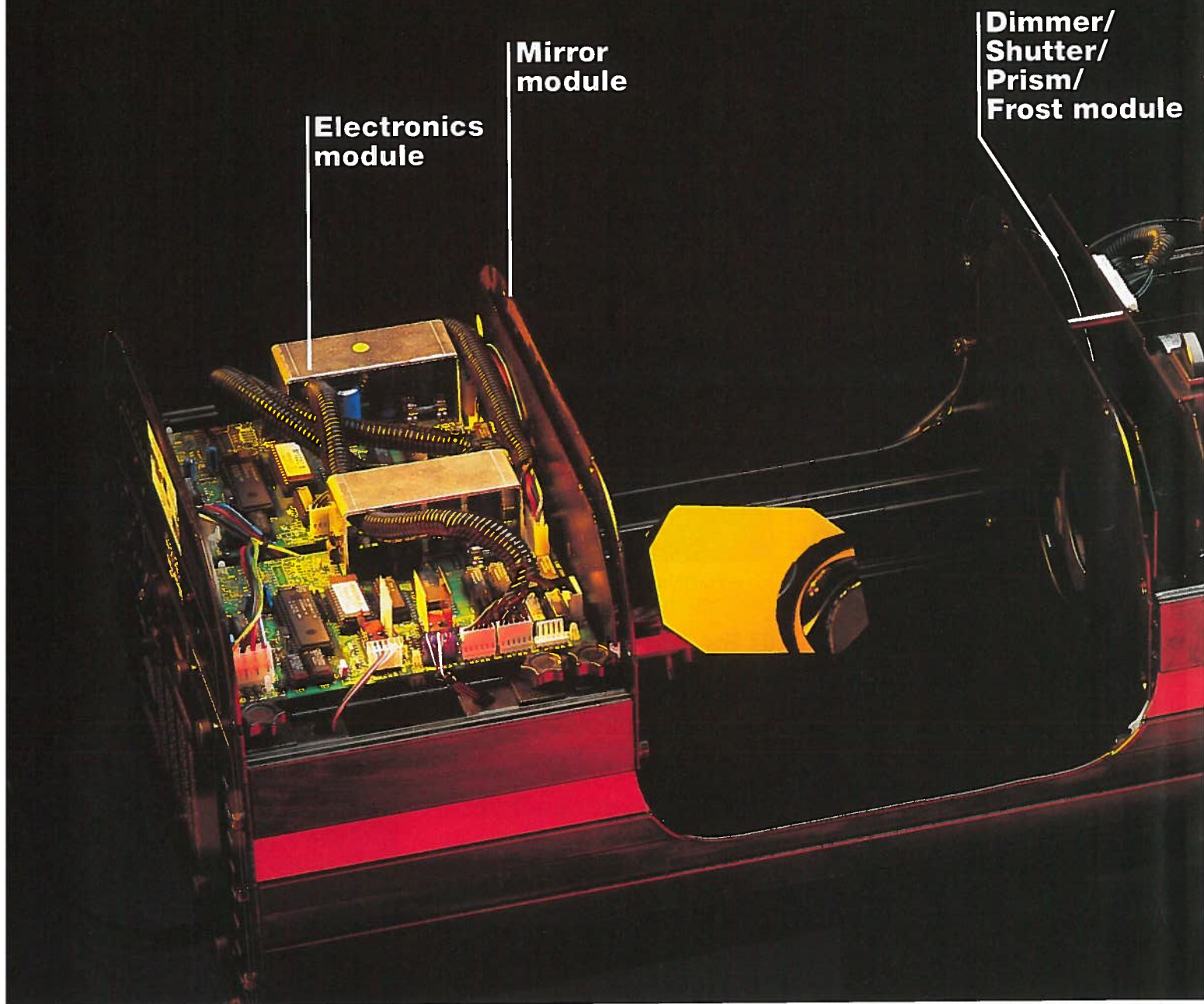
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A-1070 Vienna, Austria, Kandlgasse 23

# ROBOSCAN - AN INV



## Prepare For The Future Today With The Roboscan Pro 1220

With technological advances occurring at an ever-increasing rate, chances are your intelligent lights will be become outdated before you even finish paying for them.

Unless, of course, you buy the Roboscan Pro 1220 from Martin.

Look inside the 1220 and you will see an innovative modular design which means you won't have to junk your MK2 the minute an MK3 comes out. In fact, you can add on the hottest features on the market in a matter of minutes - including Martin's own stunning new projection effects.

## Light Years Ahead Of The Competition

This uncommon flexibility - coupled with our quality craftsmanship - gives the Pro 1220 an average life span of 10 - 15 years. Other units, by contrast, are lucky to last 2 - 3 years.

As one of our customers put it, the Pro 1220 "is the most significant development in intelligent lighting since the invention of moving mirror."

## Modularity is the Future

While your competitors all have to reinvest in a new scan, you can simply add all of the industry's new ideas as they are released.



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module

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module

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module

## Latest innovations:

- Rotating gobos
- Coated optics
- Improved dimmer
- Easy-access lid

## Martin Roboscan Pro 1220 includes:

- 1200W discharge lamp
- Motorized focus, iris & silent dimmer
- Your choice of 14 gobos w/5 rotating gobos or 18 non-rotating gobos
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- Multiplying prism
- Super-fast strobe effects
- Frost filter

# Martin

### Martin Professional A/S

Nordlandsvej 114, DK-8240 Risskov, Denmark  
Phone +45 86 21 44 11, Fax +45 86 21 50 01

### Martin Professional UK Ltd

8 Millhall Business Est, Aylesford Maidstone, Kent  
Tel 0622 790164, Fax 0622 790166

## Pulsar/Clay Paky Announce New UK Reseller Network

Following discussions with their major distributors over several months, Pulsar Light have announced that they are currently re-structuring their sales operation. Ken Sewell, commercial director, told L+SI that he hopes the change-over process will be completed by mid-September.

It will see appointed CP&P resellers covering a territory on a more exclusive basis than at present at the same time offering an improved service to end-users. "The key is to ensure a better service than in the past," said Ken Sewell. "With each reseller having their own area we also hope to eliminate overlap and conflict on the ground."

Pulsar recognised some years ago the importance of offering full customer support to end-users, and since that time project support manager Andy Graves has worked closely with UK installers to ensure that customers received the training and assistance they needed.

They see the latest moves as going one step further with appointed resellers providing a high level of pre-sales and post-sales support to customers of both Clay Paky and Pulsar products, including help with specifying, designing, installing, programming and maintenance. It is also hoped to supplement their programme of factory-based training of customers with a series of seminars and open days on resellers' premises. "The new network will make it much easier to deliver the support we have always believed necessary," said Ken Sewell. "It has involved a certain amount of re-organisation by some of our distributors, but up to now the changes have been well received and we are only implementing them after a period of discussion and negotiation."

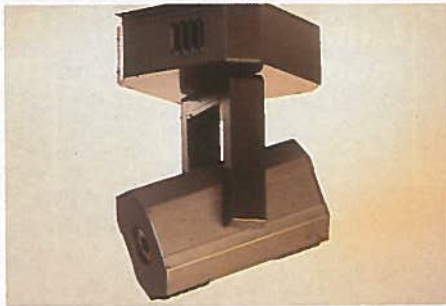
Derrick Saunders, Pulsar's sales and marketing manager, told L+SI: "The new streamlined structure strengthens our partnership with our resellers and lets us really get to grips with our customers."

## L+SI Strip



No, it's not what you think. L+SI will have a limited supply of special polo shirts on stand. Primarily intended for promotional purposes - buy a subscription and you get one free - you can also buy them at a very realistic price on stand A165. You'll also see members of the L+SI staff wearing the team colours of blue and gold.

## Avitec for Stratos



Studio Due in Italy have manufactured motorised articulate projectors for over two years, and their latest professional unit, the HMI 575 Stratos, has already been installed in various Italian theatres. Several units are about to be purchased by rock and roll rental companies in USA from distributors Meteor Light & Sound in Alabama, following successful evaluation by those companies.

New UK distributors Avitec will be showing Stratos on their stand at PLASA 93 and report that the unit has several advantages over mirror driven articulate units, the most important being the extra angles of coverage (minimum 300 degrees in both planes) and increased beam brightness due to direct beam path. The Stratos has 11 control channels, either via DMX or analog, and features two colour wheels each with five colours, giving 10 prime and 36 mixed colours, pre-selected or variable speed continuous rotation.

There are five fixed gobos and five bi-directional variable speed rotating gobos, and the step focus facility will allow soft or hard edge images. A variable speed mechanical dimmer, strobing shutter and iris are also featured, and all motors are micro-stepping.

Avitec believe that this product is entirely suitable for touring or theatre but will also be showing the Studio Due Mini-Beam a simpler version (using an MSR 400 lamp) without rotating gobos, dimmer and iris, a cost-effective alternative for discotheque use. Avitec are on stand C40.

## Standard Talk



PLASA's standards officer George Thompson will be attending the Lighting and Sound Show and apart from a spell of 'off-duty' when he chairs the 'Best Product Award' panel looks forward to meeting members on stand A165.

## MA Distribution in UK

MA Lighting Technology and Cerebrum Lighting Ltd have come to a mutual agreement whereby the MA range of lighting control consoles, dimmers and accessories will now be marketed and distributed exclusively in the UK by M & M Camelont Limited.

This decision has been taken in line with MA Lighting Technology's long term distribution philosophy which states that, in addition to international sales activity, where countries require a high level of individual customer support and service, that country should be covered separately through the appointment of a specialist company.

After careful consideration, MA Lighting Technology feel that M & M Camelont Limited offer the high level of customer support in the UK which best suits the MA product range. Internationally, Cerebrum Lighting will continue to sell the MA range outside of the UK and will continue to provide demonstration facilities for the product range in England.



September is the month of PLASA's own international light and sound show (Earls Court 2, London, September 12-15th) and, as usual, this month's issue is packed full of exhibitor news on the event, our biggest ever. If you have any queries please contact us on (0323) 410335. L+SI and PLASA are on stand A165 and we look forward to seeing you there!

- News between pages 10 and 52
- Introduction page 55
- Exhibitor List page 56
- Plans on pages 58, 60, 62
- Seminar Information pages 90 and 91

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Screenco's new JumboTron video displays bring greater choice to every show. Indoors or outdoors, the system's unique modular construction not only allows for creative configuration in a flexible range of shapes up to 72 square metres in size, but also makes giant video displays an exciting reality for venues with limited access and events with tight budgets.



# STARVISION

The Starvision's involvement in the world's major events is legendary. At 48 square metres, the system provides big, bright pictures – even in strong sunlight – and with its integral trailer unit, is the largest truly mobile video screen available today. The Starvision's versatility allows it to be flown from cranes, installed onto scaffolding towers or simply driven on site and switched on.



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THE  
FIELD

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With

# SIMPLICITY

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ON STAND A80  
AT PLASA

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Get your hands on ESP II and it all falls into place. The LCD Window prompts you while the Graphic Keypad spells out the functions available to you. Jands unique software allows you to work the way you want to, intuitively.

# JANDS

Jands Electronics Pty Ltd, 578 Princes Hwy, St. Peters 2044 N.S.W. Australia.  
Phone 61-2-516-3622, Fax 61-2-517-1045. (Australian Company Number 001187837)

### WIDE MODE

- 48 Control Channels (ESP II-24)
- 96 Control Channels (ESP II-48)

### SOFTPATCH

- Proportional to 512 Dimmers, 3 tables

### MASTERING

- 10 Pages via 12 Scene Masters -ESP II-24  
24 Scene Masters- ESP II-48
- 10 50 step chasers
- 100 random accessible effects memories
- 10 100 entry cue stacks, programmable dipless crossfade times
- Up to 498 memories

### FEATURES

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### OPTIONS

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# JANDS

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Tel: 07242 60860 Fax: 07242 60740

### Belgium

#### Stagelight NV

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#### Highlight

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### Finland

#### RMC Showservice

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#### ESL

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#### Alpha Sound

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#### Jansen Jansen

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### Israel

#### Mazuz Bros

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#### Spotlight Srl

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#### PA System AS

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### Portugal

#### Frei Audio

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### Slovenia

#### SST

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### South Africa

#### Lighting Unlimited

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### Spain

#### Spotlight SA

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Tel: 93 4908117 Fax: 93 4903934

### Sweden

#### Teater teknik AB

Contact: Peter Hallin  
Tel: 086 409290 Fax: 086 409394

### Switzerland

#### TDS

Contact: Jean Jacques Schenk  
Tel: 0212 36300 Fax: 0212 33982

### United Kingdom

#### AC Lighting Ltd

Contact: Glyn O'Donoghue  
Tel: 0494 446000 Fax: 0494 461024

## Smart Move



Light Sound Image Systems will be introducing the new Dynalite 'Smart Panel' at the PLASA Show. This is an LCD touch screen control panel that provides the operator with a 'user-friendly' method of recording and programming lighting settings in both small and large systems. In addition, the 'Smart Panel' provides simple interface to other systems such as AV controllers and security systems. The panel has a built-in seven day time clock, which allows the possibility of fully automated control in many applications.

In addition, Dynalite will also provide a 'Smart Controller' which will facilitate power control of 12 devices, either switched or dimmed, up to a maximum of 45 amps per channel. This same device will also accept analogue input signals, as well as dry loop contact closure inputs. Any number of 'Smart Controllers' may be added to the network to suit any size of system. For larger loads the 'Project 12', 12x10amp dimmer pack may be used. 'Project 12E' will also be shown for the first time. It is an up-graded version of the Project 12 compact dimmer rack. Light Sound Image Systems will be appointing a number of dealers and distributors for these products throughout the UK and Europe during the next two months, to service several markets.

Light Sound Image Systems can be found on stand A164.

## Nexo in Fire Chain



Nexo Far East has announced its latest discotheque installation in the 'Fire' chain, which is fast establishing itself in the region. Following the first Fire complex in Singapore, opened in late 1989, a series of similar discos have opened in quick succession, with the latest in Kuala Lumpur in Malaysia. Each unit has a Nexo sound installation, and the 3,000 capacity Kuala Lumpur venue has two TS2400 with two LS2000 subwoofers, complemented by four S12000 systems. The system was installed by Inova and Nexo distributors Electro-Systems of Singapore.

## Five from M&M



Whichever area of the entertainment industry you are involved in, a visit to the M&M/Camelont stand will prove worthwhile. With five new products being launched, there's something for everyone. The launch of the new Rainbow PlusCard is probably the biggest single innovation from M&M since the company introduced Rainbow Colour Changers to the UK in 1988. A digital decoder pcb, the PlusCard will widen levels of control and flexibility.

A completely new 15" Rainbow, which incorporates the PlusCard as standard, promises to be much lighter than its predecessor, more efficient - and less money, according to the company. Also new from Rainbow Colour Changers is the Alfresco, the weather-proof 8" Rainbow for both outdoor and indoor use.

M&M/Camelont are also adding two totally new product lines to their range, one being a high quality, range of lighting desks plus something so new and innovative that M&M won't reveal more - you'll have to wait until PLASA.

M&M/Camelont are on stand A134.

## Zero 88's Drama

Zero 88 have released a special series of 'Drama Packs' for the education market, centred around their well known dimmers - Alphapack. There are three packs available. The first includes three Focus 650 Series luminaires, complete with 500W lamps and a spare, an Alphapack dimmer, a stand with 'T' bar, safety chains and a range of colour gels, all packaged together in a specially designed storage box which also allows for additional equipment to be added at a later date. The two other packages in the series work along the same lines, but are more comprehensive.

This series has been designed to take the guesswork out of choosing the right equipment for the smaller drama areas. All the equipment is designed to exacting standards and will give years of service.

## Canon Style



Last year, Canon Audio made its corporate debut on the pro-audio scene at the PLASA exhibition. The new company, its personnel and its products were showcased in some style, thanks to the eye-catching Canon coach and a high-profile advertising campaign. Now the question is what will they do this year?

For the full answer everybody will have to wait until the exhibition itself opens. However, PLASA will be the launch-pad for the new V-SB100 sub-bass speaker, and Canon promise that they will have "probably the most radically different exhibition stand ever seen in the audio industry". There are no further clues at this stage, but we're certain there'll be no bus.

Canon can be found on stand B56.

## MM Samplers Day

On August 2nd, MM Productions of Colchester held a teaching day on samplers in theatre, aimed primarily at the regional reps.

The turn-out was a country-wide mix of chief LX and head of sound people. They were provided with an introduction to sampling techniques in general and hands-on experience of Akai samplers. As a follow-up to the day, each participant is being loaned an Akai sampler for a week to really get to grips with it. MM Productions intend to hold further teaching days, both for complete beginners and hopefully, to a more advanced level. The general feeling from the participants at the end of the day was that using this type of equipment will in the long run save time, money and introduce more creativity to the art of producing sound effects. However, convincing theatre managements to invest in this technology is still a big hurdle.

With the basic knowledge gained from the teaching day and the week of experimenting with the sampler, it's now possible to hire equipment for the pre-production week and dub the work onto tape to playback on the theatre's existing equipment as a cost-effective compromise.

Jackie Staines

## Old and New



White Light will be showing a selection of the equipment available in its hire stock, both new and old, as well as launching its new hire catalogue and reference guide, which is now available on disk.

This latter item, in a new user-friendly format, features a comprehensive variety of lighting equipment information including projection charts, beam angles and equipment weights.

Visitors to White Light's stand (A100) at the PLASA exhibition will be able to pick up the new issue and the PC-based disc of the catalogue. The hire catalogue will also be available direct from White Light's Fulham headquarters on 071-731 3291



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# LETTERS

Dear Editor

## DMX Protocol and PLASA

As regular readers of your journal will be aware, I have been an early campaigner for some action regarding 'Life after DMX', and I am therefore delighted that Adam Bennette and Philip Nye have managed to get the whole issue going again.

It has only taken four PLASA shows and a similar number of LDIs, plus God knows how many press articles to get this far - in fact I withdrew publicly from the fray in exasperation nearly two years ago with my 'positively the last word on the protocols' piece in this magazine. So my gast is flabbered that the whole matter has resurrected after all this time. Better late than never I say.

I can only applaud George Thompson's efforts to pick up the torch for PLASA - we tried once before didn't we George? However, I am amazed that he is surprised at the apathy of the manufacturers, they are the ones who will have to devote resources to it! No, this is one matter that has always been, and will probably continue to be, almost totally user-led. After all, it's only a marketing matter for the suppliers, but a matter of sanity for the designers.

If PLASA are at last going to move on this, they must not exclude the poor long suffering customers.

Tony Gottelier  
Wynne Willson Gottelier

Dear Editor

## Don't knock DMX512 8 bit value

I am surprised that there is still so much talk about DMX512, 8 bits and what it can and cannot do.

As I see it, DMX can (and is) being used as the transmission layer allowing easy connection to different instruments, and the use of any resolution by using two or more bytes. Avolites products compute 16 bit results for all parameters, our personality system allows this result to be sent using DMX as an 8 bit value, a 16 bit value (hi or low byte first and with a gap between them of 0 to 512). A checksum may also be specified either for every instrument or for the whole DMX frame. If 512 channels is not enough, add another line.

I do not see any good reason for saying DMX is at the end of the road. A 44Hz update rate is plenty fast enough, but if 88Hz was required then simply send out 256 channels per line. After all, only a short time ago we ran out six 37 pin lines for 180 channels! If anyone is not sure about this think about the cinema running at 24Hz!

If we consider DMX as a transmission layer its only limitation is in not having a reply line.

Finally, for products which cannot receive DMX we will be launching a protocol converter which input DMX and output in 'native' formats. The control of this will be either from the converter, or remotely from our desks with DMX.

Richard Salzedo  
Avolites

## Harman Medley



New products from Allen & Heath, JBL and EAW will dominate the Harman Audio stand at this year's PLASA Show. Taking up over 230 sq.m the Harman village will incorporate two dedicated sound-booths, both of which will include the world-wide launch of new sound systems.

The JBL international area will see the launch of the new expanded JBL Sound Power Series of professional cabinets. The series features four different lines, each dedicated to a particular sound reinforcement area. A full complement of JBL and UREI amplifiers, signal processors, audio monitors and components will be on show. JBL will also be launching the new SR Series II high end touring and portable reinforcement system. This can be found in action on the Batmink stand, whilst the JBL Array Series will be powered up on the Martin Professional stand.

EAW will have their own dedicated sound booth demonstrating the KF 850/SB850 configuration. New products will include the KF650 full-range trapezoidal and BH852 flown LF unit. There will also be an on-line selection of the latest JF range touring/theatre units, plus the DS range installation series.

British audio mixer company Allen & Heath will be showing their range of live/studio desks as well as launching the production models of the new GL2. First seen at APRS in June, this 4-buss 18 input 19" rackmountable console is highly adaptable; as it can be used as a monitor desk, but by simply re-assigning the input/output channels and groups, it can easily be used for front of house, combined FOH/Monitor mixing and studio recording applications.

The Harman village will also include products from C-Audio, Steinberg, and ART, and will be manned by staff from Harman Audio UK, JBL Denmark, JBL USA and EAW USA.

Harman are on stand B104.

A seminar covering DMX entitled *Control Transmission: are we stuck in an 8-bit timewarp?* will take place during the PLASA Show at Earls Court 2 on Monday September 13th. For full details see pages 90/91. To reserve your place, contact the PLASA office or fill in the form on page 91 and bring it with you to the Show.

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# WHOLEHOG

## The story so far . . .

### Press Comments:

- TCI: Indisputably, the **WHOLEHOG** offers a refreshing approach to programming multi-parameter instruments.
- Live!: The **WHOLEHOG** liberates the creativity of the LD to the full.
- Lighting+Sound International: The new **WHOLEHOG** does not require a rocket scientist to programme and run it.
- LDI: The **WHOLEHOG** has a programming feature unique among commercial desks: a stack synthesiser. Tracing a circle with a Super Scan is a breeze with this feature.

### Tours:

- Prince
- Grateful Dead
- Peter Gabriel
- Sting
- Rod Stewart
- The Orb
- Steve Miller
- Brian May
- Lenny Kravitz

### Awards:

- 1992 PLASA 'Product of the Year'
- Live Award 1993 'Most Innovative New Lighting Product'

## White Light Commit to Further Training

White Light has made a further commitment to the future of the lighting industry by working closely with the National Youth Theatre (NYT) season.

The London-based company already runs regular training seminars for lighting designers and technicians, both amateur and professional, in theatres, schools and leisure outlets. But, after an approach from the National Youth Theatre's Robert Halliday, White Light agreed to supply "a bit more than the normal hire" for this year's season.

All students who join the NYT for the summer holidays will be given the opportunity to spend some time at White Light's Filmer Road headquarters preparing the equipment that they will eventually hire.

## Hit the Deck



In previous years Doughty Engineering have used the PLASA Show as a springboard to launch new products onto the market. This year will be no exception, even though, in the early part of the year the company dedicated itself to attaining BS5750 (parts 1&2). This has culminated in a string of new items being released since March, probably the most notable being Zenith Truss Lifts and the versatile Doughty Clamp.

However, it now appears that they have saved the best to last with the Easydeck modular staging system. Easydeck, as its name suggests, is easy to use, and guaranteed to alleviate the problems normally associated with temporary staging. Standard Easydeck modules are one metre square, strong but lightweight, and are easily assembled and positioned by one person. The modules are also highly versatile, by virtue of being available in a range of heights and having weatherproof and reversible decking as a standard fitment.

Easydeck has been designed after extensive consultation with users of all types. It is a low-maintenance system which requires no tools for assembly, but it is also highly flexible, thus allowing the creation of some dramatic effects which can add a new dimension to a variety of applications ranging from corporate presentations through to school plays.

The company will also be releasing their new truss hook clamp at PLASA. This neat, if not exciting, product is designed specifically for use with lightweight thin-walled trussing systems. It features an aluminium dispersion plate over the wingbolt which enables the clamp to grip securely without crushing the truss.

Doughty Engineering's stand number at this year's PLASA show is A1, and as well as those items mentioned above, the following items will be on display: Zenith truss lifts, Doughty clamps, Nebula winch stands, club stands, shadow stands, studio stands, music stands, rope pulleys and scenic equipment.

## RCF Distributors

RCF UK recently brought together some of the country's top sound wholesale distributors for a sales meeting which took place at Birmingham's Post house Hotel at the invitation of RCF's MD Phil Price and sales manager Linton Smeeton. The meeting was called to establish a wholesale distributor network for RCF's industrial and commercial audio division.

The end result saw the companies present agree to a policy of 'in depth stocking' of RCF products. This will enable them to promote RCF's industrial and audio products to the 'trade' and electrical contract markets.

The eight companies involved are West London Electric Ltd, HB Litherland and Co, RW Salt Communications Ltd, Peco Electronic Distribution Ltd, DJ Kilpatrick Ltd, Louis Grace Electrical Ltd, HRS Electronics Ltd and John Hearn and Sons Ltd.

## Vari\*Lite VL2C



Less than a year after the release of the VL5 wash luminaire, Vari-Lite Inc has released another new product - the VL2C spot luminaire.

It features a new, highly efficient optics system coupled with a 600 watt HTI source. When compared to 400 watt fixtures, this combination provides twice the brightness, twice the lumen, higher colour temperature and improved optical performance. Further developments to the lensing system add enhanced focusing and defocusing on patterns. Technological advancements to the iris motor produce fluent, subtle changes especially noticeable over slow, timed beam size changes.

The VL2C made its television debut on Jerry Herman's 'Broadway at the Bowl' designed by Greg Brunton and its Broadway debut on 'Tommy Tune Tonite!' designed by Jules Fisher. It is also being used by lighting designers Kieran Healy on The Arsenio Hall Show and Candace Brightman on The Grateful Dead.

The new VL2C can be seen on the stand of the Samuelson Group of Companies, A132.

## Theatre Open Day

In late August, the Kenneth More Theatre, Ilford held an Open Day to which representatives from across the industry were invited.

As part of this day a technical exhibition was organised involving a number of suppliers and hirers of sound and lighting equipment in the area. Amongst these were Gradav Theatre Services who hire lighting and sound equipment and supply consumables such as gaffer tape, fog fluid etc and Turnkey Projects who carry out lighting and sound installations in a number of theatres and schools throughout Redbridge.

In addition, Compulite were exhibiting the latest range of moving lights and effects lighting in the main auditorium, controlled by the Animator desk which is capable of controlling both moving lights, conventional dimmers and colour scrollers. Products on show included those from the High End and Coemar range as well as Compulite Whisper colour scrollers.

During the day, an hourly presentation took place with a sound and light show on the stage of the main auditorium featuring a six minute dance sequence with members of a local dance group performing. The sound system for the day featured a 2k per channel PA system fed from digital sound sources.

## Le Maitre In



At the very last moment Le Maitre have decided to take a stand at the PLASA Show. Rick Wilson and Dave Winfield will be in attendance and on display will be the latest range of Le Maitre Genesis smoke machines featuring new block technology.

Also on stand will be the range of Pyroflash hardware, firing systems and pyrotechnics alongside which will be the latest addition to the range - a new Ice Bubble machine.

Le Maitre are on stand B46.



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## New Generation



Diamond II is the new generation of control desks from Avolites. At first sight they are similar to the original QM500 desks, with a preset allowing instant access to channels and with swap and add buttons for every one of the 180 preset faders. However, the Diamond II has more to offer.

Ultra-fast moving light control is offered via eight encoder wheels or the pre-programmed hot keys, allowing instant access to colours, gobos, prisms and iris by name. Positional control of pan/tilt is via two dedicated encoder wheels or the optional trackball, mouse or joystick. Avolites 'Programmable Personality System' (PPS) allows console owners the opportunity to design new 'personalities' for the next generation of lighting instruments without needing a degree in computer programming.

Patching instruments with the Avolites personality system makes it fast and painless for entire lighting designs. The presets may be configured as two presets of 90 or as a single preset of 180.

Each of the 30 memory faders can control a memory or sequence, allowing up to 30 sequences to run simultaneously. Connecting one of the two sequence controllers to a chase provides hands-on control of any parameter. Memory faders are 'paged' and there are 100 pages, giving a total of 3,000 positions! The 30 memory faders each have an electronic dot matrix legend allowing real names to be allocated to different cues.

No less than 180 single button access, preset focuses (hot keys), global memories and groups, make selecting instruments and programming ultra fast. Additional Preset focuses, groups and globals may be recalled from the keypad. All parameters can be input through the built-in tables; if you wish to use 'red' you simply programme 'the colour red' and the desk will sort out how to move a set of filters, colour wheels etc to create this. When the memory is recalled the word 'red' appears, not a set of values.

The Diamond II comes with an integral, high resolution, solid state Electroluminescent screen, or you may plug a standard colour VGA type screen into the video output. Optionally you may also drive a second independent EL or VGA screen which can show additional console information. A standard, 3.5 inch disk is used for saving your show data which can be read on IBM PCs or Apple Macs.

Designed to be adaptable, the Diamond II is available in a number of channel sizes (and may be upgraded if additional channels are required). It is available from 1,024 channels on two DMX lines, to cover 6,000 channels on 12 DMX lines. Channels may be allocated as highest takes precedence, latest takes precedence and dipless.

Avolites are on stand A144.

## Firework Spectacle

Fox Fireworks have commenced a three month contract to supply pyrotechnic design, staffing and control systems to the Gachum River Spectacle at Expo '93, Taijon, Korea in conjunction with Post Design Tech of Seoul.

The contract includes the supply of specially constructed waterproof firing hardware, enabling a range of pyro to be used in the immediate vicinity of three 17-metre water screens. Control for the hardware is via a 160-channel Pyrodigital iFC002 controller directly from a projection SMPTE stripe.

The project has not been without its problems, as Andrew Jolliffe, senior partner of Fox Fireworks told L+SI: "The chief snag so far has been the reliability of Korean fireworks. At the start around 30% of the shells and mines selected for the show were bursting completely blind, in spite of rising to the correct height. After numerous trials, this problem has now been solved but there still remains the difficulty of a river which is prone to flooding and can vary in level by as much as 20 metres daily - great news bearing in mind that the majority of the pyro is fired from rafts on the water!"

Development work on the Pyro Tech MK2 is proceeding apace and there will be more news on this in a future issue of L+SI.

## TP Carousel

Theatre Projects Sound has won the sound system hire contract for Cameron Macintosh's new West End production of 'Carousel'. The legendary musical opens at London's Shaftesbury Theatre on 10th September '93 following a critically-acclaimed run earlier this year at the National Theatre.

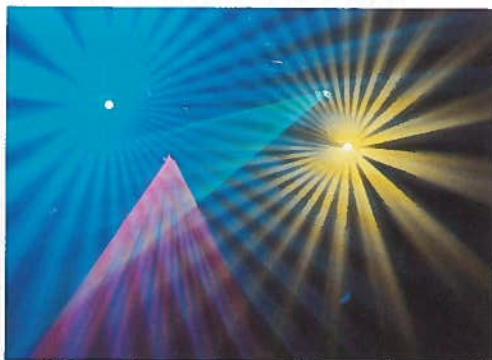
TP Sound had supplied Sennheiser radio mic systems for the NT run. For the new production, the same sound design team of Mike Walker and Paul Groothuis awarded them the whole audio hire contract.

TP Sound is supplying a Cadac J Series desk (a split 58/34 channel frame configuration), Yamaha PC4002M and P2700 amplifiers, Yamaha processors, BSS crossover and 24 Sennheiser UHF radio microphone systems. Loudspeakers comprise bi-amped Tannoy 3836s, Bose 302s, JBL Control 1s and Canon V100s for surround-sound.

## Batmink Posse



Batmink will bring together a whole host of new products at this year's show. From Lampo will be the Columbus Projector (pictured in action below), a lightweight unit featuring eight colours, eight interchangeable gobos, variable strobing and blackout with a halogen version that is fully dimmable. The unit is fitted with high quality stepper motors to ensure smooth mirror movement and can be controlled by 0-10v or DMX 512. Lampo's Domingo centre-piece has eight mirrors which work in pairs, together with six high quality dichroic filters. The beams can be reflected onto eight rotating mirror dishes which are arranged in different patterns for further effect. High quality stepper motors are used to ensure smooth movement. Also from Lampo is the Low Smoke machine, which the company claim is the first smoke generator to produce low level smoke without dry ice or heavy refrigeration plant. The machine works on the principle of combining two fluids to produce a low level sea of smoke.

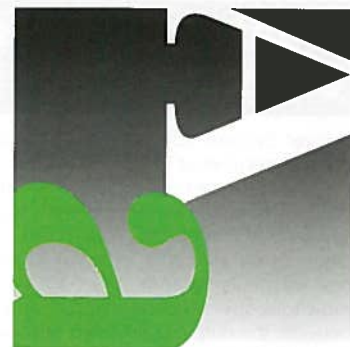


Batmink will also have on stand a brand new Mini range of effects from Genius. They are available in master and slave format, enabling the user to have one master unit controlling up to three slave units, the most popular being the Mini Round and the Mini Music Scanner.

The Helios centre-piece from Griven will also be on stand. The unit has eight arms producing 16 dichroic colour beams. To add further effect the unit has eight separate rotating mirrors and a large rotating mirrored dish at its base, with all the patterns pre-programmed. The Griven Manta uses mirrors to change single beams of coloured light to fast moving showers of small beams. Rotating dishes enable a range of patterns and effects to be produced. Another new effect from Griven is the Smile. It uses the 800watt Roundlux lamp reflected on five flat mirrors to produce five static cones of light. The inclusion of a further five mirrors produces five moving cones which can be music-animated.

Finally, from Studio Due is the Spaceflower (pictured right). Designed for outdoor use, it produces three concentric cones of light each made up of 12 beams, which rotate from side to side, and contract and expand. The whole unit has a variable pan through 180°.

Batmink's stand is C56.



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## Trantec Systems Launch S2000



Trantec Systems will launch a new S2000 true diversity receiver at PLASA. This latest addition to the Trantec range is a quartz-controlled, VHF true diversity single conversion receiver, featuring two separate RF sections with fixed telescopic antennas on a durable all-metal enclosure. As a true diversity system, the S2000 constantly monitors the received signal and switches between the outputs of the two internal receivers to find the best one and avoid normal interference. It has an LED display which indicates power, the RF carrier selected, audio presence and clip.

The company is also set to celebrate the 10,000th sale of its successful S1000 series of products at the PLASA exhibition. The range is based on the S1000X precision quartz optimised receiver with a reputation for enhanced selectivity which reduces interference and gives clear sound reproduction. The receiver also features an exclusive multi-LED display indicating power, RF carrier presence, audio presence and clip.

Trantec will be on stand A168.

## Jands V3



The Plasa Show will see the launch of V3 software for the Jands Event and Event Plus lighting consoles.

The new software features an extensive upgrade of the video output which will enable the operator to view and edit memories, chases and patch tables blind or live. This upgrade is a response to requests received from theatre lighting designers. As with all Jands upgrades, V3 is available as an upgrade to any existing Event Plus console.

Jands can be located on the stand of A C Lighting, A80.

## Laser Safety

For the first time audience scanning laser systems used for public displays will be included in the new safety guidelines HS(G)95 to be introduced by the Health and Safety Executive (HSE) in the autumn.

A special one-day tutorial in Birmingham, on the 9th November, organised by Sira Communications will discuss the implications of the new guidelines which amplify the new British and European radiation safety standard BS-EN 60825:1992, to be used by local government officers to assess safety risks and issue display permits for public events.

Speakers will consider the effect of the new guidelines on equipment specifications, and practical measures which installers and operators can take to comply with safety requirements. A spokesman from the HSE will explain the legal status of the guidelines and how they relate to the new European safety standard. The tutorial is intended for anybody who is directly or indirectly responsible for the safe use of lasers for public entertainment or display. For further details contact Sira in Chislehurst on 081-467 2636.

## Vikings Return



First came the tanker, then the 'super' tanker, then the VLC (very large capacity tanker). Well, a good idea should never go to waste, and Swedish company AVAB have dubbed their latest lighting control board 'Viking VLC', meaning of course, very large capacity, and that's exactly what it is!

The first of a new generation of super boards, the Viking VLC, has control to over 4,000 channels, and up to 1,000 channels can be viewed at the same time on one screen! Featuring tactile controls, and utilising the latest 'windows' technology, this beast can be seen in town at PLASA on the stand of Zero 88, A98.

## Ryger Range



At this year's show, Ryger Electronics will be exhibiting 10 new low-voltage touchpad controllers. Seven of the products from the new Micro range will include Microflash, Microlatch, Microchase 8, Microchase 4, Microeffects, Microplexer and Microsound Zoner. Three from the new Prolite range will include the Touch Master, Touch Light and Touch Chase.

Also on show for the first time will be the SP40-A4 channel 40 amp switch pack, SP120-A12 channel 120 amp switch pack and the new FL4-foot operated controller.

A completely new concept for Ryger Electronics will also be debuting at the PLASA exhibition in the shape of a lighting effects unit which incorporates a 250 watt lamp, 20 gobos, 10 colours, waggly mirror, strobe and lamp dimming. This unit is completely micro-stepped and can be controlled on either 0/10V or RS232. A DMX512 converter controller will be available soon.

Ryger will be on stand B202.

## White Light Busy

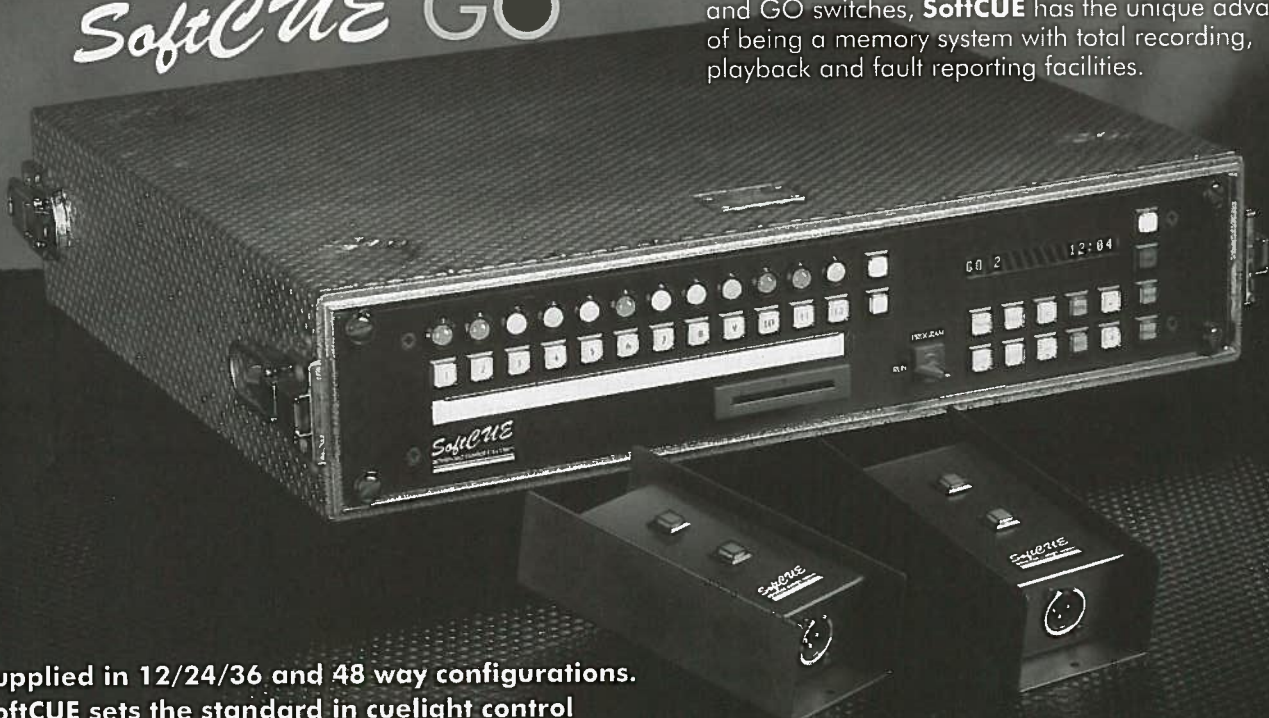
White Light is celebrating with some of the hit shows of the summer. Although traditionally a quiet time, August this year has proved to be their busiest ever. The company began the month by supplying the complete rig, including moving lights and control equipment, for the musical 'Grease' (see August L+SI).

They then went on to work on the much-hyped revival of 'Hair' at the Old Vic and the transfer of Carousel from the Royal National Theatre to the Shaftesbury Theatre. Other productions which have worked with White Light include the tour of 'Relative Values' from Chichester Festival Theatre, lit by Grease's lighting designer Mark Henderson and 'An Inspector Calls', another transfer from the Royal National Theatre, lit by Rick Fisher.

Standby Tabs

Standby LX Q1

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## Network First



This will be the first time that Network have exhibited at the PLASA Show.

Formed only 12 months ago, Network are exclusive UK distributors for Klark Teknik signal processing, Nexo Loudspeakers and Lab Gruppen power amplifiers and signal processing.

Following the success of Nexo's PS10 the new PS15 two-way enclosure will be launched which houses a 2" driver with 3" titanium diaphragm and a single 15" woofer. The system, which weighs only 29kgs, has an optional sub-woofer, the LS1000. New from Klark Teknik is the DN3600 programmable dual 1/3rd octave graphic equaliser, which features security code lock-out in order to prevent unauthorised users from adjusting the set parameters.

Lab Gruppen, the Swedish amplifier manufacturer, will show two new models, the LAB1200 4-channel switch mode amplifier, which produces 4 x 350 watts and weighs 10kg. In addition to this Network will be showing the new LAB2000C which is based on the well-established LAB2000, but with size and weight significantly reduced resulting in a 1,000 watts per channel @ 8 ohms in a 10kg package that is 4" shorter than the LAB2000.

Network can be found on stand B176.

## K2OP International Dealerships

Kaleidovision have announced a number of new international dealerships for their Kaleidolight K2OP video lighting system.

European distribution outside the UK is being handled by Videasel International after much interest was generated by the Kaleidolight when it was exhibited by Videasel at Rimini earlier this year. A number of European dealers are to be announced within the next few days, the first of which Mediarent, will be serving the German market. Across the Atlantic, Tracom Inc, one of the largest American distributors of video equipment, will also handle the product: the specially developed NTSC Kaleidolight system has pride of place in the video section of their new colour catalogue. All dealers world-wide have showroom demonstration systems.

Recent Kaleidolight installations range from Singapore to Preston, where Greenhalls have created a spectacular sound-driven video-cube centre-piece at their prestigious new Wall Street venue. Meanwhile, back at base, Kaleidovision's graphic design team are creating a large number of new graphic styles for release in the Autumn. There will, however, be the chance of a sneak preview at PLASA!

## An Unusual Demonstration



Unusual Rigging division Unusual Automation is holding a demonstration of its automated winching and tracking systems skills at Black Island Studios in West London from 14-18th September, to run concurrently with the final two days of the PLASA Show.

Unusual Automation was created almost two years ago to meet the growing demand for precision and repeatability in productions. Since then the company has provided computerised equipment for rock tours by Genesis and Japanese star Yumi Matsotoya, as well as the West End musical 'Crazy for You' and major product launches for car manufacturer Opel in Germany and Spain.

Unusual Rigging director Adam Wildi told L+S: "We want to demonstrate our abilities to the entertainment industry at large because anyone watching a commercial production is unlikely to appreciate the technical complexities."

Unusual Automation has developed its own software packages, and challenges it has met include the operation of Vari\*Lites on a big dipper-style track for the Matsotoya tour (see main feature June L+S). The Black Island demonstrations are being held between 10.30 and 20.30. Interested parties should contact Caroline at Unusual Rigging in the first instance. In case visitors to the PLASA show are wondering why Unusual Automation are not holding the demonstration at the exhibition, the straight answer is the equipment was far too big, and wouldn't fit! Unusual Rigging can be contacted in Stanmore, telephone 081-206 2733.

**FULL LIST OF PLASA EXHIBITORS AND FLOOR PLANS IN THIS ISSUE**

## Beyerdynamic bring on the Names



Beyerdynamic are planning a comprehensive line-up for the PLASA Show. New products on display include the S150, S250 and S350 wireless systems, which are available on all de-regulated frequencies in handheld or lapel microphone versions; the DT150 professional lightweight headphones, with wide frequency range and extended bass response; and the DT190 lightweight communications headset.

Also on show will be ASL Audio Communications talkback system for 'behind the scenes' communication in theatres and concert venues. From the Soundtracs stable comes a string of mixers, including the Solo Live and the new Solo Logic with its on-board automation system, plus the brand new Sequel 2 sound reinforcement desk that features leading edge DSP technology.

Beyerdynamic are on stand A54.

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## Mixing at the Ministry

Following on from the success of their 'New Year Sampler' in January, held at The Rocket club, North London, Soundivision will be presenting the latest of their product demonstration exhibitions at London dance-club venue - the Ministry of Sound. As before, there will be some 20 or more of the top sound and lighting companies from the industry participating, including Abstract, Sound-to-Light, Numark, Martin Professional, Citronic Audio, Vestax (Europe) Ltd, Harman Audio (JBL), Batmink (Lampo and Genius) and Laser Science. "We are presenting an opportunity for the mobile disc jockey to meet the leading name manufacturers and national distributors of the top products on the market - all under one roof - and to demo 'hands-on' style, at the same time," David Graham, Sounddivisions's managing director, told L+SI. The exhibition is scheduled to commence at 2.30pm with special appearances by top DJs Carl Cox, Jumping Jack Frost, Paul (trouble) Anderson from Kiss FM and Justin Berkmann, resident DJ of the Ministry and other surprise PAs throughout the day.

The Soundivision staff, led by Alex Hazzard, will be on hand throughout the day to provide assistance with product information and technical advice. For more information about the event, ring Soundivision on 071-281 8121.

## Veronica Zomertruck

It's a well-established tradition during the summer months in Holland that rock singer Veronica and her Zomertruck tour across the country. Veronica Zomertruck, as it's become known, is a mobile stage fully equipped with all technical facilities needed for live performance. Production company Erik van den Broeke Producties have upgraded the truck for the current season including an increase in the stage area to 14x6 metres. For the third consecutive year, the truck will be equipped with a Stage Accompany performer Series 15kW PA system. This year the monitor and side-fill system of the truck has been upgraded to feature products from Stage Accompany's Leader and Champion series.

## APRS 94

The organisers of the APRS exhibition have announced their plans for 1994. The programme seeks to consolidate the event as a showcase for professional audio technology.

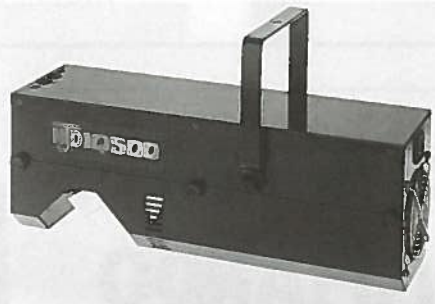
Under the title APRS 94: The One Audio Show, the exhibition will take place at Olympia 2, London and run for three days from Wednesday 22 June to Friday 24th June. For more information contact organiser Philip Vaughan in Reading on (0734) 756218.

## NJD Dozen



NJD are to release no less than 12 new products at this year's PLASA show. However, the most important of these come at the top of the range, with the top six featured here.

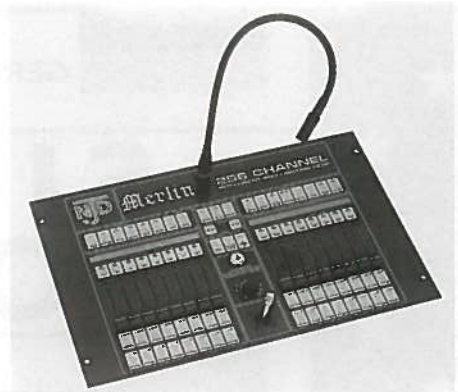
The big brother of the now well-established IQ250, the IQ500 (pictured below), is an intelligent unit with a 400W Metal Halide lamp, seven dichroic colours plus white, seven individually selectable gobos, strobe and black-out facility. It also has DMX input and individual internal sound activation, and comes in a compact housing measuring 514 x 142 x 176mm.



Incorporating touch pad, slider and joy-stick control the new Merlin (pictured above right) features 256 DMX output channels, 1400 scenes and 64 programmes, and according to JND is only limited by the operator's imagination. It is designed to be user-friendly and easy to programme, allowing any channel, scene or programme to be allocated to any slider, whilst any channel or group of channels can be allocated to either the 'X' or 'Y' axis of the joy-stick. Dimming can be allocated to any slider along with sound response or chase speed and step duration programmable in hours, minutes and seconds to any programme. Added to these features are real time programming, sound animation programming, and on-board, exchangeable memory card and a dot matrix display indicating everything from channel brightness to scene names.

A dedicated DMX controller, specifically for the IQ250 and IQ500, the IQ-MX80 features touch pad and joy-stick control for up to 16 individually addressed IQ projectors (with any number of IQs on the same address line). It also has 10 programmes of up to 256 steps each which can be programmed in real time or step by step and with a battery back-up, plus 10 factory preset programmes.

A 250W DMX-controlled, colour changing spotlight, the Chroma 250 features six dichroic colours and white with both black-out, strobe and dimming facilities, and may be controlled by



Merlin, any standard DMX lighting desk, or via the dedicated new Chroma-MX40 controller. Alternatively, it may be left to run through a series of its own built-in programmes, activated by an internal microphone, any number of which can be synchronised together by the addition of a simple jack-to-jack lead.

A brand new effect, the Cyclone, utilises six dichroic mirrors fixed to an asymmetrically mounted, sound activated carousel. The result is a new lighting effect which spins a 'whirlwind' of brilliantly coloured beams at continuously changing angles whilst simultaneously changing direction in time with the music. Up to 10 Cyclones may be synchronised together by the addition of a jack-to-jack lead.

Finally, there is the JL10 strobe. With its 10 joules light output, 0-10v remote input and remote speed control facility, the JL10 can be used as a normal independent strobe, or, when connected to other JL10s, can be synchronised to run through its eight built-in patterns. Also on display will be the new, improved IQ250 MkII.

## DeSisti Classics



Ever conscious of the changing needs of the industry, DeSisti Lighting have come up with a new concept in lighting. Responding to the demand for compact low power spots and soft lighting they have introduced a range specifically designed for small studio environments and location shoots.

Included in the range are the 'Magis' tungsten fresnel, the 'Wyeth' tungsten soft, the 'Rembrandt' daylight fresnel and the 'Raffaello' daylight soft. All are available in 200 to 1000W sizes. With 1000-2000W of controllable light they can achieve what used to demand 10-20000W with savings in both power and A/C requirement.

For outside broadcast and film production DeSisti are launching the brand new 'Remington' 2.5/4kW Par which will get its first airing at the PLASA Light & Sound Show on stand A20.



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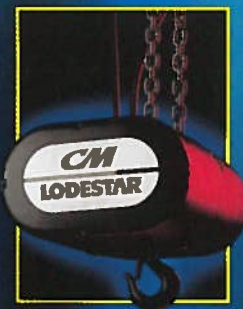
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## Show Shuttle



New products from Shuttlesound at this year's PLASA show include two new power amplifiers from Amcron, the XL600 and XL800. The Shuttlesound signal processing portfolio has been strengthened with the introduction of two digital delay lines from Dynacord, the DDL 102 (1 in 2 out) and the DDI 204 (2 in 2 out or 1 in 4 out). Further delay processing is available from Rane with the new ADD 22 (2 in 2 out). These units will be shown on stand to demonstrate their particular features.

Behringer introduce the MDX 1000 compressor/limiter and the Ultrafex EX 3000 providing sound enhancement with surround stereo capability. The EX 1000-bass enhancer provides digitally synthesised sub-harmonic bass enhancement with limiting and has major application in today's dance music scene plus unique problem solving capabilities. From EV the S-122 stage system joins the S-152 previewed at last year's show. This time a 12" bass unit combines with a true compression driver to provide a high quality, high efficiency full range system or top box when used with the S-181 single 18" MT sub bass cabinet. A new range of low frequency systems update the TL range.

Also on demonstration will be ShuttleCAD - engineering and presentation software designed by contractors for contractors to provide a way of producing sales, presentation and shop, drawings plus engineering information quickly and efficiently. A great tool to secure sales and improve production (see feature this issue).

Shuttlesound will be on stand B188.

**FOR FURTHER DETAILS ON THE SEMINARS PLANNED FOR THE PLASA LIGHT & SOUND SHOW SEE PAGES 90-91**

## Glantre win Contract

Reading-based Glantre Engineering have won the contract to provide a total package of stage rigging, lighting, sound and communication equipment for the major development of the former Empire Theatre into the City of Edinburgh's principal performance venue. The original 1928 site of the 1,950 seat theatre has been extended to create the largest stage in Britain at any lyric touring theatre.

This important project is scheduled for completion in time for the internationally renowned Edinburgh Arts Festival next year. Project manager Mike Rowntree and project engineer Mark Davenport from Glantre Engineering are working on this project in co-operation with management contractors Bovis Construction and Theatre Projects Consultants.

Nothing is being spared when it comes to the stage equipment for this new light in the Scottish theatrical firmament. Stage mechanical hardware includes three orchestra lifts, 84 single purchase counterweight sets, an electrically operated lighting bridge and a loudspeaker hoist. Rear and side stage acoustic doors, safety curtain, sundry electric winches and associated equipment are also part of the stage installation.

Stage and house lighting consists of 508 Strand 'EC90MD-Plus' high specification digital dimmers with a Galaxy Nova lighting control console. In addition, custom working light control, socket boxes and a mix of luminaires from Strand and ADB are being installed.

The house sound reinforcement and effects system is based on a Soundcraft Delta DLX mixer, Crest amplifiers and a combination of loudspeakers involving Meyer, Electrovoice, JBL, Apogee and Bose products.

A full communications infrastructure includes ring intercom, cue lights, MIDI control, hard of hearing systems, paging, show relay and video distribution.

## Light Fantastic



Coe-Tech Ltd, the Northampton-based distributor for Coemar and TAS, are planning another bumper PLASA Show. This year's stand occupies a massive 144sq.m with a dedicated area for clients to talk business.

The light show will be designed and operated by award-winning duo Carl Dodds and John Lindsell and promises to be spectacular. The show will see the UK launch of Versatile, an advanced compact version of Spartan and Multitunnel. It produces seven bright beams in a fan configuration via a 650W halogen lamp or seven tunnel beams from Coemar's roundlux lamp.

Also new from Coemar is a compact aluminium-constructed profile spot named Centro. This unit features built-in shutters and a high quality optical system utilizing either a 300W or 500W lamp. Optional accessories include iris diaphragm and gobo holders. Coemar's Baby Colour is now available in two versions - Pro and Eco - both featuring 10 dichroic colours. Pro is a stand alone unit, whilst Eco is a set of four electronically-linked units. The 10 colours can be selected or rotated at six different speeds. Pro has both fast and slow strobe modes, with sequence effects fully controllable from the sound-to-light unit. Eco creates a sequence effect by triggering the lamp, and is fitted with four manually selectable gobos. Baby Colour Pro and Eco can both be operated by DMX512 or 0-10V analogue desks, or by a dedicated 64 unit controller. New products from TAS include the upgraded Mini-Ultrascan, now featuring a high output MSD 200 discharge lamp with a 2,000 hour life.

Coe-Tech's in house R&D department, in response to customer demand, has developed a range of hybrid products based on the Mini Twin, Swing, Nabila and Dominator effects, which are all to be launched at PLASA.

Coe-Tech are on stand C84.

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## 17 From Selecon



The culmination of months of work, and a significant investment in optical design and new product development, comes to fruition at the PLASA show when Selecon debut some 17 new or improved luminaires.

The new 2/2.5kW Arena range includes three models of zoomspots, two fresnels and a PC. A new ellipsoidal reflector, the result of Selecon's optical modelling software provides over 660,000 candela with a 2.5kW lamp or 637,000 candela with a 2kW lamp in the 9-18° Arena zoomspot narrow. Similar performance is shown by the Arena medium 14-32° over 500,000 candela with a 2.5kW lamp and the wide 20-37° zoomspot. Features include separately rotating shutter planes which provide a range of masking angles and reduce focus time. A new shutter assembly incorporates cast mounting plates and individual brass pressure pads which hold each shutter precisely once set. Access to the lamp and lens is simple via a swing down extruded tray. The High Performance fresnel using a 250mm lens, the Theatre fresnel with a 200mm lens and a PC complete the range.

New model Zoomspot 1200s will also debut at PLASA. Significant increases in light output of up to 30% have been made over the range. The new shutter system developed for the Arena range has been incorporated into the 1200 range, along with a new rear casting and outboard safety microswitch.

The success of the Performer 1200 MSR followspot has prompted Selecon to make further developments in this field. On show will be the Chorus 1200 Quartz (a 2/2.5kW tungsten version of the Performer) and the Performer 1200 MSR itself. The next addition to Selecon's followspot range is a short-throw version of the 1200 MSR which will be available later in the year.

Selecon will be on the AJS stand, A58.

## Electrosonic US Move



In a bid for more space, Electrosonic Systems Inc have recently relocated to new premises at 10320 Bren Road East, Minneapolis, MN 55343, USA.

The new 25,000 sq ft building brings under one roof Electrosonic's USA administrative headquarters, warehousing, videowall product sales, Procube assembly and engineering support. The high bay engineering facility includes a large wiring and assembly area, and is large enough to accommodate the full scale testing of videowall and projection systems. It supports the sales of both standard video display product, and the building of special audio visual systems. Electrosonic Systems Inc is a wholly owned subsidiary of Electrosonic Ltd, and has been established in the USA since 1972. While it imports Electrosonic Picbloc image processing and other control equipment from the UK, it is now a net exporter from the USA.

## Golden Scan Award

Only a few months after its entry into the market, Golden Scan 3 has won its first international award.

In mid-June at the Metropolis Hotel in Birmingham, Golden Scan 3 was awarded the Molson BEDA Lighting Award, during an official reception. Renato Ferrari, Clay Paky's Italian sales director, collected the award on behalf of the company.

## Nigerian Mastersound

Based in Lagos, Nigeria, Mastersound is the first professional sound re-inforcement company to be set up in this part of the African continent. Chief Chris Okunowo, company chairman and originator of the project, sees the operation renting quality sound equipment and services throughout Nigeria, Ghana, Cameroon, the Ivory Coast and Senegal. A full rehearsal facility is included in the overall plan.

Backed by Laolu Akins as systems co-ordinator, Peter Mbanefo providing engineering and Ike Okolue on the technical side, the company can provide systems for events ranging from music concerts to garden parties. The main system is an Electro-Voice MT2 powered by Amcron with Soundcraft consoles. The package was put together in the UK by Surrey-based Shuttlesound and it incorporates all the features of current technology. Mastersound can be contacted at Falemi House, 250 Ikorodu Road, Obanikoro, Lagos, Nigeria. Telephone 234 1 263 2849.

## R&W Line-Up



Raper & Wayman are this year concentrating their efforts on key products from four manufacturers.

The A500 Series compact PA loudspeakers from Ramsa are handled exclusively in the UK by R&W and include the A500 high frequency unit, the A550 low frequency unit and the SP2 crossover: IRP's system 41 is a single frame signal processing system with modules which include crossovers, equalisers, delays, automatic and manual mixing distribution amps, automatic gain control, VCAs, limiters and matrix switching. Altec offer selection of installation equipment from one of the biggest ranges in the trade, and finally from Dawe Instruments, there will be an SPL meter, a noise meter and a personal dose noise meter.

## Opportunities in the Middle East and Far East

*Inova is a company specialising in the distribution and turnkey installation of sound, lighting, laser, video and A/V equipment throughout the Asia/Pacific region. We are looking for entertainment industry professionals to fill a number of posts in our Dubai and Singapore offices.*

*Tertiary technical qualifications would be an advantage in Dubai, but essential in Singapore.*

### Regional Sales Manager (Singapore)

*The position of Regional Sales Manager is to target and develop sales opportunities in S. E. Asia for Inova's products and services which include:*

**Entertainment systems:** including sound, lighting, video, laser equipment.

**Professional systems:** including boardroom A/V concepts, housing dimming systems.

**Services:** including operational consultancies, personnel, video and audio software, technical maintenance.

*The applicant should have extensive experience in dealing with a corporate clientele. It is also important that the candidate be able to demonstrate at least five years experience in negotiating high value contracts.*

*As the position involves extensive travel throughout Asia and Australasia, the position may be more suited to a single person.*

### Production Manager (Dubai)

*The post involves responsibility for setting up and running a new production department located in Inova's Dubai office. The job will entail the co-ordination of design, crewing, equipment and budget for sound and lighting rental. The area covered by the post will include the Gulf, Middle East and West Asia.*

*The applicant should have extensive experience in setting up productions for concerts, product launches and exhibitions. It is also important that the candidate be able to demonstrate at least five years experience in managing at least one major element of the sound and/or lighting production industry.*

### Product Sales Executive (Singapore)

*The position of Product Sales Executive is to target and develop sales of Inova's high end distribution products including theatre lighting, dimming and control systems; audio-visual products and specialist systems.*

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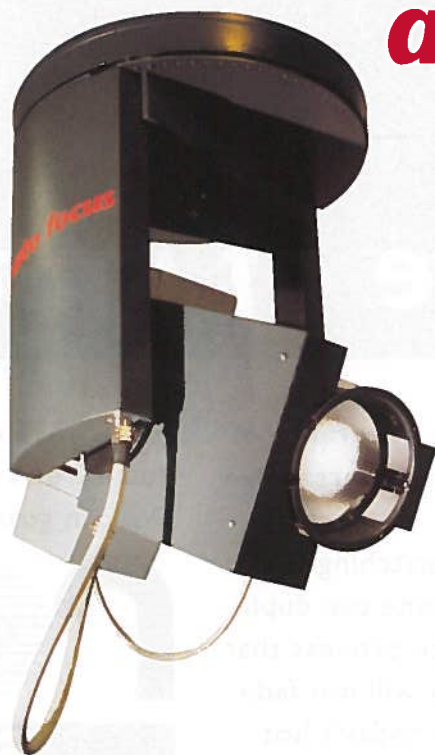
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# High Jinx on First Night of PLASA



The first day of the PLASA Light & Sound Show promises to be seen out in style (depending on your definition of the word). BEDA, Disco Mirror & Licensed Design and EDR are staging an evening of fun and frolics in association with PLASA at Rank's flagship venue, Le Palais in Hammersmith.

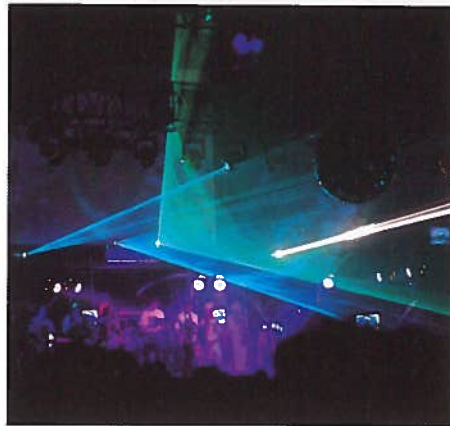
Festivities kick-off at 7.00pm on Sunday 12th September and run through in true carnival style until 11.00pm. The 20 strong in-house dance troupe is going to be working hard with three appearances where they will be giving specially choreographed material its first run through. Other acts to look out for include Hot Flesh, a tantalizing fire eating act, Grupo de Dancea Alegria, an exciting Latin American dance extravaganza which promises to get even the most obstinate foot tapping, while the Blobbendales and Penthouse Review should cause hot flushes after the watershed.

For those into audience participation a trial run at bouncy boxing, pole jousting or a jaunt on the bouncy castle should promise to liven up the evening. A unique light show is also promised courtesy of Pulsar Light of Cambridge while side shows which are being kept well under wraps at present should prove a popular feature with all those who have the nerve to turn up.

Secured promotions include Max cider and Edison, Miller, Sol and Fosters beer. There are many more brands in the pipeline and Le Palais will be the place to be for a good time on the 12th September.

There is a ticket hotline operating for any advance enquiries. Call Amy Wright at Disco Mirror on 061-429 7803. You can also pick up tickets from the Disco Mirror stand on the first day of the PLASA Light & Sound Show.

# Ravenous for Technology



During the dark days of recession it has often been the rave business which has kept rental houses going and, as important, it has kept the punters dancing. What has been significant is the new dance scene's seemingly insatiable appetite for the latest technology and the vast quantities in which it consumes that equipment. Witness a recent scene at Lydd Airport, now billed as International, where world dance promoted their all-night warehouse party in the main hangar.

World Dance, whose slogan 'out of the darkness into the light' gives a clue where they are coming from, issued an eight page full colour brochure for the event with an entire page of ticket agents all over the South East - a far cry from the secret locations and muddy fields of yesteryear! In it, an entire page is devoted to the equipment billing, which reads more like the run down of a major rock show than a party near the Kent coast. Admittedly a giant party - 7,000 were expected.

DLD Lighting were responsible for co-ordinating the equipment, though much of the kit came via The SpotCo and Samuelsons. Among the entertainment technology proudly listed were 72 Vari\*Lite VL5s, plus eight each of CP Goldenscans and Superscans, and the same number of Opti's StrobeFlowers and Terrastrobes. What they don't say in the programme is that all the automated lighting was run from a Wholehog desk, Chris Craig presiding, with help from Flying Pigs' Tom Thorn. Lasers were provided by both Laser Creations and Laser Magic.

Sound was provided by two massive EAW sound systems erected on purpose-built platforms specially designed to give maximum volume throughout the venue, producing 100K of surround sound. There was also a lot of hype about video and the video artistes performing. As well as his own kit, Video co-ordinator Daz Jameson also brought in Hugh Roberts and the Xylo crew with their Turbine control system. For transmission there were 24 monitors, a Barco 5000 LCD projector and two subsidiary LCD projectors. Sources were laser disc, VCR, Fairlight and Daz's pet chromascope. The rest of the story is told in our exclusive pictures from the event.

T.G.



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## ShowCAD Experience

When the Aussies set about creating a national 'Experience' at Melbourne's Southgate Arts and Leisure Precinct, they turned traditional concepts upside down to show Down Under in a different light. Not for them a dark ride, or walk-through heritage exhibition, or even a motion theatre, instead, something which combines elements of all three, called 'SensorVision', was created.

SensorVision is a sit-down theatre experience for 105 people at a time, featuring a 50 minute show which combines wide screen multimedia techniques with digital audio processing, temperature change and scent emissions, to give the presence and feel of a 'real' encounter with the pages of history. "Each person who sees 'Experience Australia' should feel as if they are present in the actual environment, conversing with the people of the time, at that moment of history," says producer Marcus McCartney.

24 Ektapro 5000 slide projectors and three CRT projectors provide the wide screen images, while a Tascam M2516 16 track sound console delivers digitally recorded voice, music and SFX tape via 8-channel surround sound to numerous points in the theatre. Pyrotechnics, strobes, and smoke machines are also used while nine different aromas, together with steam, smoke, and hot air are ducted to all the rows of seating. There are also 24 channels of complementary lighting effects.

Local firm, The Staging Company, who developed the lighting and special effects, gave control of their entire set-up to a British-made control system the 1,024 channel ShowCAD, which relies on dependable PC technology for its power and memory, and an expansion card and exclusive software for its functionality.

In this case its ability to read timecode was essential. "ShowCAD has handled every single cue precisely since the first day of installation, without hitch or fear of operator error," says Terry Penman, from Staging. "The AV operator simply turns on the power to the computer each morning, ShowCAD automatically loads the appropriate lighting plot and SMPTE script, then waits for the incoming timecode from the main tape. Then away it goes!" In typical Oz style, the events depicted range through the arrival of the convict ships, the settlers hut, the mines and the goldfield pub, the wool shed, bush fire, the beach and so on. With Southgate Precinct attracting 8m visitors annually, 'Experience Australia' can hardly miss.

The ShowCAD expansion card and software, developed by Axon Digital Design in the UK, will run on any PC from 386 up and is a comprehensive lighting control package providing many tools to simplify the task of programming complex lighting sequences. One of these, to be launched in the latest software version at this September's PLASA Light & Sound Show in London, enables the user to create personality screens, which emulate the function of numerous different brands of automated luminaires. The package is distributed world-wide by Cerebrum Lighting, and in Australia by Coemar Desisti Australia Pty.

## Tracer 4000



Italian manufacturer Griven will use the PLASA Show to launch their latest outdoor effects luminaire. The Tracer 4000 generates 15 beams in a rotating cone with a beam angle of 10 degs, which can be scanned through 170 degs and mechanically tilted by 35 degs to the horizon. It can be operated remotely, via four channels of analogue which give control of the shutter, scan excursion, scan rate and speed of rotation, or set by hand for automatic operation. The light source is a single-ended HMI 400 with a light output of 410,000 lumens, 500 hour life and a colour temperature of 6000K. Griven claim that the beam can be visible for up to 15 to 20kms, depending on conditions. Forced air ventilation regulates the internal heat.

Griven can be found on stand C34.

## Laser Games

Laser Grafix have been engaged to provide an exciting new dimension to the games arena of the Acorn World show at the Wembley Exhibition Centre, October 29th - 31st this year.

Acorn 32-bit computers, featuring ARM 3 RISC processors, can be found at the heart of all Laser Grafix control systems, whether they be destined for touring, trade shows or permanent installation. At the exhibition Laser Grafix will be showing some stunning effects which should pep-up the presentation in the games arcade at the show.

## Combined Force

Roland, the electronic musical instrument manufacturer and co-sponsor of this year's Disco International Awards, have announced that they will be at PLASA, sharing a stand with Soundivision. Roland's managing director, Brian Nunney, told L+S: "The DJ-70 Sampling Work Station is just the first of many such products and we have to be at PLASA if we are at all serious about addressing what is, to us, a new market. Sharing a stand with Soundivision will allow us to draw on their experience and gives us an outlet for sales generated as a result of the show."

## ATC/Phoenix Link Up

Loudspeaker manufacturers ATC have recently appointed Southend-based Phoenix Sales & Marketing as distributors of their professional drive units.

ATC have established a reputation for themselves over the years and their systems can be found in many major studios world-wide, in theatres in London and Broadway, and in big name Jazz clubs such as Ronnie Scotts in London. The Phoenix/ATC partnership will endeavour to bring these products to a wider audience.

## Autograph Kit

Autograph Sales will be exhibiting a comprehensive selection of high performance kit on Stand B194 at PLASA 93.

Meyer Sound loudspeaker products will be extensively featured, with several models making their first appearance, including the MSL-2A and the UPL-2. The MSL-2A is an arrayable enclosure, offering wide dispersion, very high clarity and low distortion, whilst the UPL-2 is a bi-amplified and compact design, featuring Meyer's patented horn driver for smooth performance. The Meyer MPS-3 Series of ultra-compact enclosures will also be on the stand.

On show for the first time with Autograph is the Clear-Com range of intercom systems, which are used extensively throughout the theatre, leisure and live sound industries. The products range from the industry-standard Party-Line belt packs and main stations, to the advanced Matrix-Plus digital intercom system.

Also introduced for the first time by Autograph is a new range of sleek black microphone stands from K&M, including the pivotable and height-adjustable model 26070.

The Meyer products will be supported by examples of the ATM Fly-Ware range of loudspeaker rigging hardware. A selection of ancillary equipment will be on display, specially manufactured by Autograph Sales to complement Meyer Sound products. These include purpose-designed equipment interface racks, which contain circuit-breaker and power distribution units, specified to very high engineering standards.

Autograph Sales will also be exhibiting the full range of Milab microphones, together with new Micron radio microphone equipment, including miniature switchable frequency transmitters and a new type of diversity receiver. Sophisticated signal processors from BSS and Klark-Teknik will also be shown, complemented by a selection of QSC power amplifiers.

The Autograph Sales team is also providing a little extra support to PLASA enterprise this year by providing sound equipment for the well-established PLASA seminar programme, and for the in-hall Awards announcements. The small PA system for the seminars will comprise a combination of Meyer Sound MPS-355s and Milab table microphones.

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Grand Master 100% Memory left: 81% Sub Page 1

| Cue List | Up | Down | Wait | Link | Follow | Label | Submaster List |
|----------|----|------|------|------|--------|-------|----------------|
| Cue/Type |    |      |      |      |        |       | Sub x Label    |
| 95       | EF | 2    | 3.5  | D    | 15     |       |                |
| 97       | EF | 1    | 1.5  | D    | Hold   |       | FL             |
| 98       | EF | 2    | 3    | D    | 13     |       | FL             |
| 99       |    |      |      |      |        |       | FL             |
| 100      |    |      |      |      |        |       |                |
| 101      |    |      |      |      |        |       |                |
| 102      |    |      |      |      |        |       |                |
| 103      |    |      |      |      |        |       |                |
| 105      |    |      |      |      |        |       |                |
| 150      |    |      |      |      |        |       | 42             |
| 151      |    |      |      |      |        |       | 60             |
| 152      |    |      |      |      |        |       | 83             |
| 200      | EF | 0    |      | D    | Hold   |       | FL             |
| 250      |    |      |      |      |        |       |                |
| 400      |    |      |      |      |        |       |                |
| 450      | EF | 5    |      | D    | Hold   |       |                |
| 550      | EF | 5    |      | D    | Hold   |       |                |
| 556      | EF | 0    |      | D    | Hold   |       |                |
| 700      |    |      |      |      |        |       |                |

Folder A/B Cue 2 Folder C/B Cue 55  
100% Complete 100% Effect Rate 56

# ARRI

| Cue/Type | Up | Down | Link | Follow | Label |
|----------|----|------|------|--------|-------|
| 55       | EF | 2    | 15   | 3.5    |       |

Select channel numbers

| Cue/Type | Up | Down | Link | Follow | Label |
|----------|----|------|------|--------|-------|
| S1       |    |      |      |        |       |
| S2       |    |      |      |        |       |
| S3       |    |      |      |        |       |
| S4       |    |      |      |        |       |
| S5       |    |      |      |        |       |
| S6       |    |      |      |        |       |
| S7       |    |      |      |        |       |
| S8       |    |      |      |        |       |
| Flash    |    |      |      |        |       |

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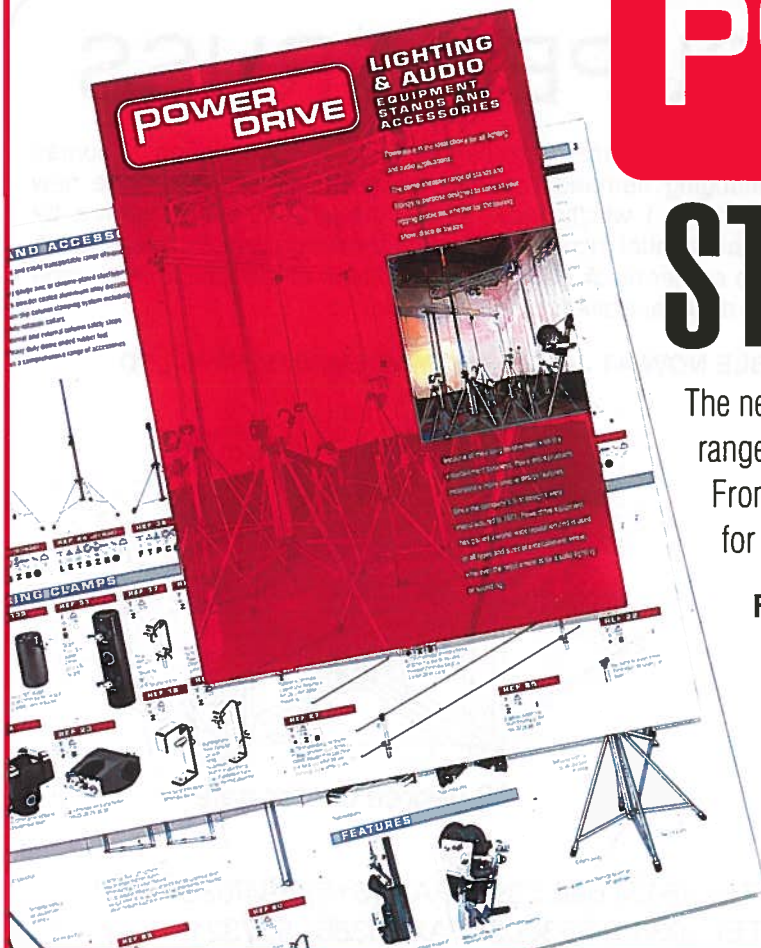
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## Double Decker



Glantre Engineering's stand at PLASA will be an impressive bi-level construction assembled from Steeldeck staging.

A new rigging control system from Hoffend and Sons Inc will be seen in Europe for the first time at the Show: the computerised Flymaster Plus offers the user precision manoeuvring of motorised rigging equipment.

It can control up to 256 fixed speed motors and incorporates direct manual control allowing motors to be sent to a target position to an accuracy of 6mm. Other features include a battery backed-up memory, digital position encoders, multiplexed control loop, video displays of stage or presets and a fully redundant emergency stop system.

There will also be 'hands on' demonstrations of 'Stage Manager' from Richmond Sound Design. This show control package includes hardware, software and MIDI interface to provide a complete solution for centralised control of all technical production elements. This system has been employed in a variety of entertainment venues and will also be utilised on board Oriana, P&O's new superliner due to go into service in April 1995 (see news, April L+S).

Glantre are on stand A82.

## Lightronic Move

Lightronic Licht & Lampen, the German distributors for Multiform Lighting, Cloud Electronics, Penn Fabrication, Visual FX and The Effects Company amongst others, have moved to a new warehouse facility which will give them 800sq.m of storage space, with a further 200sq.m dedicated to a service area.

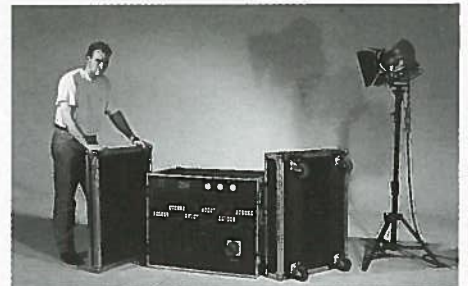
The company can now be contacted at Stenzelring 29, D-21107 Hamburg, Germany, telephone 49 40 753 4054.

## SmartRack Install

L T Engineering, part of the Lighting Technology Group, have been busy recently installing SmartRacks up and down the country. The Charter Theatre, part of the Guild Hall Centre at Preston and the Royal Theatre, Northampton have recently joined London's Victoria Palace in taking advantage of Arri digital dimming. Now Manchester Royal Exchange Theatre has joined them.

The theatre has a very heavy touring programme so it makes good economic sense for them to have their own basic lighting equipment as well as everything else needed to put on a show - even down to portable seating. Their tour dates take them to venues not normally used for staging theatrical presentations so the company tend to rely on their own resources, including a rig. The basis of the touring system is four separately flight-cased Arri SmartRacks, containing 36 2.5kW hard wired dimmers. Each case has front and rear removable panels, the rear panel having four wheels to help get-ins. The rear panel houses the DMX input and output, using five pin XLR connections. The mains input is by 125 amp three phase appliance input connectors, and the rack is protected by a 125A three phase MCB (160A is available as an option).

A 72-way load patch in each case is paired to two 3-pin patch lines. Load, neutral and earth are transferred when patched. Dimmer outputs are to 180 3-pin in line sockets and the load patch output terminates in 18 19-pin Litton connectors (compatible with Socapex). Patch leads of various lengths are provided with each rack, and each bank of four dimmers is on the same phase, i.e. dimmers 1-4 on phase 1, 5-8 on phase 2 and 9-12 on phase 3. A demonstration unit to the above specification will be shown on the Lighting Technology stand (A128) at the PLASA Show.



Lighting Technology's David Woodman with the Arri SmartRack system.

## Formula 20



In response to customer demand, Formula Sound will have a prototype of the latest eight-channel mixer - the FSM8 - on show at PLASA. This year marks Formula's 20th year in business and the company will be celebrating this throughout the show, and in particular on Tuesday 14th, the official anniversary. On demonstration will be the full range of mixers, the award-winning PM90 and System 2000 modular mixers, the AMX6, the AVC2 noise control unit, the SE2 system equalisers and QUE-8 headphone foldback units. Formula Sound are on stand A137.

## CAD Software



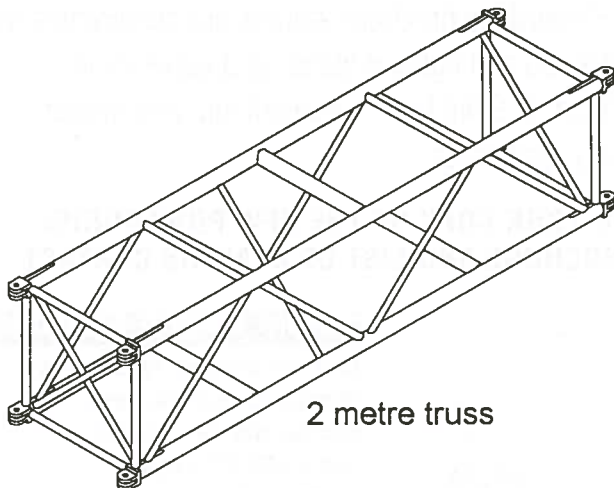
Modelbox will show the new MacLux Pro lighting rig software for which they are exclusive European distributors. Also on stand will be Flyman, a flying management programme which generates a 3D 'SmartPlan' of a venue, noting the specification and location of all suspension equipment. It automatically checks for clashes and overloads, as well as allowing the user to define the positions of 'deads' and preview flying cues. There'll also be Autolight Pro, an upgraded version of the original Autolight software with the latter available cut-price at the show. Modelbox are on stand A100.

# Thomas

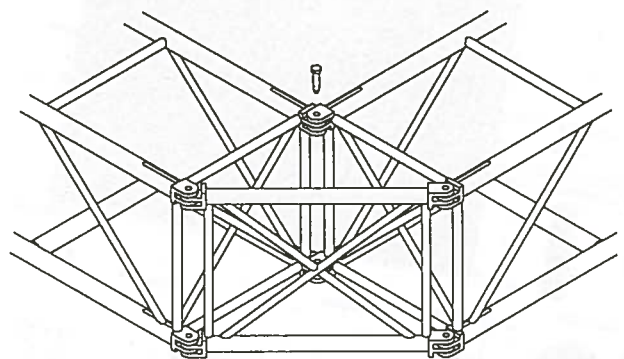
## SUPER-TRUSS

Introducing SUPER-TRUSS, the newest innovation in truss systems from James Thomas Engineering. Thomas has rethought truss design to encompass the ever changing demands of the entertainment industry. The new design features double fork connectors ( patent applied for ) which allow for a unisex truss which cannot be assembled together incorrectly. This design provides a substantial increase in the loadbearing capacity over the old design. The SUPER-TRUSS system does away with the corner block as we know it. Think of the saving in storage and truck space plus assembly time and you will find the new generation of truss is here.

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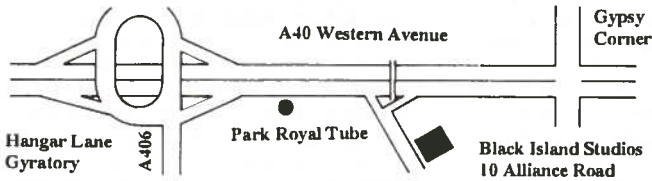
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# Seminars Start in Controversy and Finish in Colour



Visitors to the PLASA Show seminars are guaranteed a thought-provoking first session at 11.30 am on Monday 13th September. The title is **Control Transmission: are we stuck in an 8-bit timewarp?**

Chaired by Derek Gilbert of Glantre Engineering, the session will see DHA lighting chief engineer Philip Nye argue that PLASA should oversee the introduction of a universal lighting protocol. Other panellists, including Paul Mardon of Pulsar, believe that a 16-bit protocol would just be over-engineering. Nye advocates a 'fresh approach' to the problem and calls for detailed technical analysis and an identification of the operator's requirements before a new standard is defined. Although he has his own hit list of system capabilities that should be included, Nye suggests that a "working party under PLASA's umbrella begin by drawing up a list . . . without reference to existing standards." Nye first made the issue public in his Viewpoint for this magazine in the July issue. Since then PLASA Standards Officer George Thompson has responded by pointing out some of the pitfalls in what would be an enormous project, involving a high degree of co-operation between rival manufacturers. Pulsar technical director Paul Mardon, who designs all the electronics for Pulsar and Clay Paky told L+SI he believed in "good value engineering and not specmanship for the sake of it". It was possible to achieve everything the user required using existing PMX protocol, Pulsar's own 9600 baud standard. Also putting their perspective on the issue will be Adam Benette of Arri, Steve Terry of Production Arts, both of whom have written Viewpoints on the subject in recent issues of L+SI, and Marco Van Beek of Vari-Lite.

Following will be a seminar entitled **Green Temperamental and Spiky: all you wanted to know about discharge lamps but were afraid to ask.** Chaired by John Watt, the seminar will feature panellists Don Hindle of CCT, Eddie Ruffell of Lee Filters and representatives from a number of lamp manufacturers. The final seminar of the day will cover **Technical Training for the Entertainment Industry.** John Faulkner will chair the session and has panellists Tony Bond of the National Theatre, Roger Fox and Joe Aveline of the AETTI. The seminar is timely as competence, and therefore technical training, has become mandatory with the introduction of the Health & Safety at Work Regulations 1992. Entertainment managers are required to minimise or eliminate risks through good working practice and well thought out

health and safety policy. Before very long, insurance premiums may be affected by the level of staff training. Having a fully trained staff will become a financial as well as practical necessity. The seminar will attempt to unlock some of the mystique surrounding the issue with an overview of what is currently available. It will also provide the opportunity for delegates to air their own views on how NVQs will work for the industry.

On the second day of the Show, the seminar session starts with a vital issue for anyone involved in the sound installation and contracting business - the proposed British Standards. Opening at 11.30am, the session is entitled **Sound Installs and BSI; have we got standards to work to?** "It should be a good session, because this is an issue the industry needs to wake up to," chairman Tim Frost told L+SI. "The draft is limited in what it covers, as the industry has not been able to get its message across. People have tended to have been so busy surviving that they have not addressed important issue like standards - so the things they know have not ended up in the draft paper. The document BS6259 is detailed at more than 150 pages, but there are worries that current practices and technologies are not adequately covered. For instance, attention is given to the now virtually obsolete multi-cellular horn, while no real mention is made of the mixing console, still less digitally networked or computer controlled systems. Of the draft, Frost continued: "It could be an industry bible, but as things stand, it is more likely to be left on the shelf." Panellist Vic Dobbs from Glantre Engineering said that his concern was that although it was possible to create standards of workmanship, "it is very difficult to apply standards to performance, because there is an element of personal preference." Dobbs said he was also worried that clients would not be aware of standards and that they would tend to be ignored unless a qualified consultant were involved. The other panellists at this important session are Mark Burgin from Shuttlesound, Alex Garner from Tannoy, Ken Dibble of Ken Dibble Associates and Ivor Green of Creative Technical Services.

Sound issues continue at 2.30pm with **Sound Control: out of the studio and onto the road.** The seminar deals with the increasing degree of automation used to control sound systems in live presentations and theatrical productions. Speakers include Wladyslaw Wyganski of Out Board Electronics, Mick Brophy of Amek and Roland Hemming of Theatre Projects.

**Video Live** is the title of the seminar at 4.15pm. As the title suggests, the seminar looks at the increasing use of live video coverage and giant screen projection in concert and corporate presentation. The speakers are Malcolm Mellows of Melville Presentation Services, Rolling Stones lighting designer Patrick Woodroffe, David Crump of ScreenCo and Graham Burgess of Sony.

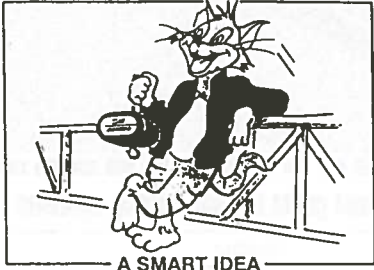
The final day of the seminar programme looks at the past and present, with plenty of thought-provoking analysis of current trends in-between. **Automated Lighting - the next move** is chaired by Tony Gottelier. "Basically, it's a crystal ball exercise," Gottelier told L+SI. "The lighting designers will tell us what's on their wish list." This will be followed by Jim Douglas of Unusual Automation, who will give details of the latest developments in computer control and robotics for moving lights. Daniele Canuti of FLY will also be looking at the latest in automation technology. The seminar starts at 11.30am.

The **Robert Nesbitt Interview** promises some fascinating historical insights from a man whose career in lighting design spans seven decades. Interviewed by Graham Walne and introduced by committee chairman Joe Aveline, Nesbitt was recently made President of the Association of Lighting Designers in recognition of his contribution to the industry. An inspiration to generations of designers, Nesbitt set the standards of presentation and elegance by which others were judged with his spectacular revues at the London Palladium, the London Coliseum, the Hippodrome, the Talk of the Town and the Dunes Hotel, Las Vegas. In particular, his work for the Talk of the Town Theatre Restaurant and the Dunes Show Room established a model for all nightclubs which followed. The 25 Royal Variety Performances mark the golden age of this event and such is the enduring quality of Nesbitt's work, he is still consulted about many royal and gala occasions. The interview begins at 1.15pm.

**Colour - will dichroics ever replace gel?** follows at 2.30pm. Looking at both current trends and future developments, the session is chaired by Michael Hall of Rosco. The panel consists of Donald Cameron of OCLI Optical Coatings, Jim Rees of Balzers, Eddie Ruffell of Lee Filters and lighting designer Durham Marengi.

**The Seminar booking form can be found on page 91 of this issue. You can book at the Show on the L+SI stand, A165.**

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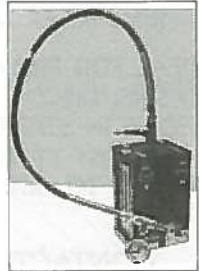
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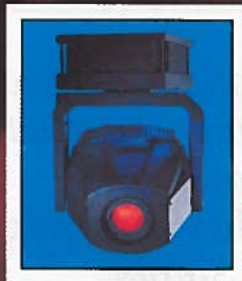


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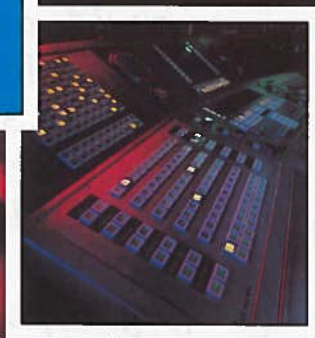
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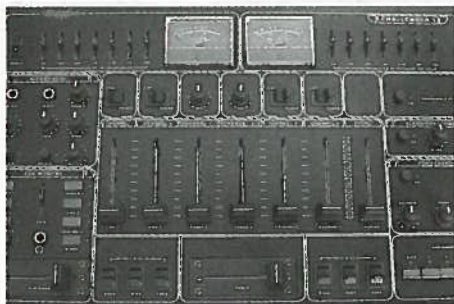
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## Intimidating Mix



Aggression seems to be the trade mark of newcomer mixer manufacturer Intimidation. The Challenger 1 mixer is loaded with special effects features with such war-like names as 'Kill' and 'Slaughter Chamber'. This is obviously one 'tank', mercenary DJs will want to get their hands on to blow a few heads off.

The 'Kill' switches enable cut out of bass, mid and treble frequencies; the 'Slaughter Chamber' staggers the incoming vocal, for effects when mixing or scratching, or in combination with the 'Echo' facility. There is also a 'Pan' control for moving and mixing two inputs between speakers and Send/Return for use with samplers etc.

Other operating features are: eight music channels, crossfade, eq on inputs, two pairs of outputs balanced XLR and unbalanced phonos, high power headphone monitoring and good looking VDUs. The company also claim that the cross fader, likely to get a considerable bashing in such a unit, is replaceable in minutes and a spare is provided.

This looks like a weapon that could cause some serious damage on the dance-floors of Britain. If you want to see it for yourself, Intimidation will be showing the Challenger at the PLASA Show on stand B49.

## Adam Hall One-Stop

Adam Hall Limited, known for their small parts (for cabinet and case manufacturers) have recently expanded their pro-audio distribution to provide a complete one-stop-shop for all PA and installation requirements. Fane and Wharfedale are now available exclusively from Adam Hall to complement the existing range of McCauley drivers. Fane Acoustics UK, a division of the Adam Hall Group, will provide off-the-shelf delivery of all products from the Fane catalogues at manufacturers prices. The new Force series enclosures from Wharfedale are now available.

Adam Hall are also now handling BGW Power Amps. A new series of powerful, lightweight two unit general-purpose power amplifiers have been added to the range and a new competitive pricing structure has been introduced for the touring amps such as the GTA and installation models such as the 7500T.

The SPA signal processing amp is suited to large installations and has proved popular with major motion picture studios in the United States such as Warner Bros, Universal, Twentieth Century Fox and Paramount. Adam Hall have also taken on RSP Technologies Circle sound systems for the film industry.

## Spectrum Colour Changer



The Spectrum Colour Changer will have its first public viewing at the PLASA Show this month. The changer has been designed from the ground up for the professional touring user, offering compatibility with other leading colour changing systems but with a build quality and colour cassette facility which makes it ideal for the touring market. You can see Spectrum in action on the stand of AC Lighting, A80.

## Show Catalyst



Midnight Design will be releasing their low cost portable appliance testing software 'Catalyst' at PLASA '93. It has been designed to accelerate testing, simplify record keeping and overcome the problems associated with multiway items (such as multicore mains cable, mains distribution systems etc) and equipment that needs testing intervals based on the number of hires completed rather than the elapsed period of time.

Midnight have produced the software in response to companies' needs for reduction in the time taken to test and to manage the information produced. The software satisfies these requirements and allows companies to keep their houses in order with the minimum of fuss. The software has been designed to use an IBM PC or compatible running Microsoft Windows. Each item of stock has a single bar-code that identifies the type of equipment and tests to be carried out and provides a unique serial number. Existing type 39 bar-codes can be supported.

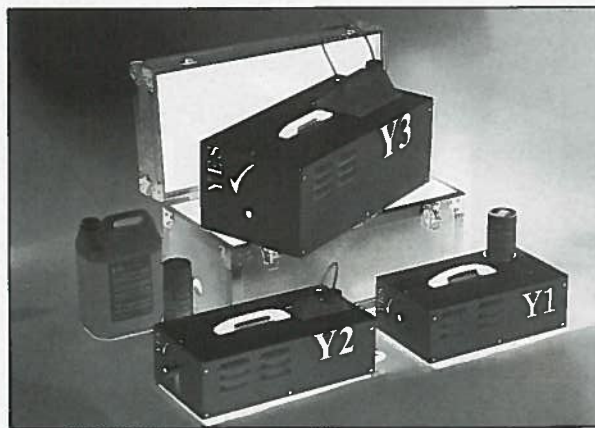
The computer has a bar-code reader attached which identifies the equipment, selects the appropriate tests and takes over the control of the PA tester. Information is automatically entered by the PC where possible and the computer logs all the tests and maintains the database containing the bar-code versus test code and item types etc. The operator can call up and print, for example, the test history of any item, show which needs repairing, print certificates for all equipment on a particular job or remind the operator which units will need inspecting within the next few weeks. Service records can be kept and the software keeps track of where the item has been and how often the item has been out on hire. It also prints delivery notes to provide basic stock control facilities and management information.

Midnight Design are on stand B196.

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## Stage Light Design Celebrate 10

This month marks the tenth anniversary of Stage Light Design. Founded by John Rinaldi, the company specialises in lighting design for tours and corporate presentations. The anniversary coincides with the company's plans for expansion which will see it acquire additional premises in Wimbledon, to add to its existing 900sq.ft. As part of this move, John Rinaldi is also looking to take on a full-time lighting designer to cope with the increasing workload.



John cut his teeth in the early years as a lighting designer and is known for his work with Everything But The Girl. When he set up the company it was to assist with his touring work, but by the late eighties, he made a conscious move away from touring to the more commercial fields of the exhibition and conference markets. Over the years the company has acquired a range of equipment which includes a working stock of just over 300 standard theatre lanterns, together with 100 plus low voltage, halogen, floods and architectural light fittings, trussing, dimmers and Pulsar and Celco control desks.

Since its foundation, the company has notched up an impressive client list and recent projects include a large presentation in Montreux for Abbey Life, the Porsche Show in Reading, lighting for the Philips exhibition stand at the SECC, Glasgow and more recently, the Citroën stand (pictured above at the Ulster show) and also at the Fleet Motor Show, which John believes was possibly one of the first uses of the Clay Paky Golden Scan 3 - a product which he has now added to his hire stock, together with Clay Paky Miniscans. In the last couple of months, the company has successfully bid to light the moving display on the approach to Terminals 1,2 and 3 at Heathrow Airport.

In addition, Stage Light Design has built up a steady following at the 'small' end of the market and undertakes permanent installations in schools and smaller theatres. The company's next target is NICEIC approval.

## RCF Introduce Monitor 8



RCF are now entering their third year of trading in the UK, and on display at the PLASA Light & Sound Show will be the Monitor compact loudspeaker systems. The Monitor Series is a compact Acoustic Speaker system, which comprises the Monitor 5S, the Monitor 4 and 4T.

On show for the first time in the UK will be Monitor 8 which was seen in prototype form at this year's SIB/Magis in Rimini. The new Monitor 8, like the other two in the series, is a high powered compact unit and is the result of an extensive R&D programme conducted by RCF to introduce a speaker capable of producing deep controlled bass and extended high frequencies without sacrificing efficiency.

RCF can be found on stand B172.

## BKSTS Autumn Programme

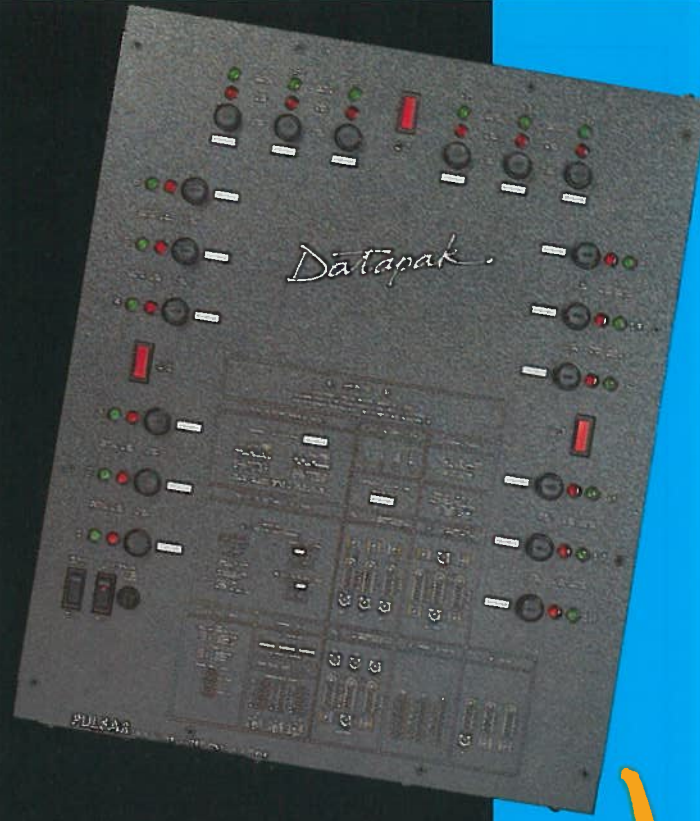
The BKSTS has announced its autumn programme of training courses and workshops covering the technical areas of film, television and cinema exhibition. These events are open to members and non-members alike and offer particularly good value to freelancers who can benefit from a special discount rate on some courses, made possible through the Freelance Training Fund.

Among new courses for the autumn are a series of hands-on workshops as part of the Wildlife Film-Makers Symposium being held at Harper Adams Agricultural College, Shropshire. The workshops, which are intended for beginners, will include 'Shooting and Editing on Video', 'Introduction to 16mm Cameras', 'Film Editing', 'Underwater Photography' and 'Video & Location Sound Recording'. Sponsorship has been provided by Arri (GB), Panasonic Broadcast Europe and Mel Worsfold. Admission is free of charge to those who have enrolled for the symposium.

A special showcase of interest to production staff will take place in early September at Pinewood Studios. Entitled - 'If it Shoots, Move It', it will take the form of an open day and aims to combine a social event with an exhibition of interesting and unusual camera mountings and accessories.

For those who wish to learn more about the technology of modern video production a series of evening lectures is being planned covering an introduction to video technology, video recording and tape formats, production techniques, post-production and TV systems towards the year 2000. These are being held at the School of Communication, University of Westminster in central London and commence in October.

For further details on all these courses contact Karen Kendon on BKSTS Training 071-242 8400.



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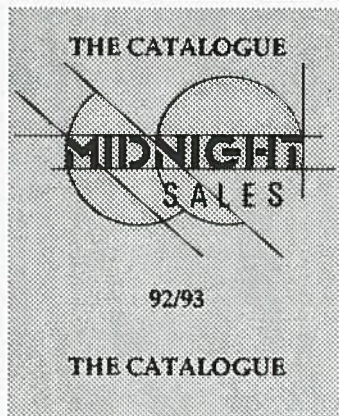
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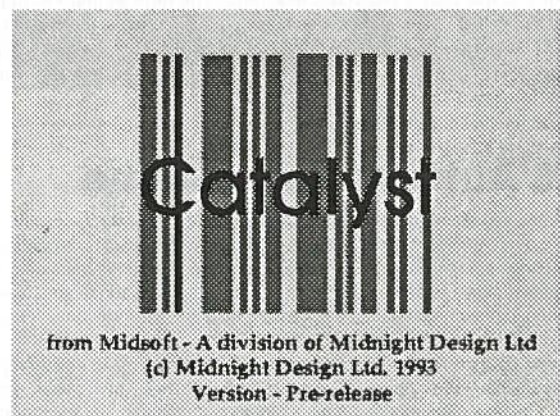
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## Computlite Collection



Computlite plan to release a range of new products at the PLASA Show. The philosophy of the output of the Animator moving light control desk has been revised to enable a mixture of moving lights to be controlled from the desk simultaneously, each using its own protocol. A special output protocol has been developed which has 12-bit resolution for the X and Y parameters and 8-bit for the remaining parameters. A separate protocol computer then enables the user to set how many of each type of spot are being controlled and the correct output protocol for that spot will be sent. Thus the maximum performance can always be attained from the moving lights without the restrictions of DMX. In response to requests from end-users two options are now available for the Animator. The first is a 50 key remote macro box which, together with a shift function, allows access to an additional 100 programmable macro keys. Each of these keys can be programmed with virtually any of the desk functions to provide quick and easy access to functions such as groups and chases. The second is an additional 20 submasters, each complete with flash button. This will enable the desk to be better suited for the live music and 'one night stand' part of the industry as, when used with the Animator 48, it will provide a total of 28 manual submasters in addition to the two crossfade playbacks and six chase playbacks - a grand total of 35 playbacks.

Computlite are also launching a universal moving yoke designed to fit a wide range of 1k and 2k luminaires including fresnels and Parcans. It operates with either 12-bit resolution when controlled from a Computlite desk outputting to this resolution, or from DMX. Another new product, the DMX input HMI dimming shutter, has been designed to offer smooth operation.

Computlite have also launched two protocol converters, both housed in 1U high 19" rack mounting cases: one converts Strand D54 to DMX512 and the other converts DMX512 to D54. These units are suitable for controlling scrollers from a D54 output desk or driving existing D54 input dimmers of demultiplexer from a DMX output desk.

## BMW Take Clients for a Ride

Park Avenue Productions are currently working on a stand for BMW for the Frankfurt Motorshow in September. The stand will be a major departure from the traditional 'car park' approach, and features a 'Dark Ride', which takes visitors to the show on a journey through BMW's research and development facility.

A feature of this ride is the sound system, which is synchronized to each visitor's journey by means of 90 independently controlled CD players. Unfortunately, following a successful client preview of the ride at the National Exhibition Centre, thieves broke into the yard of the trucking company, where several trucks were waiting to depart to Frankfurt, and stole 91 CD players.

The machines are made by Denon, model number DCD595, and as they have been adapted to work with Park Avenue control systems, and to drive the specially designed headsets, they are completely useless to anyone else. They are heavier than the standard unit, with a 'D' type connector on the back, and no remote control unit.

Anyone who is offered such a unit should contact Dave Coombe at Fly By Nite Transport, on 021-327 6900. A reward is being offered for information leading to the recovery of these items. In the meantime, Park Avenue are pulling out all the stops to replace the missing items, and we hope to run a report of the successful conclusion to this story in next month's L+S.

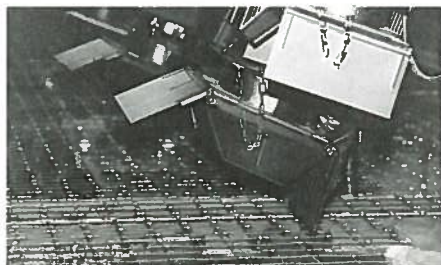
## Meshing about in Montreal

Jackie Staines, chief electrician and lighting designer at the Stephen Joseph Theatre in the Round at Scarborough recently returned from Canada following a short tour of three theatres which have employed a wire mesh 'trampoline' below their lighting grids - a system she is recommending for the new Scarborough 'Odeon' theatre (see feature in June L+S).

Theatres visited included the Theatre De Ville, Theatre D'Aujourd'Hui and Hall 5 in the Place des Arts. The older installation at the Theatre de Ville provides a 2" square mesh across an area of 80' x 60', whilst the other venues have the preferred 3" mesh.

The proposed Scarborough system will be a 'first' for the UK, and will cover the whole 21' x 21' stage area in a single section. Jackie told L+S: "There is no visible shadowing caused by the mesh and lanterns can be hung at any distance above it. However, the closer to the mesh the lens, the smaller the pool of light on the mesh. Allowing for the largest lantern in use brings the lighting bars up to waist height, the most comfortable height to rig at."

Our pictures below show Jackie standing on the 'trampoline' at the Place des Arts (right) and a close-up from above the mesh in the same venue.



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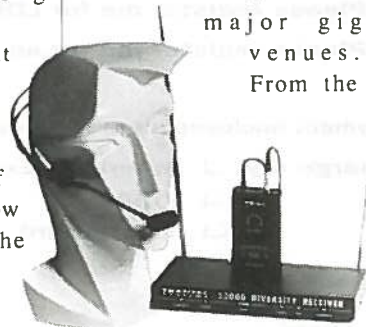
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  - 2  independent technician/engineer
  - 3  staff architect/interior designer
  - 4  independent architect/interior designer
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  - 7  educator
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  - 9  other; specify \_\_\_\_\_

**Lighting Dimensions International** November 12, 13, 14, and 15, 1993  
 Return this form to: LDI93, 135 Fifth Avenue, New York, New York 10010 USA  
 For more information contact: Paula Millstone at Tel. 212•353•1951 Fax 212•677•3857.

# BOOK REVIEW

## Discovering Stage Lighting

Francis Reid

Focal Press

ISBN 0 240 51345 2

Price: £15.95

I'm a great admirer of Francis Reid. As a lighting person, I admire him because his Stage Lighting Handbook was and is one of the lighting 'bibles'; as a writer, because of his amazing ability to recycle his work in different forms - his recent ABC of Stage Lighting began life as a column in Cue magazine, for example.

The material in his latest book, Discovering Stage Lighting, is, as far as I am aware, new to print, although it is taken from the projects he often runs for lighting students. The book is divided into two sections. The first is a fairly standard introduction to the equipment and processes of lighting as found elsewhere, though the section on analysing lighting is very helpful.

The book's main selling point is the second half, which contains 14 lighting projects. Each of these seeks to introduce a different use of light, from exploring the effect of light from different angles, through using it to selectively highlight different areas of a stage, and on to providing the atmosphere for a scene from shows such as Macbeth or The Marriage of Figaro. Each project has its aim explained, a basic rig shown (with suggestions for reducing or enlarging if required), then a cue synopsis and lists of possible problems and questions for analysing the results. Each seems well thought out, and the whole set led through from basic to complex in a logical manner.

The trouble is that I can't really see who the book is aimed at! The working method described involves at least six people taking it in turn to be a lighting designer, rigger, focuser and so on. It then needs a theatre space, lights and control, stage sets of increasing complexity and, if the results are to be seen properly, some actors. Each designer is encouraged to work out their focus and colour in advance, then rig, focus and light the show as for a full production, and finally discuss the results with the group. Which isn't going to be quick.

The chances of many of those interested in lighting having access to these resources for this time would seem to be quite remote - even in courses which include a lighting option. That is wrong, of course - lighting designers should be able to experiment with their art, and they do really need time, space, equipment and a crew to do this. In countries such as Hong Kong, where Francis Reid spent much of last year, I'm sure they do get all of this. In Britain, where we tend to learn by example (which is why the show examples in Francis' Lighting Handbook are very useful), we don't, which is a pity. For anyone running such a project, though, this book will prove a useful companion.

Rob Halliday

## All Under Marquee



At its largest PLASA exhibit ever, Marquee Audio's professional audio division is presenting important new products from Soundcraft, JBL and Denon in their first UK showing - the newest additions to Marquee's extensive range of sound reinforcement and audio production equipment.

Just out from Soundcraft are the Vienna II console and SM16 monitor desk. In the Vienna II Soundcraft has updated its popular mid-range VCA automated, live sound console with a number of new facilities which both enhance sound quality and increase operational flexibility. The Soundcraft SM16 monitor console is a new 16-bus desk based on the Vienna frame, whose all-new modules have been designed in conjunction with the world's top monitor engineers. The SM16's unique design features high input density in a relatively small frame and a simple and logical control layout for fast, easy operation.

New products from JBL include the sound Power I, P and T range featuring improved frequency response and design engineering to accommodate the particular requirements for installation, portable and touring applications, and the JBL M Series II range, the newly upgraded and enhanced line of M Series loudspeakers.

In its UK debut with Marquee is the Denon DN-2700F Double CD Player, an advanced version of the widely successful DN-2000 F that has been embraced by thousands of DJs throughout the world. The DN-2700F features instant start, three-range pitch control, a host of sophisticated looping, sampling and programming features and a new streamlined control panel, all designed to deliver ultimate flexibility and artistic control. The DN-770R, Denon's new professional dual cassette deck will also be on view.

Marquee's comprehensive equipment array on show also includes C-Audio's new line of SR Series power amplifiers, audio processors from BSS and Yamaha, and EMO systems main sequencers, stage and studio ancillaries. The full Marquee Audio system design team will be on hand on B168.

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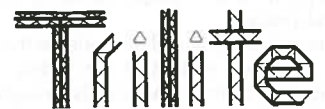


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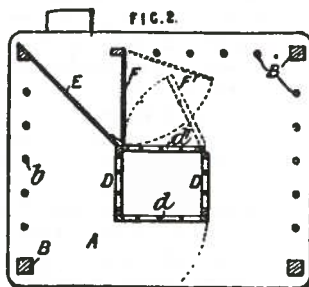
# A HUNDRED YEARS AGO THIS MONTH

BRITISH THEATRICAL PATENTS 1801-1900

## FIRST IN A REGULAR SERIES

17,429. **Morritt, G., and Winson, J.** Sept. 16.

*Conjuring apparatus.*—Relates to apparatus for the disappearing person trick. Fig. 2 is a sectional plan of a double cage D, B, one within the other, fitted with curtains, and mirrors E, F for causing a performer to disappear. The performer ascends to a raised platform A by steps, opens the door *d*, and enters the inner cage. The outer curtains are then drawn down, the performer swings back the hinged mirror F, opens the door *d*<sup>1</sup> and, after closing the door and mirror again, is concealed between the mirrors E, F. The vertical mirror E is fixed at an angle of 45°, and reflects the side bars *b* of the cage so as to make the back of the cage B appear complete.



"It's all done by mirrors" was what they used to say in the old days when faced with something they couldn't understand. The phrase is, of course, an ill-digested appreciation of the fact. But Victorian audiences were technologically very naive and the phrase was nearer the truth than they might have imagined. Indeed, the mirror was an important tool of the Victorian illusionist as we learn from this patent abridgement of September 1893 that blows the gaff on one of the many vanishing lady tricks which were so popular at the time. It recalls that other old phrase - 'Now you see her, now you don't'.

The above extract comes from British Theatrical Patents, 1801-1900 by Dr Terence Rees and Dr David Wilmore which will be published next year. There are plans to bring out a companion volume 1901-2000 for the millenium. The authors would be interested to hear from readers who have come across any patents in their own field of work, whether from the nineteenth or twentieth centuries. Readers can submit copy or register to receive advance publicity material relating to the book by writing to Theatresearch, The Lodge, Braisty Woods, Summerbridge, North Yorkshire HG3 4DN.

## Hog University

As more Wholehog lighting control systems get sold into the UK rental market (two more this month), it is only a matter of time before they become available for general hire and no longer reserved for major productions and big-name LDs.

With this in mind, exclusive Wholehog distributors A C Lighting are planning a series of training seminars designed to give lighting designers the opportunity to learn more about the console, exchange ideas and get familiar with the basic programming and operation skills. Anybody interested in attending these courses should contact Glyn O'Donoghue at A C Lighting, telephone (0494) 446000.

## Power Light plus Power Light

On June 25th, the two companies that form the Power Light Group, Power Light Handels AG and international PLASA member Power Light Productions Ltd, merged to become a single company, Power Light Productions Ltd. The capital of Power Light Handels AG has been fully integrated into the new company and with an increase in the capital the company now has a fully paid capital of Sfr 350'000,00 (£150,000). Staff, address, telephone and fax numbers all remain the same with Nicholas de Courten as managing director and Felix Riva as productions director.

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## Soundcraft Guide

The Folio Applications Guide from Soundcraft is a 32-page booklet which describes how to use Folio in a range of applications, from PA and location recording to keyboard mixing and multitrack recording. The Folio range now includes the Si keyboard mixer and 4-bus folio 4.

Though the guide makes specific reference to Folio, the mixing tips - covering the use of EQ, external processors, phantom powering, and more - will be of interest to anyone involved in home recording or handling live sound for small gigs. To get hold of a copy of this booklet send a postcard to Soundcraft, stating where you read about this offer, what instrument you play, and how you would use a Folio, together with your name and address. Postcards should be addressed to Katrina Davies, Soundcraft Electronics, Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Herts EN6 3JN.

## DHA Add-Ons

The catalogue of DHA stock gobos continues to expand with 48 new designs being introduced and displayed with great success at the ABTT Show earlier this year. The new designs have already proved very popular, as has the award-winning Tadpole, voted 'ABTT Product of the Year 1993'. DHA will launch their new gobo library at PLASA this year. This is a new concept in gobo production bridging the gap between DHA's range of nearly 500 stock gobos and their in-house custom service. Initially consisting of nearly 100 designs, the library numbers will continually be increased to extend the range of designs which will be produced to order. The graphics department continues to provide projection slide services and is currently producing the slides for the Hare Trilogy at the National Theatre.

DHA are on stand A34.

## Strand on Stand



Strand Lighting will be majoring at PLASA on its all-digital lighting systems, with the successful LD90 digital dimmer - now extended to include full System Wide Control - complemented with new Outlook Stations, providing a comprehensive architectural control facility, including remote preset record capability. Luminaires will also feature prominently with the preview of the new Strand Leko to European standards. Also new is the 1200W Optique spotlight range with high quality condenser optics. There are improvements to the Quartet 650W spotlight series. Developments in dimmer packs include the ANDI DX modular flight-cased system. Strand are also announcing new software features for LightPalette 90. A new dealer programme, Super 7, will be announced for Quartzcolor kits to work with the established Eurosystem range. Copies of the new Strand Lighting Catalogue will be available at the Show. Strand are on A76.

## Turbo-Funktion Link

Turbosound and Funktion One have signed an agreement licensing Turbosound to manufacture and market a new range of enclosures, collectively known as 'Floodlight' which incorporate Funktion's Axehead technology. The Floodlight format of Axehead uses Turbosound Flashlight's dynamic ability, but in a smaller package, with twice the horizontal dispersion angle. Coupled with the use of a similar loudspeaker complement, its initial application has been to enhance the flexibility of current Flashlight operation. Another feature is the absolute physical time alignment of the transducers. The result of beta testing and subsequent use by Britannia Row on Peter Gabriel and recently with Depeche Mode and Neil Young have proved encouraging and trapezoid and install versions are currently being tested.

## Discoscene 15

Now in its 15th year the Discoscene exhibition will be held on Sunday 24th October at the Pavilion suite, Edgbaston Cricket Ground, Edgbaston, Birmingham. The County Cricket Ground itself is located five minutes by road from Birmingham city centre with easy access to the motorway junctions of the M6 and M42, plus the British Rail services at New Street Station.

The aim of Discoscene is to provide a showcase of sound equipment, lighting, special effects and associated services for discotheques, clubs, leisure venues and discotheque trade personnel. Companies exhibiting sound and lighting equipment will be allocated stand areas in halls 1 and 2, whilst hall 3 is designated an area for service suppliers in a no sound section. The largest-ever promotional campaign for a 'one-day' show is being undertaken this year in order to increase trade awareness of the autumn 'Discoscene' show and also the 1994 series of Discoscene regional events. A major part of this promotion will feature Discoscene's participation as an exhibitor at this year's PLASA Light & Sound Show on stand C5. For further details on Discoscene contact Terry Lees in Birmingham, telephone 021-707 1925.

## Adastra Debut



At the PLASA show this year Adastra will feature their model A.80 2,000watt Mosfet two-channel power amplifier which has proved popular in a range of venues, from nightclubs to small theatres and, curiously, from French holiday camps to Mosques!

Managing director Michael Leaver, realising Adastra PA is widely used by PLASA members, has become a first-time exhibitor and will be showing mixer-amps, horns, speakers, microphones, 19" racks, cables and accessories on stand B50.

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# SHOWLIGHT 97

Following the outstanding success of Showlight 93 in April this year, the organisers are now seeking a venue for Showlight 97. Showlight is a conference for lighting designers and technicians working in any form of entertainment lighting. It is organised by the British National Illumination Committee and is held every four years at a different venue. Previous locations have been London, New York, Amsterdam and most recently Bradford. The organisers are seeking proposals for an attractive location in western Europe for 1997.

The working language is English so the venue must be in a city organised to welcome such visitors. Many delegates will come from Britain so travel costs from Britain should be affordable, but delegates from the host country and its neighbours should be a major part of the attendance.

The essential requirements are a comfortable lecture theatre for 250-300 people; an adjacent exhibition area of about 1,000sq.m where lunch and coffee can be served; a number of local attractions of interest to theatre, film, concert and TV lighting people; adequate accommodation in hotels and/or university hostels and an enthusiastic local liaison team to work with the British organisers to add the local knowledge traditionally essential for the success of this event. Showlight is priced to break even to keep delegate costs as low as possible so the local organisers, like the UK committee, can only expect reimbursement of expenses. The reward is the satisfaction of meeting so many interesting and friendly people from the world of entertainment lighting and the success of the event itself.

Suggestions please with an indication of how the local liaison could be organised to: Ken Ackerman, Showlight Chairman, 1 Dunstan Road, London NW11 8AQ. Telephone 081-455 2366.





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## News Shorts

For Jazz 93 the Kew Gardens management selected **Orbital Acoustics** to provide the core sound system for the four night open-air Jazz festival taking place outside the Temperate House. The brief from Kew was for Orbital to provide a high quality confined sound system which would provide the immediate audience with a high listening level without causing discomfort to local residents. Orbital provided six d&b audiotechnik F2 and B1 stacks with a pair of E1 speakers providing close-to-stage infill and detail.

Budapest's reputation as Europe's hottest nightspot has just been further enhanced with the opening of a luxury new disco, featuring a **Meyer Sound** loudspeaker system. The Fortuna disco has been equipped with a combination of Meyer's compact bi-amplifiers UPA-1C speakers, complemented by USW-1 subwoofers for bass extension. These are respectively controlled by the M-1A and B-2A control electronics units, incorporating frequency response and phase alignment circuitry. The full system, comprising 12 Meyer Sound units in all, was installed by local Meyer agents, ATEC, to a total budget of US\$50,000. The sound design and set-ups were carried out by freelance consultant Herbert Kopecky, working closely with ATEC - who also supplied the club's Crown Macrotech amps.

**Tannoy** Netherlands has won the first sale of the new Tannoy SuperDual in continental Europe. The Flint Theatre in Heemstede is currently being built and will open in April 1994 with four Tannoy CPA 10S SuperDual loudspeakers and two CPA12.3B bass enclosures. The sale also includes 120 of Tannoy's compact point source CPA5 and six CPA12 loudspeakers.

Carousel, the hit musical from the Royal National Theatre which opens in September at the Shaftesbury Theatre, will use the VL5 luminaire launched by Vari-Lite at last year's PLASA show. **White Light** is supplying the VL5 as well as the

conventional lighting and the contract marks the third West End musical which White Light has supplied with the new units. White Light has purchased Compulite Animators to control both the Vari\*Lites and the Rainbow scrollers in use.

**EMO Systems** have supplied a 30 channel 3-way mic splitter system to Scandec Systemer in Norway for use during live broadcasts by the main independent TV channel, TV2. The system, based around EMO's standard splitting transformer, had to fit within a 12U rack space which required the production of special metalwork. The front panels are fitted with XLR in/out sockets and earlift switches while the back panels support multiway connectors. The complete system is shock mounted in a flightcase.

**Definitive Lasers** now have available a 6m wide x 9m drop motorized gauze screen, fully extendable in approximately 30 seconds. Rigging is required to suspend the screen which weighs 100 kilos - and, of course transportation.

**Turbosound** has supplied a new sound reinforcement package for Brugge football stadium. Belgian distributor TEM supplied the system, consisting of 20 TMS-4 and eight TSE-111, to rental company Artson, who will rent the PA to the stadium's owners on a continual basis. Amplifiers and cabling are permanently installed, while the speakers will be removed between games for additional rental purposes.

From September, Shure SM58 capsules will be available with all **Trantec Systems** hand-held transmitters and will be branded the 'Trantec Fifty Eight Wireless'. Improved production and supply channels mean that the SM58 capsule is now available throughout Trantec Systems' range for use with its receivers. Up until recently it has only been sold with the S1 Series, S101 Series and the S2 auto diversity system. The SM58 is now available with the S1000 and the new S2000 true diversity single conversion receivers.

**Raper and Wayman** are the new UK distributors for Industrial Research (IRP), the Illinois-based

manufacturers of professional sound equipment.

**RCF Electronics** have appointed Borsumy Communications as their distributor in Southern Ireland. Borsumy have recently hired ex-Bose man Richard Tyrrell to head up their pro-sound sales team. Pictured below is RCF's Phil Price (right) with John Mulrane of Borsumy Communications.



RCF have also just published the latest edition of their Commercial Audio Sound Systems Catalogue. It covers the complete range of RCF products. The company have also recently published a new guide to sound installation - 'Sound System Design and Installation Guide' covering all aspects of sound installation. The book is available from RCF, tel (0268) 570808.

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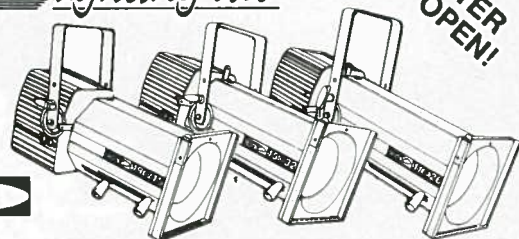
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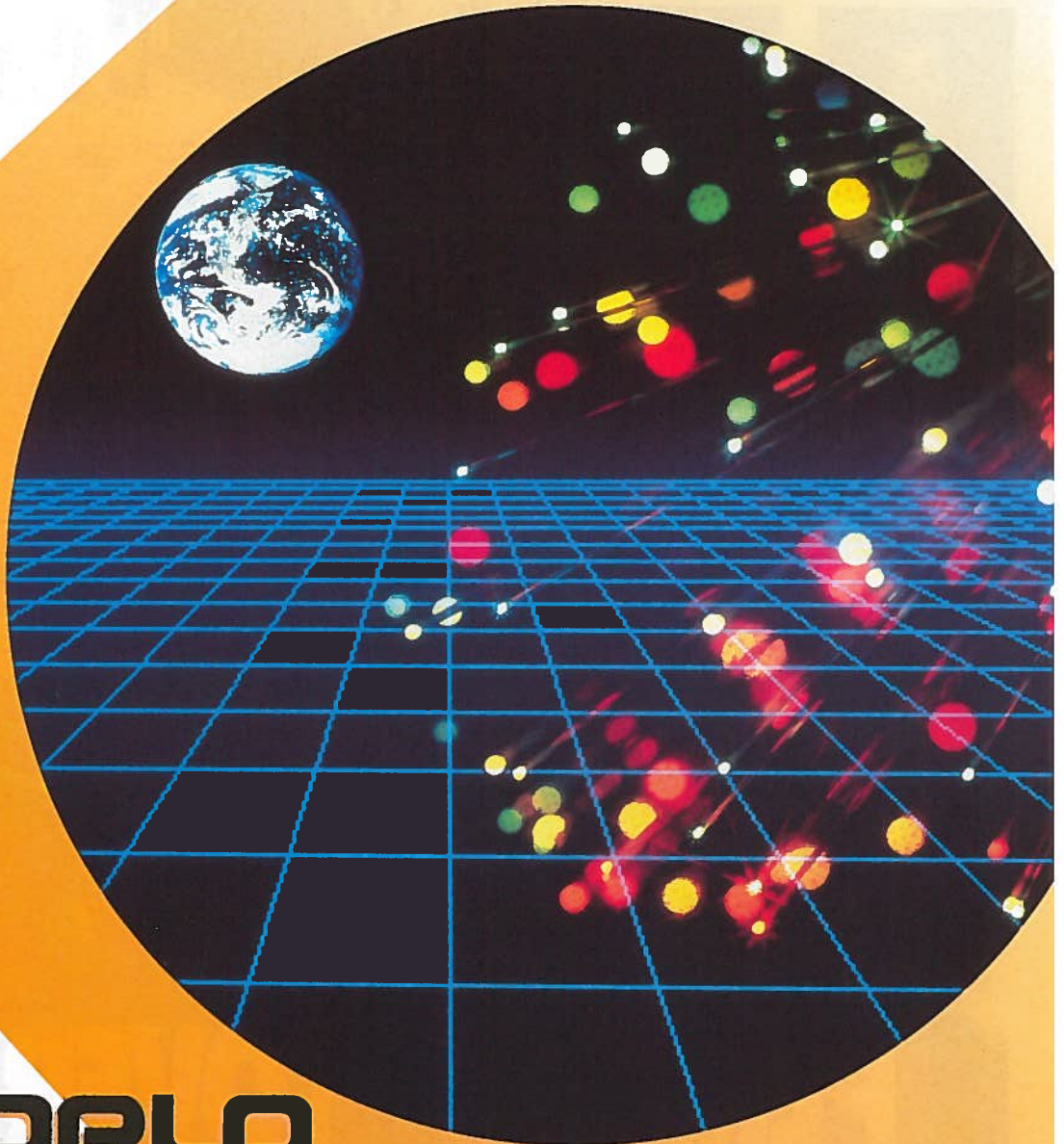
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## People News

Autograph Sales has appointed **Richard Barman** to the post of sales engineer. He originally trained at RADA as a stage manager and the new position will make full use of his theatre background.



Richard Barman.



Alan Martin.

**Alan Martin** has joined Soundcraft as head of pro sales, where he will be responsible for the full range of live and recording consoles.

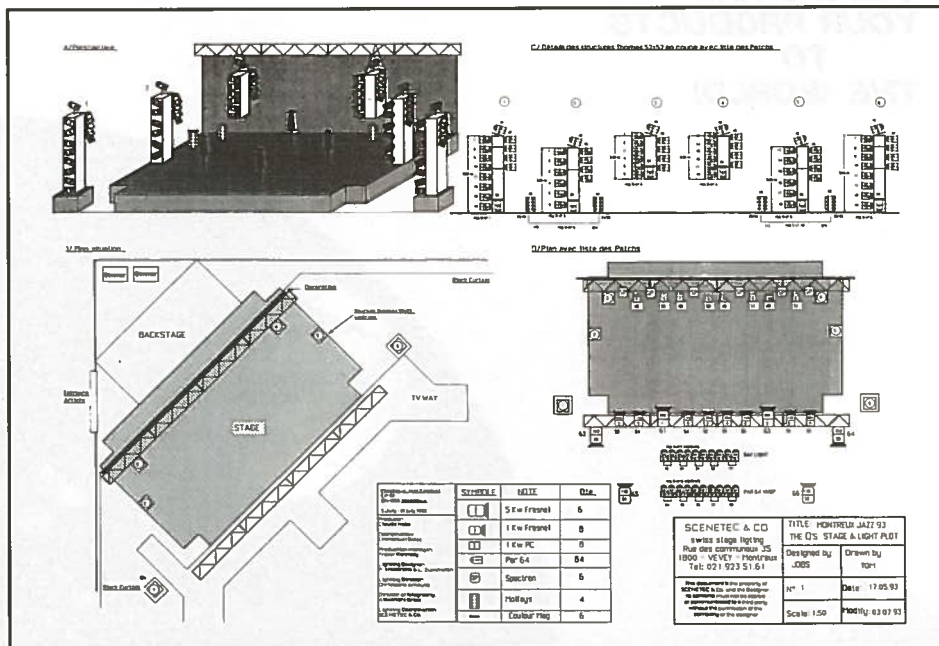
UK-based distribution company Coe-Tech Ltd have recently appointed **Graham Barron** as their new marketing manager.

## JYG Two-Tier

JYG's stand (C66) at the PLASA Show will have two floors - to demonstrate to prospective club owners that the company can create any type or shape of structure to meet customers' specifications.

All UK visitors to the stand who purchase goods will be offered free overnight delivery and special discounts will be offered to retail customers.

## Montreux Jazz Revisited



Following our coverage of the Montreux Jazz Festival last month, shown above is the lighting schematic for the event, which was designed by Patrick Woodroffe. The rig and conventional lighting was installed by Swiss company Scenetic for the Stravinsky auditorium and for the 'New Qs' where they also ran the desk. In the Stravinsky Hall, 12 Vari\*Lite 2Bs and 15 VL5s were accompanied by 24 Thomas 6-Bars, eight 5kW fresnels, eight Mini Molemags, 10 Thomas cys, three ACL bars and four Super Troupers. Steve Nolan ran the main lights from a Wholehog, whilst Dave Hill operated the Vari\*Lites.

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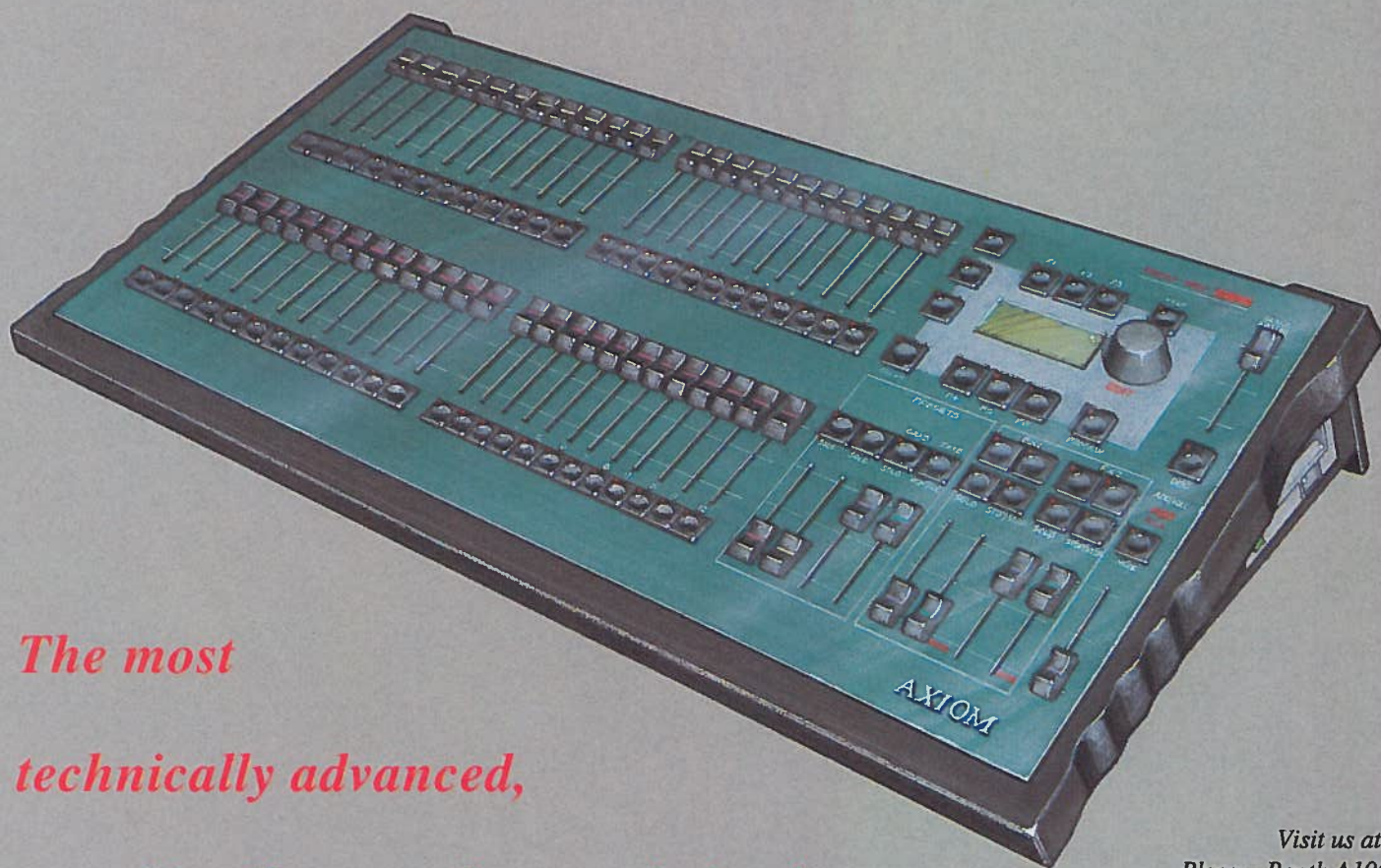
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|-----------------------------|-----|-----|-----|
| Channels – Normal Mode      | 12  | 24  | 36  |
| Channels – Wide Mode        | 24  | 48  | 72  |
| Scene Memories – 12 pages   | 144 | 288 | 432 |
| Scene Masters               | 12  | 24  | 36  |
| Chases – 99 steps per chase | 12  | 24  | 36  |
| Stacks – 99 cues per stack  | 12  | 24  | 36  |
| Sound-to-Light Setups       | 12  | 24  | 36  |

- Proportional softpatching – 4 patches – multiple dimmers per channel allowed

- Crossfade or snap steps on individual chases
- Stack cues can be linked with fade times
- Chases and stacks may be chained
- Channel selection for Highest-Takes-Precedence or Last-Takes-Precedence (for colour changers and moving fixture control)
- Timing Fader with View/Ride facility
- 20 character by 4 line LCD with edit wheel and six function buttons ensuring easy operation
- Help button with readout on LCD
- 3 preset masters – A, B and Grab
- 2 effects playback masters
- Grand Master with DBO button
- Add/Kill master with mode button
- Isolated DMX512/1990 output signal
- MIDI In/Thru/Out
- RS232 serial port
- Universal power supply – 80-240V 50/60Hz
- Attractive slim case

#### Options

- 3 1/2" PC compatible floppy disk backup unit
- Analog outputs
- Gooseneck desk lamp

*Specifications are subject to change without notice.*

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# PLASA'S SIXTEENTH LIGHT AND SOUND SHOW

## Boom Year Predicted

As L+SI was put to press, all the signs point to a boom year for the 16th annual Light & Sound Show. Organisers Philbeach Events are receiving a huge number of advanced registrations every day and remain highly confident that the visitor count may even pass 9,000, a significant increase on the 1992 record of just over 8,000.

All stand space has now been taken up, showing an increase in space sold of around 300 sq. metres, making the event the biggest yet. Over 150 stands will be showing products and services from over 300 companies, including a total of 43 new exhibitors. Almost 60 per cent of exhibitors are launching new products, proving the ever increasing international importance of the show.

The PLASA Pavilion, in association with Lite Structures, is a new feature at this year's show. The Pavilion has been constructed to accommodate eight companies, other than Lite Structures, and gives smaller and new-start companies the chance to exhibit at PLASA. Participating to date are: Intimidation, See Bees, Red X Hardware, Le Maitre, Adastra, Horizon Laser Graphics and Envo-Tech.

The PLASA Light & Sound Show Awards are being run once again and this year's presentations will be at 5.00pm on Monday 13th September. All contracted exhibitors at the show are eligible and the Awards will continue to be made in two categories - Best

New Product and Best Stand. Winners will receive the specially designed PLASA Par-cans.

Visitors who have not yet sorted out accommodation in London should call Res-o-tel on 081 542 6611. By quoting the PLASA Light & Sound Show you can book a room in a wide range of London hotels at special rates.

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OFFICIAL  
SHOW CATALOGUE  
IS FREE  
TO ALL VISITORS  
AND AVAILABLE  
AT THE ENTRANCE  
TO  
EARLS COURT 2**

The information in this issue is based on information supplied by the Show organisers and correct at the time of going to press.



### Opening Times:

Sunday 12th September: 11.00 - 18.00  
Monday 13th September: 11.00 - 18.00  
Tuesday 14th September: 11.00 - 18.00  
Wednesday 15th September: 11.00 - 17.00

## In this Issue . . .

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List of Exhibitors

### Page 58

Plan: no sound area plan

### Page 60

Plan: background sound area

### Page 62

Plan: sound area

### Pages 90/91

Seminar Programme



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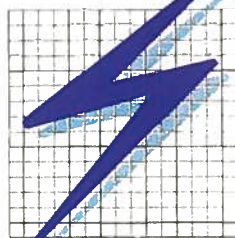
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# EXHIBITORS AT LIGHT AND SOUND SHOW 93

## Exhibitors

|                                 |           |                                   |         |                                 |          |                                 |          |
|---------------------------------|-----------|-----------------------------------|---------|---------------------------------|----------|---------------------------------|----------|
| ABTT                            | C7        | Martin Audio Ltd                  | B122    | D.A.S.                          | A62      | Niethammer                      | A98      |
| Abstract Design to Light        | C48       | Martin Professional               | C12     | Decoupe                         | A60      | Oscar Lighting                  | A128     |
| Acoustic Sound Systems Ltd      | C3        | Mico Lighting Ltd                 | A55     | Dedo Leigert Film GmbH          | A20      | P&G Stage Draperies             | B7       |
| Adam Hall Supplies              | B136      | Midnight Design Ltd               | B196    | Dynacord                        | B188     | P&G Stage Electrical            | B7       |
| Adastra Electronics Ltd         | B50       | Multi Remote                      | B9      | Dynalite                        | A164     | PM Large Screens                | B128     |
| ADDA Super Cases                | A10       | Multiform Lighting                | A90     | EAW                             | B104     | Powerdrive                      | A19      |
| Anytronics                      | A86       | Music Factory                     | B15     | Electronic Theatre Controls Inc | A66      | QSC                             | B144     |
| Apogee Sound (UK) Ltd           | A46       | MGC Lamps                         | A138    | Electrovoice                    | B188     | Rane                            | B188     |
| Applause Publications Ltd       | B10       | Network Ltd                       | B176    | Excelsior                       | B136     | Renkus-Heinz                    | B36      |
| Arri (GB) Ltd                   | A66       | Nu Light Systems Ltd              | C4      | Fane                            | B136     | Richmond Sound Design           | A82      |
| Audio Projects                  | B36       | NJD Electronics                   | C28     | Fly                             | C4       | Ross Systems                    | C70      |
| Autograph Sales Ltd             | B194      | Optical & Textiles                | A163    | Flying Pig Systems              | A80      | RV Electronique                 | A22      |
| Autopia Terakat Accessories     | A161      | Optikinetics Ltd                  | B68     | Fostex                          | C59      | Sabine                          | B188     |
| Avitec Electronics (UK) Ltd     | C40       | Oskar Lapp Ltd                    | A162    | FOS                             | A80      | Sachtler                        | A163     |
| Avolites Ltd                    | A144      | Osram Ltd                         | A61     | Furman                          | B36      | Samson                          | B188     |
| AC Lighting Ltd                 | B196      | OCLI Optical Coatings             | B180    | Gallien Krueger                 | A54      | Selecon New Zealand Ltd         | A58/A134 |
| ADB-Stage and Studio Lighting   | A28       | OHM Industries Ltd                | B28     | Genie                           | A80      | Sessions                        | B136     |
| AJS Theatre Lighting and Stage  | A58       | Pani Austria                      | A42     | Genius                          | C56      | Shure                           | B144     |
| B+K Braun GmbH                  | B182      | Par Opti Projects                 | A136    | Giant Jingles                   | B150     | Smoke Factory                   | A134     |
| Batmink Ltd                     | C56       | Penn Fabrications Ltd             | B14     | Great American Market           | B196     | Space Cannon                    | A80      |
| Beyer Dynamic GB Ltd            | A54       | Pfaff Silverblue Mechanical       | A18     | Greystone                       | C35      | Spectrum                        | A80      |
| Beyma (UK) Ltd                  | B44       | PLASA                             | A165    | Hermes Diem                     | B110     | Spotlight Milano                | A80      |
| Bose (UK) Ltd                   | B20       | Phoenix Firework Displays         | A8      | High End Systems                | A62      | Soundcraft                      | B198     |
| Canon Audio Ltd                 | B56       | Playlight                         | B7      | Hoffend & Sons                  | A82      | Steinberg                       | B104     |
| Cardiff M Disco Services Ltd    | B150      | Primary Colours                   | A17     | Hush Systems                    | B136     | Socapex                         | A80      |
| Celco Division of Electrosonic  | B64       | Primarc (MKT)                     | A53     | James Thomas Engineering Ltd    | A128     | Soundtracs                      | A54      |
| Celestion International Ltd     | B128      | Pro Sound News                    | B175    | Jands                           | A80      | Starlite Systems Technology Ltd | C9       |
| Cerebrum Lighting Ltd           | A19       | Pulsar and Clay Paky              | C18     | JBL                             | B104     | Strong International            | A80      |
| Citronic Pro Audio Ltd          | B2        | Raper & Wayman Ltd                | B186    | JYG Ltd                         | C66      | Strong Lighting                 | B44      |
| Clay Paky                       | C18       | Red X                             | B47     | K&M                             | B194     | Tarsin Entertainments Ltd       | C3       |
| Cloud Electronics Ltd           | A36       | Robert Juliat                     | A60     | Klark-Teknik                    | B176     | TAS                             | C84      |
| Coemar/Coetech Ltd              | C84       | Roscolab Ltd                      | B84     | La Novalight                    | C4       | Technical Insight               | A100     |
| Columbus Mckinnon               | A160      | Ryger Electronics                 | B202    | Lab Gruppen                     | B176     | The Effects Co. Ltd.            | A90      |
| CCT Lighting                    | A112      | RAT (Music Stands) Ltd            | A74     | Lampo                           | C4       | Tomcat                          | A80      |
| C.L.A.S.S. Ltd                  | B42       | RCF Electronics (UK) Ltd          | B172    | Light Support                   | A53      | Tourmate                        | A80      |
| CP Cases                        | A166      | S & H Technical Support Group     | B74     | Lighting Dimensions (WL)        | A100     | T5L(AV)                         | A100     |
| Dance Aid                       | C1        | See Factor Industry Inc           | A139    | Link Dynamic                    | B136     | 3-G                             | B144     |
| DeSisti Lighting Ltd            | A20       | Seebes                            | B48     | Littlelite                      | B188     | tre-D Engineering               | A20      |
| Disco International             | B57       | Showcase                          | A65     | LMP Lichttechnik GmbH           | A106     | Ultimate Pro Acoustics          | B144     |
| DHA Lighting Ltd                | A34       | Shuttlesound Ltd                  | B188    | Lowell                          | B188     | University                      | B188     |
| DJ Magazine                     | C89       | Slick Systems International Ltd   | A146    | LT Engineering                  | A128     | Valiant Electrical              | A128     |
| DMC Ltd                         | C60       | Smithfield Electronics            | C83     | Lycian Stage Lighting           | B196     | Verlinde                        | A64      |
| Doughty Engineering Ltd         | A1        | Stage Electrics                   | A12     | MA Lighting Technology          | A19/A134 | Volt Loudspeakers Ltd           | C66      |
| Electroacustica General Iberica | B151      | Stiers GMBH                       | A169    | McCauley                        | B136     | Wharfedale                      | B136     |
| Eminence Speaker Europe Ltd     | A124      | Strand Lighting Ltd               | A76     | MEC Systems                     | A90      | White Light North               | A100     |
| Euro Material Handling Ltd      | A64       | S&VC                              | C14     | Meyer                           | B194     | White Light USA                 | A100     |
| EMO Systems Ltd                 | A59       | Syncrolite                        | A72     | Micron                          | B194     | Yes Electronics                 | C66      |
| Envotech Ltd                    | B53       | Tannoy Ltd                        | B88     | Milab                           | B194     |                                 |          |
| ESP (UK) Ltd                    | A22       | Teatro srl                        | A40     | Mobil-Tech                      | A22      |                                 |          |
| Fabtronic Lighting              | C35       | Trantec Systems Ltd               | A168    | Modelbox                        | A100     |                                 |          |
| 5 Star Cases (Flexiplas Ltd)    | B184      | Trifibre Containers International | A26     | Nexo                            | B176     |                                 |          |
| Formula Sound Ltd               | A137      | Triple E Ltd                      | A38     |                                 |          |                                 |          |
| Futurist Light & Sound          | B164      | Turbosound Ltd                    | B54     |                                 |          |                                 |          |
| Gerriets GB Ltd                 | A44       | Vestax (Europe) Ltd               | B110/C2 |                                 |          |                                 |          |
| Glanre Engineering Ltd          | A82       | Vinten Electro Optics Ltd         | A118    |                                 |          |                                 |          |
| Griven snc                      | C34       | VPLT                              | A167    |                                 |          |                                 |          |
| Hardware for Xenon              | B59       | Wembley Loudspeaker Co Ltd        | C66     |                                 |          |                                 |          |
| Harkness Screens Ltd            | A116      | Wharfedale Loudspeakers           | B154    |                                 |          |                                 |          |
| Harman Audio Ltd                | B78       | White Light                       | A100    |                                 |          |                                 |          |
| Hill Audio                      | C70       | Wybron Inc                        | A14     |                                 |          |                                 |          |
| Horizon Laser Graphics          | B52       | XTBA                              | A153    |                                 |          |                                 |          |
| Howard Eaton Lighting Ltd       | A30       | Zero 88 Lighting                  | A98     |                                 |          |                                 |          |
| HW International                | B144      |                                   |         |                                 |          |                                 |          |
| HZ Audiotech (Eminence)         | C210      | <b>Companies Represented</b>      |         |                                 |          |                                 |          |
| Intimidation Ltd                | B49       | Action Lighting                   | A128    |                                 |          |                                 |          |
| JEM Smoke Machine Co Ltd        | B137      | Alcatel                           | B136    |                                 |          |                                 |          |
| KAM Electronics plc             | B162      | Altec                             | B188    |                                 |          |                                 |          |
| KAM Electronics plc             | C88       | Altman                            | A80     |                                 |          |                                 |          |
| Laserpoint Communications       | B177      | Allen & Heath                     | B104    |                                 |          |                                 |          |
| Laser Grafix                    | C9        | Amcron                            | B188    |                                 |          |                                 |          |
| Laser Innovations Ltd           | C59       | ART                               | B104    |                                 |          |                                 |          |
| Le Maitre (Sales) Ltd           | B46       | ASL                               | A54     |                                 |          |                                 |          |
| Lee Filters Ltd                 | A102      | ATM                               | B194    |                                 |          |                                 |          |
| Leisure Innovations (UK) Ltd    | B195      | AVAB                              | A98     |                                 |          |                                 |          |
| (Incorporating Coatrak Ltd)     | C8        | Axon Digital Design               | A19     |                                 |          |                                 |          |
| Leisure Lighting                | C82       | Behringer                         | B188    |                                 |          |                                 |          |
| Light & Sound Design Ltd        | A122      | BGW                               | B136    |                                 |          |                                 |          |
| Light Processor                 | A164      | BSS                               | B54     |                                 |          |                                 |          |
| Light Sound Image Systems Ltd   | A62       | Bytecraft Pty Ltd                 | A30     |                                 |          |                                 |          |
| Lightfactor Sales Ltd/High End  | A128      | Camlok                            | A80     |                                 |          |                                 |          |
| Lighting Technology Group       | A107      | C-Audio                           | B104    |                                 |          |                                 |          |
| Lighting Dimensions             | A165      | Centre Stage Crew Ltd             | A128    |                                 |          |                                 |          |
| Lighting+Sound International    | B169      | Clear-Com                         | B194    |                                 |          |                                 |          |
| London Laser Co                 | A106      | Coemar                            | C84     |                                 |          |                                 |          |
| LSC Electronics                 | A134      | Coherent                          | C59     |                                 |          |                                 |          |
| M&M Camelont Ltd                | B58       | Compulite                         | A128    |                                 |          |                                 |          |
| Mainstage                       | B168/B198 | Comsat Marketing Ltd              | B195    |                                 |          |                                 |          |
| Marquee Audio Ltd               |           | Constella Lighting                | B110    |                                 |          |                                 |          |
|                                 |           | CP&P                              | C18     |                                 |          |                                 |          |
|                                 |           | Crest Audio Inc                   | B36     |                                 |          |                                 |          |

The definitive list will appear in the Show Catalogue which will be available at the Show



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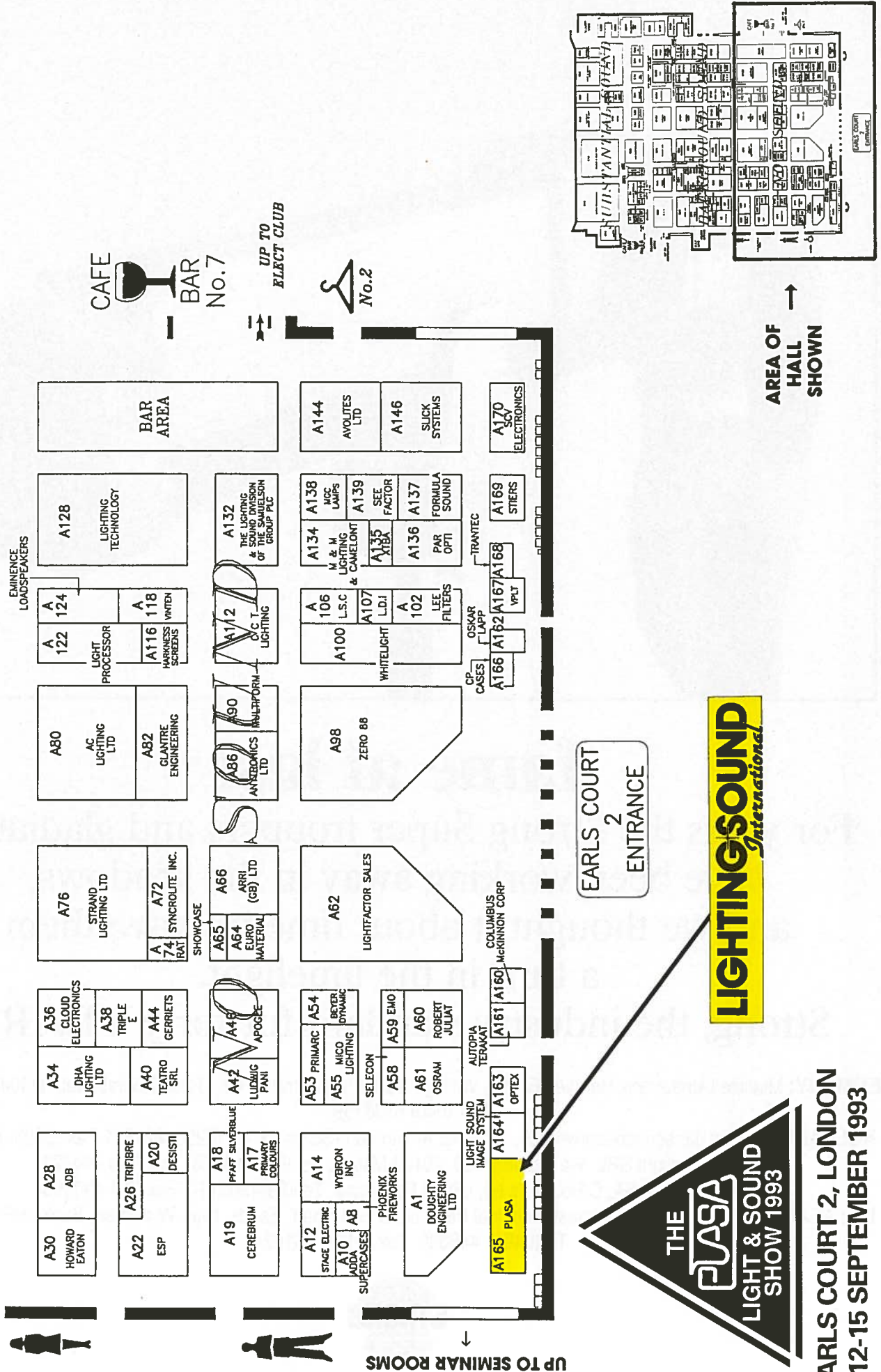
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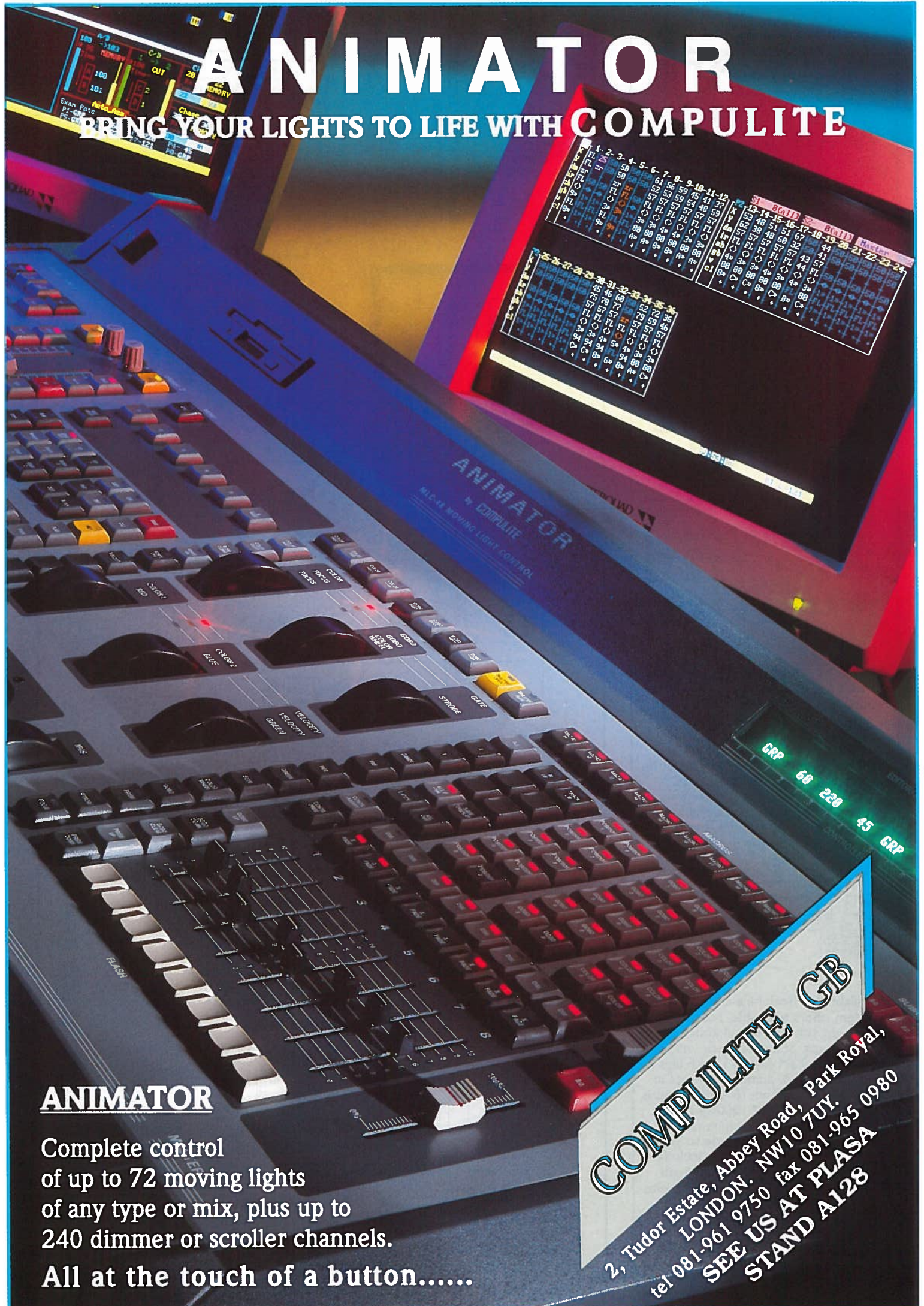
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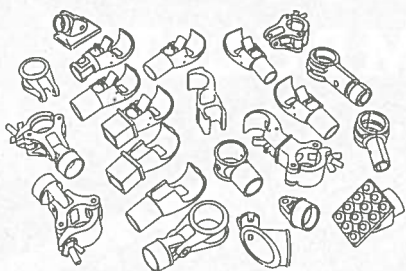
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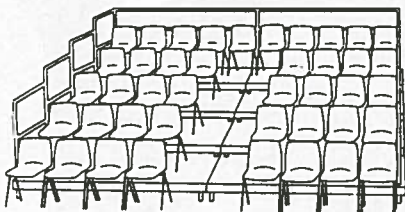
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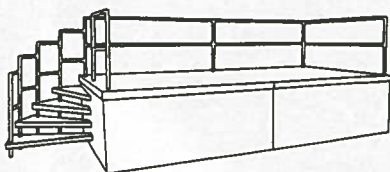
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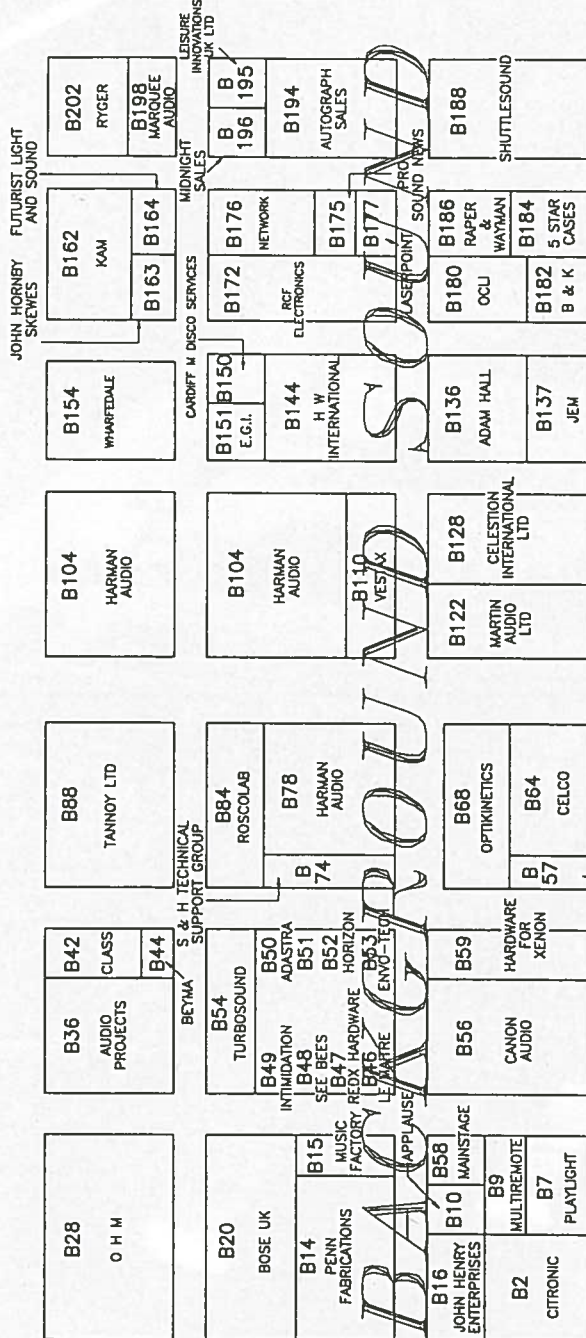
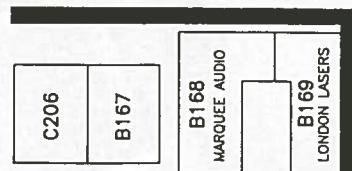
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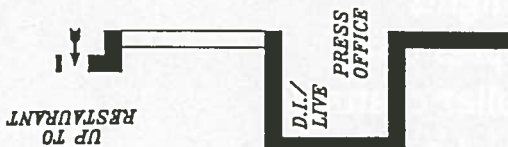
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12-15 SEPTEMBER 1993



AREA OF HALL SHOWN

BACKGROUND SOUND AREA

PLASA LIGHT AND SOUND SHOW 93

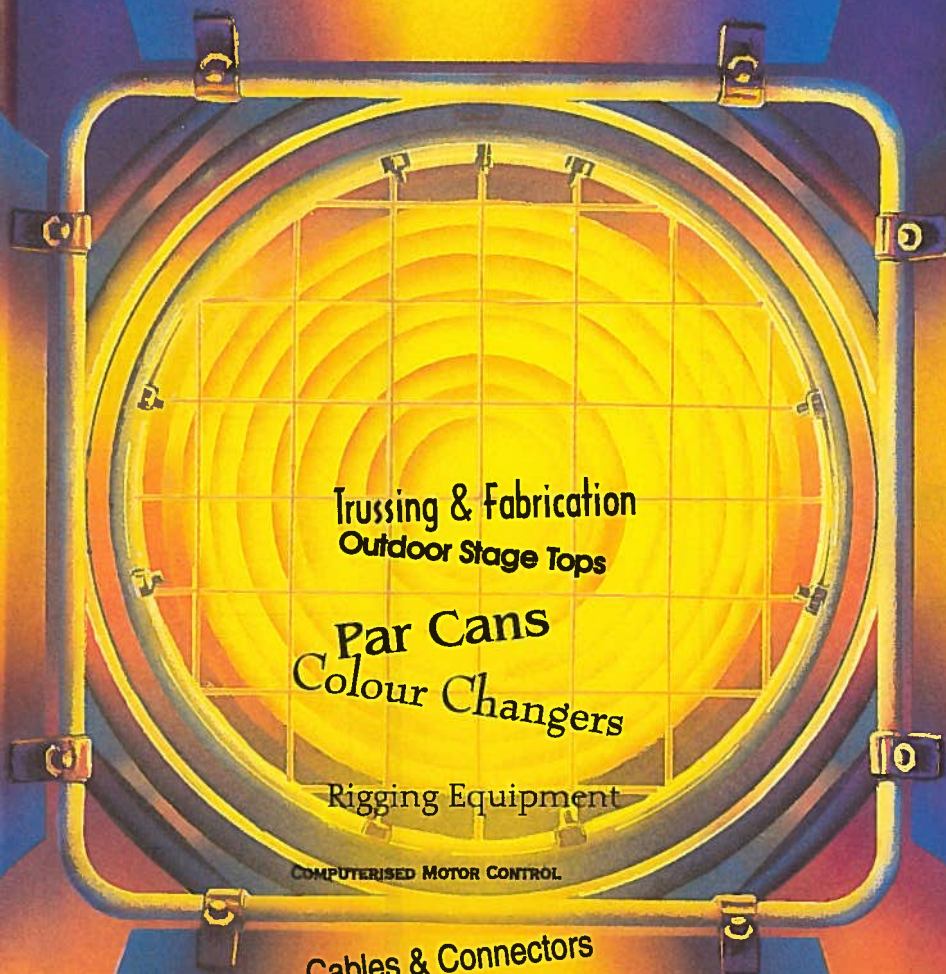


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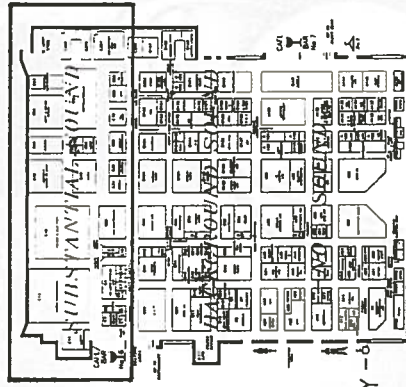
# ENVO-TECH



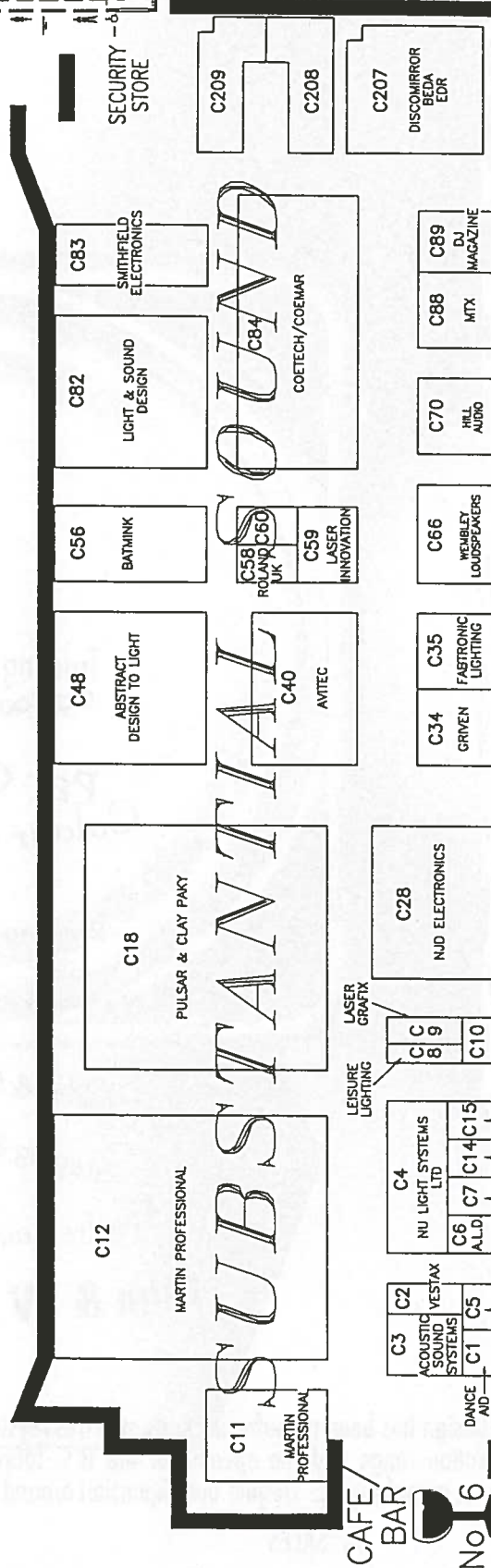
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## PLASA LIGHT AND SOUND SHOW 93

## SOUND AREA



EARLS COURT 2, LONDON  
12-15 SEPTEMBER 1993



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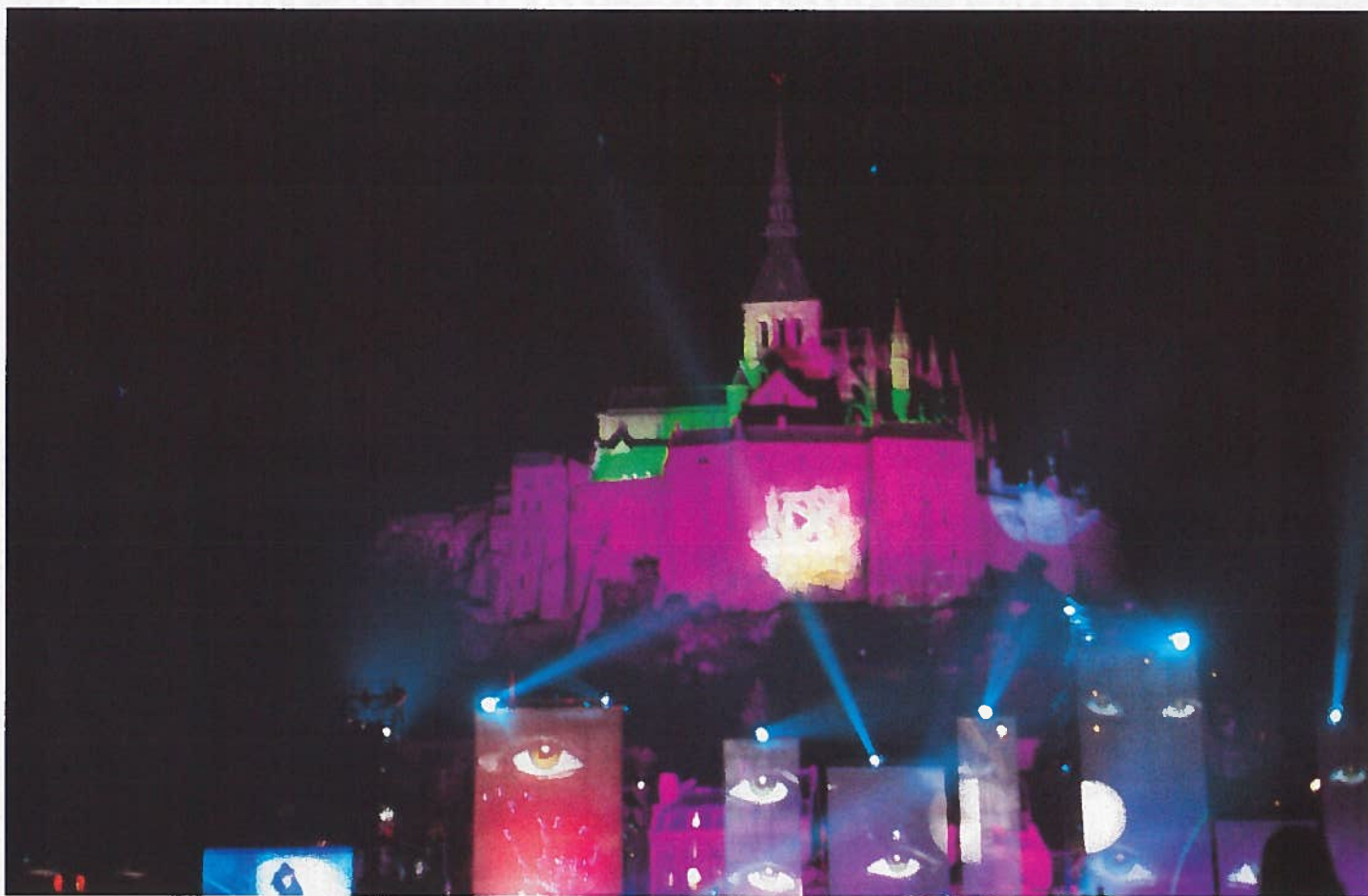
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# THE SYNTHMAN ON THE MOUNT

Tony Gottelier visits Mont St. Michel in Normandy, from where Jean Michel Jarre launched his Swatch the World tour



The eyes have it: the full set with 'juicy' colour bumps on the transept.

I didn't take much persuading when the suggestion that I should see the new Jarre show in France, rather than wait for Wembley, was made by Alien Frenchman, Jean Luc Michaud. "It will surely be a magical experience," he pleaded, in that evocative accent, dripping with the honeyed vowel sounds of his birthplace. I was in the middle of a novel about myth and magic in Normandy at the time, so I was ready for a spiritual happening. Besides, how would the 21st Century panoply of the Jarre multi-media circus gel with the medieval monastery on a rock, which is Mont St Michel? Rock, on a rock! Son et Lumiere, extraordinaire!

Fortunately the French take a very enlightened attitude to art. They are quite used to their national

monuments being wrapped-up by the likes of Christo, and I once saw the Champs Elysee planted from end to end with wheat. Then there is the other guy, whose name eludes me, who likes to walk on a high wire between tower blocks, and once even the Grand Canyon, supported by Rock music and a massive light show - all of this probably funded by the Ministry of Culture! So, to have a Rock crew clambering all over a seaside national treasure, turning it into a canvas for a mammoth light show, must have seemed like pretty petite biere to them. Mind you, after La Defense, Houston and Docklands, M. Jarre's warriors ought to have got the hang of it by now.

Of course, Jarre's production company CICS

virtually invented the genre, and a whole generation of technology has grown up around these mega performances - xenon projection, sky trackers and large frame performance lasers - to name but a few. But have people tired of it now? and has the technology become so available as to make the whole thing commonplace? Even Raves do it these days.

First, of course, the business of getting there! Cauchemar, about sums it up. In their wisdom, the gendarmes had prescribed a route entirely through country lanes all of which had been made one way for the day, just as well since two vehicles could not have passed each other on these narrow byways. And at every crossroads les flics were



Surreal man! Which came first?



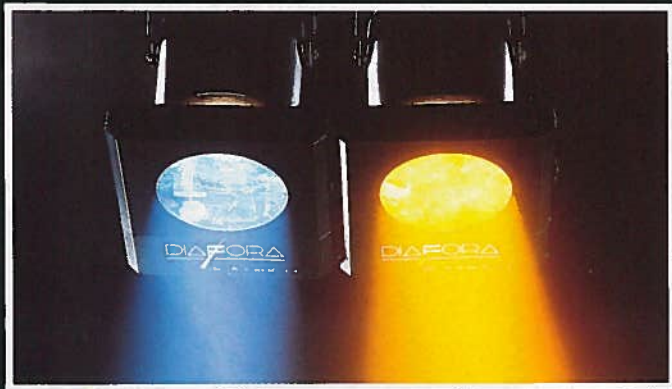
A mixture of pop, opera, circus and spectacle.

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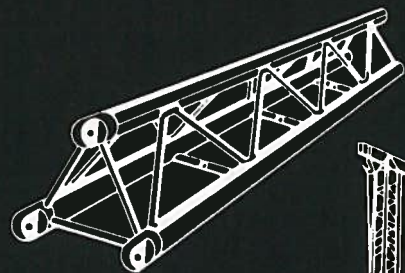
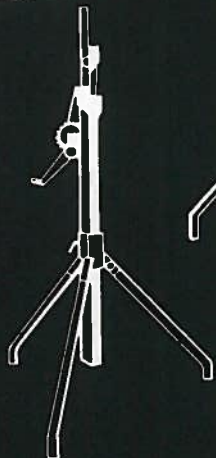
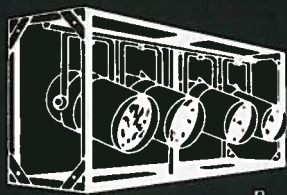
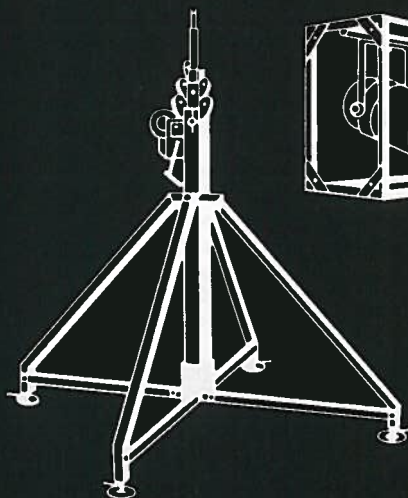
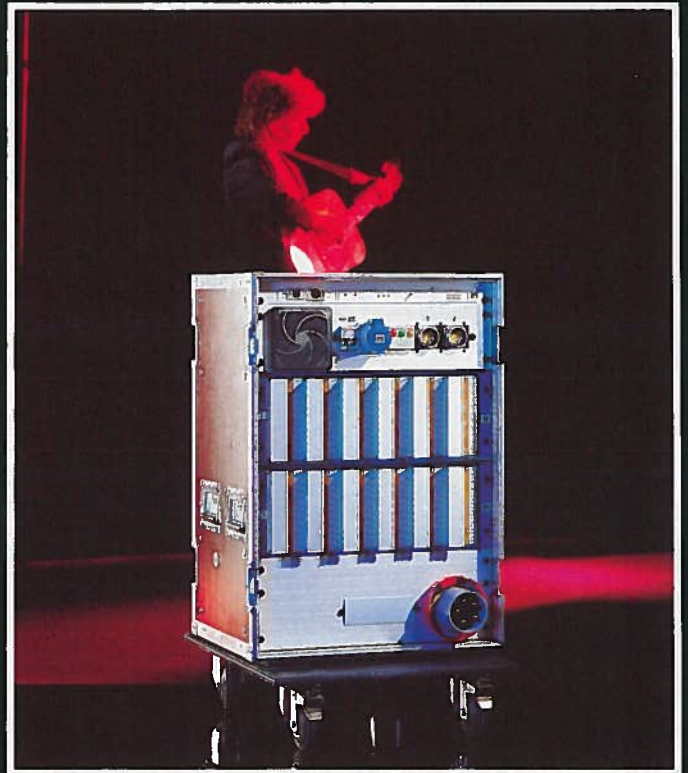
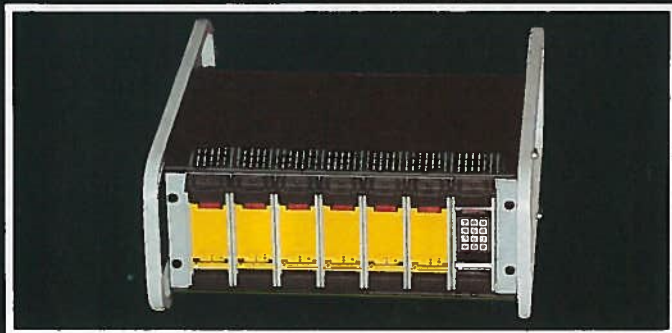
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lurking ready to make it impossible for you to go any way other than their way. The problem was that my target was the press office, not the official car park. On my third snails pace, nose-to-tail circuit, I hooked up with a kindred spirit, on the basis that a problem shared is a problem halved. This particular spirit was a very much alive Parisian photographer who, if he had a way with the police, had about as much navigational sense as the aforementioned escargot.

The little knots of village people who had gathered outside their doors, to look on in disdain as more cars passed by than they had seen in a rural lifetime, were no help either. However, between his language facility and my sense of direction we eventually found the unmarked portacabin which concealed our passes. It had taken a mere two hours and forty minutes to cover the 3kms from the National route to the concert site!

I make no apologies for this homily because it gives a feel for the scale of such an event and for the logistical problems it can create. I wouldn't have given two sous to have been a holiday-maker in the area at the time. However, I had at least allowed the time so that I could talk to the guys before the concert started, so all was well in the end. Since my passes seemed to get me just about everywhere on the site, it didn't take long to run into Simon Ransom, CICS's production manager, and one of the least flappable people you could hope to meet. Considering the logistical challenges of the previous few days, Simon had made a science of keeping his head while all around him . . . At the same time, I can hear on the RT that he is busily organising the get-in for the Lausanne concert the following week.

The set up for this show must have given him a few headaches, though he only cites the water level at the early stages as a major problem. For, St. Michel is connected to the mainland by a raised road and, though the surface doesn't submerge at high tide unlike its twin in Cornwall, the surrounding area does. On either side of the road there is a drop of roughly three metres which takes water on occasion, and it is here that Edwin Shirley Staging were obliged to build their technical towers: two vast ones on either side of the stage, supporting the main projection screens, some speakers and the stage lighting rigs, and two more away from the stage for the projection equipment, lasers, the control stations for light, sound and laser, video screens and more speakers.

The stage was set at the foot of the Mount, at the T-junction with the road. Behind, like a giant theatre set, sat the extraordinary triangular rock with the Church steeple at its peak, stretching upwards towards the heavens, and on either side and centre stage, seven gigantic projection screens, all of different shapes and sizes - the tallest 25m high, the widest 18 metres wide, clad pre-show with symbolic drapes and Swatch sponsored hangings. The taller screens appeared like skyscrapers in the context of the total scenario, so that in combination they formed a composite set at ground level not unlike a modern city skyline. So, on arrival, and from a distance, the perspective was terrific and it bode well for the performance to come.

The only blackspot was the audience situation which was not ideal, being stage left in the long narrow slot formed between the shore and the road bridge. With an audience expected to exceed 60,000, this created problems, especially for the sound designer, to say nothing for the security firm and the whole issue of accessibility to the site. (I should worry, we press and cameras are given pole position in a reserved area bang in front of the stage.)

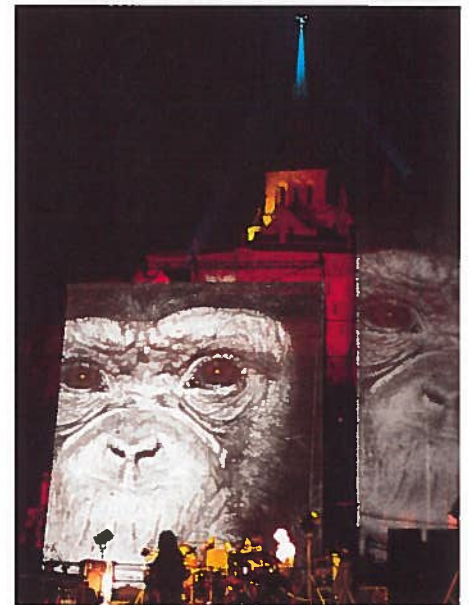
Simon's other problem, and Edwin Shirley's too, was the tourists, for there was no question of stopping them coming to visit the Mount during the set-up and hundreds of them continued to pile



The opening projected trade mark images of the tour with operatic torchlight procession on stage.



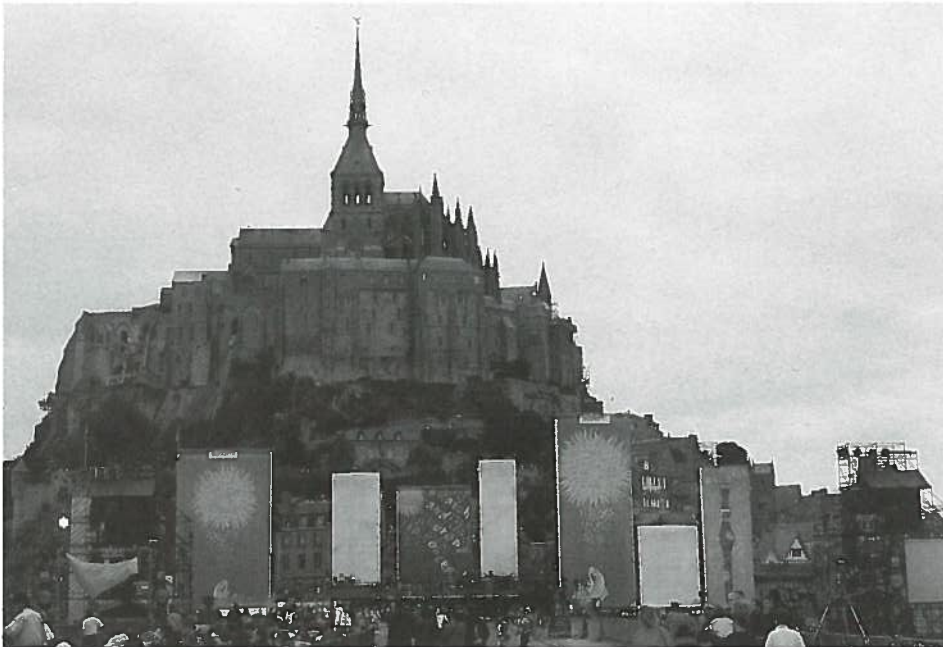
Surrealism on the mount.



Animal magic, a touch of humour.



Original Olympians disporting naked on graph paper.



Before the show, the scene in daylight.

across the road on foot every day, causing, at the very least, a considerable security problem.

All together the scale of the production was mind boggling, so I was interested to get some of the statistics from David Sinclair, electrical chief for the tour with LA-based Show Power, a company which five years ago bought their way out of Show Lights, under their Irish born President John Campion. David told me that the total static load for this show was 1.8 Megawatts of generated power, split into two systems with 600kW for sound and 1200kW for the lighting and projection. The generators used were, apparently, of their own construction and all had two parallel engines for back-up. (Back in LA they are busily working on a new product to be called Fly Pak, a 300kW generator plus redundant system, all in a flight container and weighing less than 9000lbs.) Estimated total cable usage for this concert was 23,000 feet, of which 15,000 was mains.

I talked to Paul Souverbie, a gentle giant of a man who runs Objectif Lune, a company name which is an obscure pun on 'aiming for the moon'. Souverbie is the projection man on the tour, and since this equipment and the resulting visuals are a vital ingredient of any JMJ spectacular, he, his crew and his gear are crucial elements. For this show he was using two of the new Pani 2.5k short arc, direct beam systems for the two smaller screens, and eight Hardware for Xenon 7k short arcs for the skyscraper screens. These are set at

different levels on the two projection towers, with one projector on each level having the benefit of a remotely controllable continuous loop system, using a film of 30 metres in length. The benefit of this system became obvious during the show when the bombardment of huge animated and static images began. All the visuals were produced by CICS themselves.

Controlling the imagery was a Compulite board, one of two on the tour. So this was my cue to scramble into the lighting and projection control tent on one of the technical towers and talk to lighting director Jean Francois Touillaud of Fiat Lux, who took me through the main elements of his equipment choices.

Conventionals, which are under the control of a Celco 90, range from 30 Molefays, 42 profile 2ks, and 36 ACL 600s, all with Diaphora scrollers, plus seven bars of 12 Parcans, for front lighting, 10 ACLs and scrollers for side lighting, and on the stage apron eight more Arenas with scrollers with 40 1.2k Asymetrics. In addition there were 14 MkIII Telescans, also under Compulite control. 12 3k xenon Brite Lites provided the automated sky effects, supplemented by WW2 carbon arc searchlights for long distance work. Followspots were six 2.5k Super Troupers. 24 discharge 2k Arenas and 12 HMI 6ks, all scrolled, were used to highlight the Mount and its ecclesiastical architecture.

Things were starting to hot up in the lighting tent,

so I headed to the other side of the arena to snoop around the sound and laser control areas. The lasers were by Stratovision, whose Claude Lifante I had come across previously at the Euro Disney lake show. Claude was in the middle of last minute checks so I satisfied myself with the knowledge that two large frame, 20W Argon lasers were used with dye units. Fibre optics deliver the coherent light to JMJ's so-called laser harp on stage, though this is a somewhat wasted effort since no one, other than the performer himself, can experience the effect at this elevation - still that's all been done before, so I suppose it's old hat. Anyway, it's all a far cry from the 800 lasers promised in the advertising for the English concerts; not that I ever really believed that, since it probably amounts to more performance lasers than exist on the entire planet. They also claim 40 sky-trackers, so they are a bit out there also.

I went on to meet sound man Eric Alvergnat of Dispatch, the audio contractor for the entire tour. He confirmed that his major problem in this particular location was the configuration of the audience, which has forced him to run long delay lines out. "I have got six delay towers at equal intervals from the stage, each with eight Meyer MSL-3s on top and four 650-R2 sub woofers in front," Eric told me, "but once the delay gets to 2.5 seconds, there really isn't any point in delays anymore, so beyond that and on the road, I have 10 further towers each of four Martin Audio boxes." These towers were, in fact, Stacco lifts which Eric reckons are best for outdoor use, because of their slim profile and their ability to hoist two tonnes up to 12 metres.

Apart from wedges which were all Meyer UM-1s and Dispatch's own DS1Rs, the rest of the rig was all Dispatch, with a total of 84 of their SCV246 speakers. The SCV cabinet includes two 18", two 10" and one 2" driver plus two tweeters, all JBLs. All this is powered by an astounding 294 Amcron PSA2s which are bridged, and driven by Yamaha D2040s. The main sound desk was a Yamaha PM 4000/48 and the monitor console was a Soundcraft Series IV with 24 sends. Alvergnat told me that he calculated the value of the audio equipment in use at Mont St. Michel to be 14 million French Francs, or roughly £1.6 million at current rates! "Mind you it's a big tour, we will be using six 40' trailers for audio and backline alone and a crew of 20."

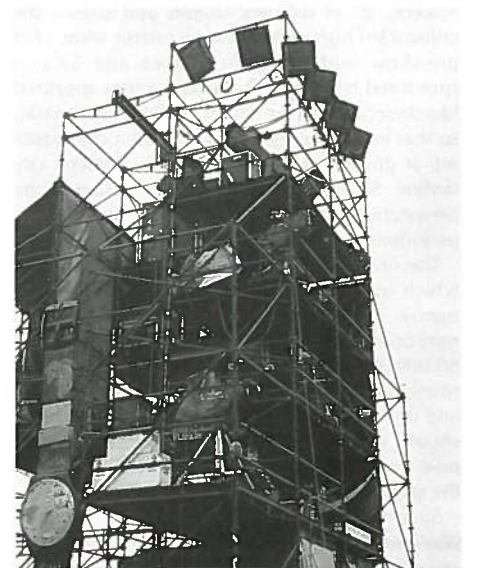
Eric and I agreed to talk after the show to see how it all went down, and I set off to take up station in my guise as a photographer, in which role I am a total imposter, as the accompanying pictures will no doubt reveal. Of course, the professionals can see straight through such an obvious pretence. As with lighting designers it's the size of your



LD Jean Francois Touillaud from Fiat Lux.



Simon Ransom, tour production manager, conducting a final pre-show check on stage with set designer Emanuel Bourgeois.



Technical tower, with control tent at the bottom.

equipment which matters. If you don't have a lens at least 30cm long, forget it! So when the world's paparazzi arrive, typically at the last minute, plus numerous TV crews from satellite stations across the globe, I am left trampled underfoot and gasping for breath. (Also wondering how I get my shots through the massed ranks of safari waistcoats, which seems to be the uniform of this particular profession, who have now ranged in front of me, their occupants carrying on regardless. I begin to realise what being a war correspondent, or a royal watcher, must be like). Never mind, I thought, if the worst comes to the worst we can always beg, borrow, or buy some shots via mon ami the agency photographer. Not to be deterred, the start of the show sees your intrepid photo-journalist clicking away with the best of them. And my sincere apologies to the French lady writer whose eye came close to being impaled on my tripod. Don't ask!

Shortly before the start, the crew dropped the drapes from the towering screens at the tug of a single cord, which got the oohs and ahs going from the crowd. Then it started, with a slow countdown on the projection screens. Then Jarre appeared, keyboard slung round his neck, electric blue coat and trademark aviator shades - the synthman cometh - otherwise an insignificant figure dwarfed by the sets, the technology and the geography. But then this is what this show is all about, the music yes, but the spectacle, certainly. As he said: "This show is a mixture of pop, opera, circus and spectacle. I find it necessary to match the scale of the concept to the scale of the event or the location. Otherwise, it would be easier to go on the road with just my synth." Strange, I thought, when I heard this later, that I had seen no use of MIDI in the control tent, though maybe I missed it, where there were at least seven different operators and boards. It would be that much more of a personal performance if the projection sequences and even the laser imagery were triggered from Jarre's own keyboard.

His description rationalises pretty well the essence of the 'Swatch the World' performance, opera is represented in an early moment when a 100 voice choir, all in white surplises, file in a crocodile onto the stage bearing flaming torches; extraordinary slides of spotted giraffes, striped kangaroos and monkeys bounce about the screens, all in a menagerie of startling colours and not a little humour; these are interspersed with other images, more ethereal, some static some animated, some graphic, some photographic.

Eyes blink and curtains raise to reveal naked athletes disporting themselves on a background of graph paper, next minute we are on the surface of the moon - its all very surreal; sometimes these images find their way onto the face of the massive monastery wall, while the spire and the transept are spectacularly lit with Touillaud's lanterns, with juicy colour bumps; every now and then a laser

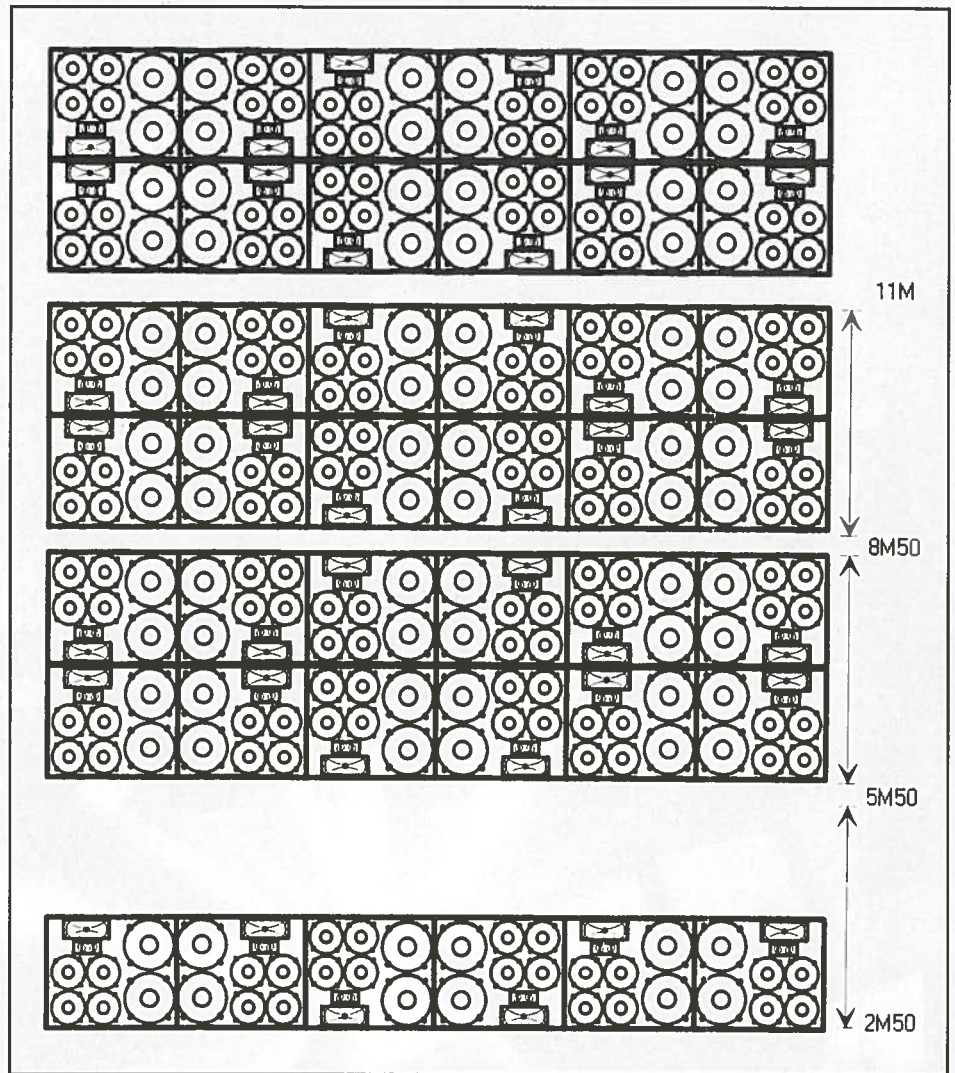


Diagram of one of Dispatch's main speaker towers - 42 SCV 246 cabinets per wing.

generated graphic image intervenes, a weaving snake, an exotic bird; occasionally the trackers sweep upwards from above the screens, change colour and swoop away again, the searchlights form a white canopy high over head, and sometimes the fireworks add crackle and sparkle on the crescendos, or send enormous, successive plumes high above at the climax of a piece.

As I needed to get shots of the whole spectacle from a distance, I headed back to the car park just before the end, to use the roof of the car as a perch but, more importantly, to be in pole position ready for the off. I witnessed the final explosions of the finale, and made my getaway with the hopefuls still arriving (they were still leaving at 04.30!), but I got back on the National Douze in half an hour. Not bad.

I talked to Eric Alvergnat the following day. How

did it go with the sound? "No problems, the SPL was good," he said. "I was still unhappy with the sound beyond the delay lines, it started to break up didn't it? The site was really a disaster from that point of view, but what can you do? I always think you have to put the audience first, but in these circumstances you can only do your best. There were almost too many people." Simon Ransom agreed: "We told the promoters to expect 100,000, but they insisted that they would only sell 50,000 tickets. I knew that wouldn't make any difference. But we were prepared, even if they weren't, and on the whole it went really well apart from the inevitable congestion."

So now Lausanne, Budapest and Brussels before London and Manchester at the end of August. But none of those venues can possibly compete with the magic of Le Mont St. Michel.

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# SHUTTLECAD

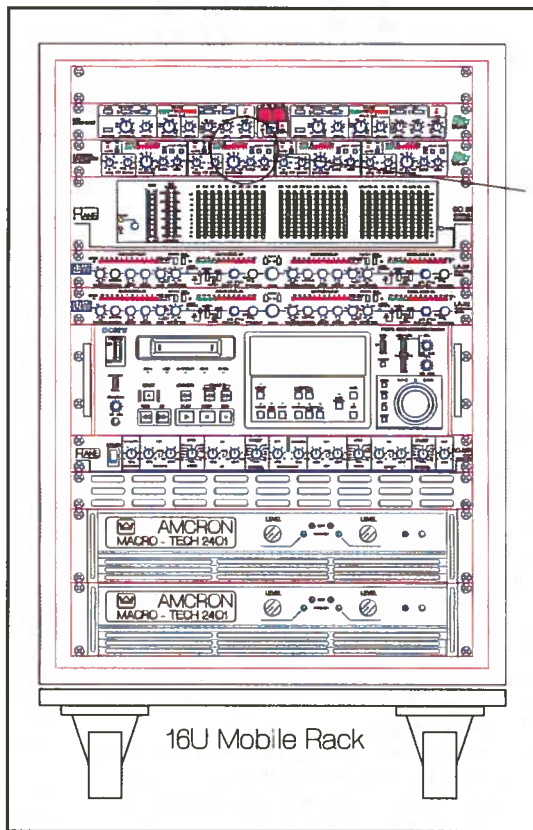
Tim Frost reports on the CAD that's not a bounder

Software for audio installers is not exactly a new phenomenon. As well as using all the word processor, database and spreadsheet packages common to every thrusting young executive, the audio installation and specifying business is also inundated with modeler-type programmes that let designers lay out and predict the performance of a sound installation. Where quotes originally stated simply that a quality sound system will be supplied, now design specifications can include coverage detail, minimum levels and intelligibility statistics. This gives better guidelines to the build standard and an absolute statement of quality to which the installation can be measured.

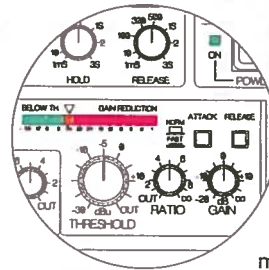
These software packages - often prepared by large manufacturers, and none the worse for that - have made a big step towards prettying up presentations. Whereas statements of power levels, coverage angles and RASTI values might confuse the executive who may be considering the different quotes, the 'modeler' software can produce elegant images of speaker coverages, with intelligibility statistics represented by various coloured footprints; these still do little to enhance the client's understanding - but boy, do they look good! There are even proposals to combine these packages with digital sound processors to let clients 'hear' their system long before the building is even built.

But these packages have all centred on the same basic area of a project - aiding the initial design of the system to maximise its quality and coverage and minimise its cost. Whilst laudable and effective in many instances, they do little to resolve the everyday design and documentation requirements of contractors. Although there are commercial engineering Computer Aided Design (CAD) drawing packages from shareware programmes up to AutoCAD, few have been bent to the requirements of the audio installation industry.

This was something that design-installer/distributor Shuttlesound discovered when they won a major installation contract for Wembley Stadium at the end of the 80s. This required substantial documentation, both to execute the job properly and also to meet the post-installation requirements of the contract



Rack layout showing front high detail view.



the installation industry, to write 'modules' that would run under the EasyCAD system to do each of these main functions. Where possible the modules exchanged data, so that the amount of data entry could be kept to a minimum and drawings could be kept constantly

updated. Once the CAD ball was rolling, Shuttlesound continued to develop and refine it. The project was purely for their own internal use, but after a couple of years it became apparent that what they had developed had commercial potential. "When we started using it for ourselves we had no idea we were going to get into the software business," says Shuttlesound's Rob Robinson who is responsible for ShuttleCAD support. "But what we've done is repackaging the engineering skills of Shuttlesound and apply it in a different way."

There are two driving forces behind the release of the full installation documentation system that has now become ShuttleCAD. One is purely and directly commercial. "We wouldn't enter an entirely new market like the software business unless we were in it to make money," notes Rob, stating what ought to be obvious. But there is also a less direct commercial advantage in letting competitor installers in on a system that has taken four years of hard work to develop.

It continues a theme that Shuttlesound and a couple of other contractors have been leading with for several years: improve the professionalism of the industry and everyone benefits.

By offering a value-added service that includes good design specifications, proper system planning and presentation, alongside good documentation before, during and after the work is completed, the client can see he is buying more than just a set of amplifiers, speakers and control hardware. He should be specifying a system that maximises the benefit it gives his facility whilst looking to minimise the ongoing cost of the system - the running and maintenance costs.

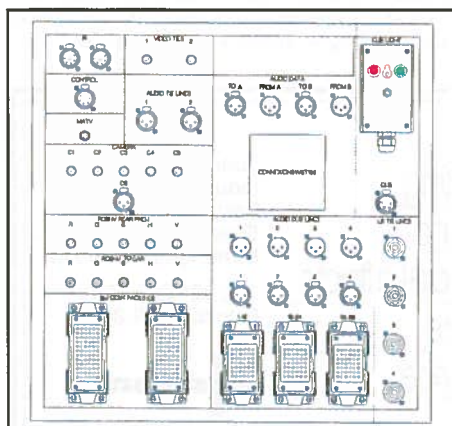
All this moves away from the simple concept of buying on the cheapest bid - the territory of the unabashed cowboy - into aiding the client to understand what exactly he is getting into with a new sound system. The more this

for 'as-built' system documentation.

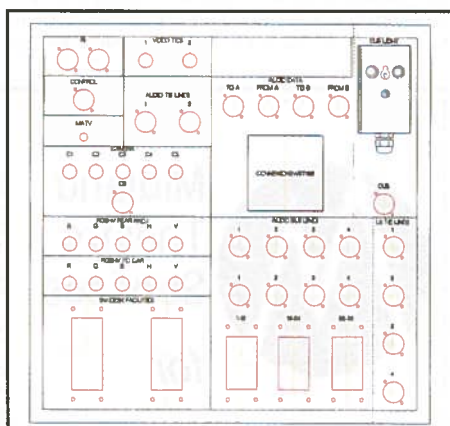
The sheer scale of the project led Shuttlesound to formalise much of the paperwork systems that were already in place and then to look for a CAD package that could be used for the Wembley project. What Shuttlesound lighted on was EasyCAD, a CAD package that was written in low level language that was by CAD standards fast and easy to use and to learn for the non-expert CAD user, whilst including all the general functions that were needed for the primary document facilities. Those were found to fall into four major areas:

- Block schematics for system design.
- Rack layouts.
- Layouts for custom metal work.
- Key feature for sales presentations - a pictorial version of the schematics that replaces symbols with accurate drawings of the products themselves.

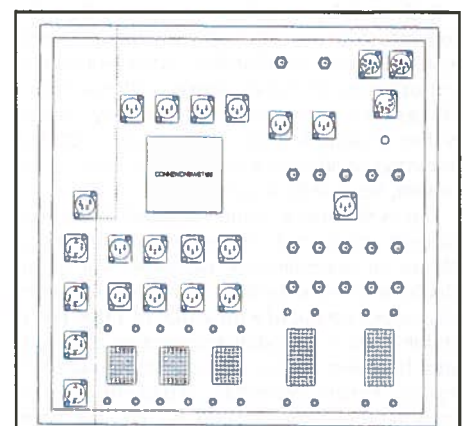
Shuttlesound took the EasyCAD package and brought in a outside CAD expert who also knew



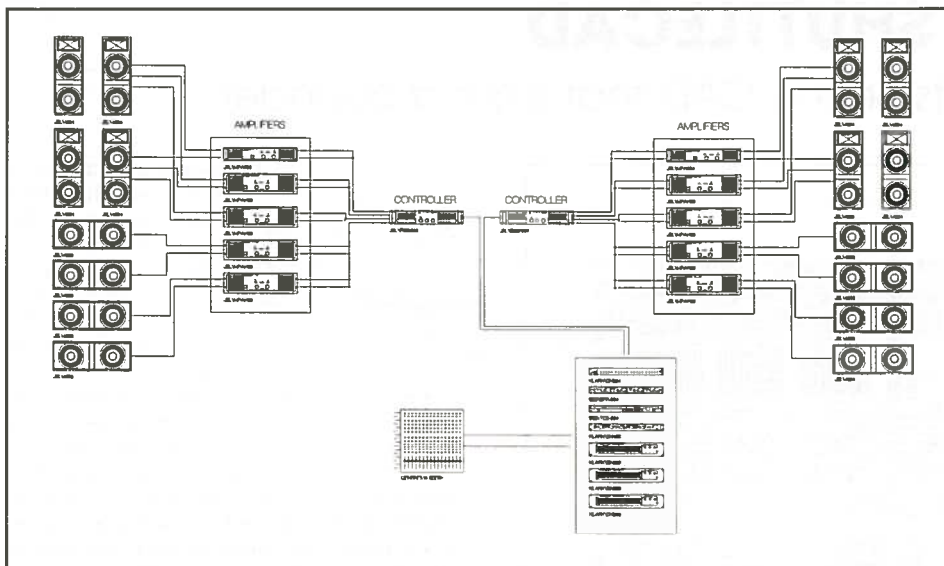
Drawing created in panels module showing panel visual view.



Punching information extracted automatically from panel drawing.



Wiring information extracted automatically from panel drawing.



**Pictorial schematic intended for use as a sales presentation.**

happens, the more likely that the better contractors will be able to compete on quality installs.

So much for the background - onto the reality of ShuttleCAD. The system is a suite of independently running modules based around the EasyCAD engine, of which a full version is included with the package. Since this is a well-established CAD system it includes printer drivers for virtually every commonly used printer and plotter and a reasonable set of file exchange routines.

The software will run on any 386 or better, providing it has a maths co-processor and at least 2Meg of RAM - hardly a sophisticated set-up these days. Like most other complex CAD programs, ShuttleCAD is a pure DOS running system - Windows would slow it up unmercifully. The system comes as standard with the block schematic, panel and rack layout modules, a set of interchange utilities and a library of generic parts and symbols. The pictorial schematics modules and manufacturer product data come as optional extras to the basic package.

The block schematic module is used to create the system schematic by choosing the name of the item from a pull-down menu, placing it on the schematic grid and then interconnecting it with just a couple of mouse clicks. If specific, rather than generic products are chosen, then their product names can be automatically included in the schematic. At the end of this stage the block schematic module would have built up a list of all the items being planned for the system. This list can be exported to the other modules, where the real time savings of a industry specific CAD and data package start becoming apparent.

It should be noted at this point that the software system is only half the solution - some would say even less than that. What is of critical importance to make these systems time-efficient (i.e. save more time than they use up) is the availability of ready-made, detailed drawings of all the elements being used in the system, from XLRs to amplifiers.

This is the area in which ShuttleCAD is now placing most of its effort; in establishing a library of manufacturer products which are available as separate discs. So far 26 companies have come on board with a total of 3,000 parts, and the aim is to update the product discs and add between seven and ten manufacturers every three months. Virtually every manufacturer approached so far has been totally co-operative and as well as including old sparring partners such as JBL, EV, Tannoy

and Altec, it has a wide range of electronic and system products from companies such as TOA, Sony, Millbank, QSC, Behringer and Klark Teknik.

The drawings include the full front panels and rear panel (including all text), side dimensions and additional clearances for knobs and connectors. The advantage (or necessity) of having these highly detailed drawings ready made on disc becomes very apparent at the next drawing stages.

With the project's product listing imported from the block schematic into the rack module, the first job to do is select all the items to be rack mounted. The programme then goes away and creates a pile of all the amps effects and other electronics. These can be dropped into a suitably sized 19" rack with a simple mouse click, together with any blank and cooling panels. Switching to high detail shows the rack in all its glory - every fader and every bit of lettering is shown - and it makes a very impressive drawing. Since these, and all the other drawings can be exported as image files, they can also be included in word-processed documents such as expanded quotations or manuals. With clearances and depths detailed as well, it is quite easy to specify the cable lengths needed for interconnecting. This in itself can save time and money, since cables can be created before the rack is loaded so that equipment can be bought in that little bit nearer the installation date.

Details for custom panels end up in several different guises: one set for the metalwork team, another for the engraver and another set for the wiring team. The panel module comes with all sorts of blanks and a full range of connectors which come with pin numbers, clearances and cut-out details. Drop in a row of XLRs, a couple of multipin EDACs or a Harting or two, type in the legend for each of them and ShuttleCAD

produces a front view cut-out drawing for cutting (this can be to scale or with dimensions depending on your preferences), an engraving layout with all the lettering and cut-outs, a rear wiring view with all the pins pre-numbered to avoid the 'I thought you meant numbered from the other side' confusions, and finally a fully assembled front view of the panel with all the sockets in place and lettered up.

Used together, these three modules not only increase the speed and quality of the original system drawings (and better accuracy = more effective use of resources), but since they require little effort to reproduce and update it means that they are likely to end up with the right people, in the latest revision, more often, than if the job has to be done with pen and paper. The last module - the pictorial schematics - is the only pure sales and presentation element in ShuttleCAD. Starting from scratch again, this module lets you re-create the schematic, replacing the normal symbols with the detailed drawings of each of the components. To the non-technical client this has two very distinct advantages. As a communication tool it really shows the customer what he's getting without having to decipher the engineer's shorthand - which is really all that electrical symbols are; amplifiers look like amplifiers, speakers look like speakers - it all becomes very clear. Secondly, as a sales tool, it goes a long way to explaining the cost of the system - a drawing of a full-range speaker unit looks a lot more like £1,000 worth of kit than a triangle with a little box on the back. As a final add-on there is a listing utility that can take product lists and generate a sorted text list that can be imported into a database or spreadsheet programme for costing and ordering.

Shuttlesound's major launch for ShuttleCAD was earlier this year in the United States (at the NSCA) which they expect eventually to account for 60% of their software business. The system has been well received so far and each package goes out with comments sheet including questions like 'What do you hate about ShuttleCAD' - just to ensure they're not missing anything important.

So far the response to the system from users, potential users and manufacturers is reported as excellent, with comments relating more to details rather than basic operational points. The cost of the software depends on how much of it is bought. The basic EasyCAD and three module package comes in at £765 with the pictorial schematics adding an extra £70 and the rack parts and listing module another £35. The Data discs are priced anywhere between £25 and £35 per manufacturer or as a complete package including updates for a year at £275 - ongoing updating costs £225 a year.

On this basis a total ShuttleCAD system costs just under £1150, not peanuts admittedly, but spread over two or three large jobs - especially if it helps in getting one of them - it should soon start showing a profit on the investment.



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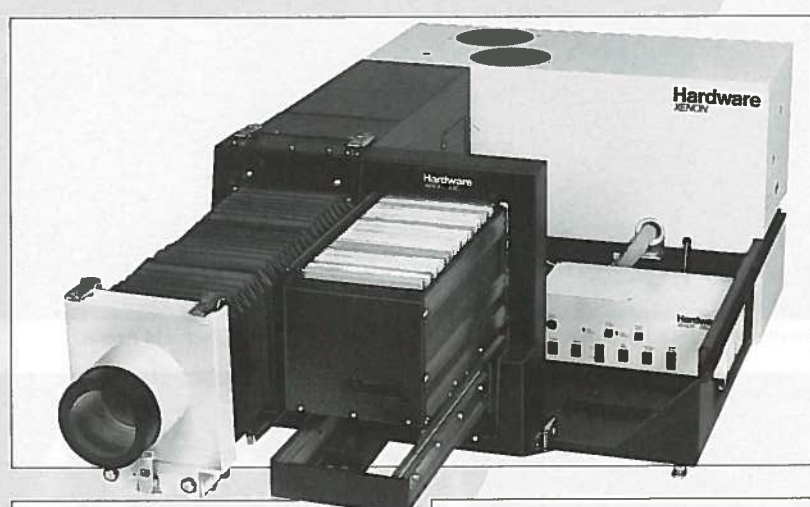
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**SALES AND RENTALS**

# ON TOUR

## AND PRODUCTION NEWS

### Prince at Sheffield Arena LD: Roy Bennett

It's well known that Prince will soon change his name, but hopefully he will not do the same with his band as the recent performance of the New Power Generation at Sheffield Arena was outstanding. With a repertoire of over 150 songs to choose from, and with a band that seemingly knew them all, Prince effortlessly switched the path of his show across a decade and a half, from the old classics to his latest hits. The sound problems that reportedly beset his shows at Birmingham and Edinburgh had been banished, and the lighting, designed as ever by Roy Bennett, flawlessly followed the drama of the Purple One. Always renowned as a show man, and with a reputation for providing the very best in live music, these, Prince's first indoor shows in Britain since The Love Sexy Tour in '91, were no disappointment.

The opening number was the first hint of the playfulness Prince brings to his shows: as house lights dimmed a large flight case was wheeled to the front of house mix position, a diminutive figure clad in black catsuit and wearing a veil of gold chain emerged and mounted the small swing chair that hung waiting. Winched tantalizingly just a few feet above the reach of the crowd, the chair and its coyly waving occupant slowly traversed the 50 metres or so across the top of the audience to the stage, running smoothly along the motorized trolley that held it from above. Late in the opening number, having apparently sung and paraded around the stage with all the panache one would expect, the veil was dropped and the catsuit torn off to reveal the purple bikini clad figure of dancer Mayle Garcia. As the crowd recovered from its surprise, the man himself emerged from the rear of stage and, tongue firmly in cheek I'm sure, launched into a pumping rendition of 'You Sexy Mother-F\*\*k\*r'.

The backdrop to what became a parade of costume changes, greatest hits and teasing manipulation of the crowd's emotions, was a lavish lighting show. In design the rig was simple enough; a back truss held a full stage width painted cloth, all pastels in a dreamy abstract rendering of a city 'scape, whilst down each side of the rig were three legs in a similar motif. Above main stage was a conventional 60'x50' box truss divided by a mid span running stage left to right. In the centre of the rear rectangle hung a single six foot diameter hexagonal pod, its aluminium frame dressed in black with grille work across the bottom not dissimilar to a small speaker. To either side in the front rectangle hung two further pods, all three were motorized and movable. Each pod had six Vari\*Lites positioned on its outer edges, one to each face of the hex with VL2Cs and VL4s hung alternatively, whilst within the pod behind the grille were concealed six VL5s. Alongside the pods were clusters of five Molefays fitted with LSD Molemags (three clusters in all) aimed straight down. As well as flooding the stage these closely packed lamps also made an interesting scenic element in the rig, appearing almost as windows with blocks of intense coloured light streaming through them. Equally spaced down each side of the box truss were three 5kW fresnels, also with Colormags. The rest of the trussing was packed with Vari\*Lites (120 in all, a mixture of 59 2Cs, 39 4s and the aforementioned 18 5s in the pods). I know it doesn't add up but I can only print what the Vari\*Lite crew chief tells me!

There were also 18 Goldenscan 3s, an indulgence, you might say, with so many Vari\*Lites, but in fact a suitably different light



Currently going through a purple patch - Prince in performance at Sheffield Arena.





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source to be an added dynamic to lavish display.

The dominant image of the stage was the new Prince 'name' logo hanging in front of the backdrop. 18 feet high, 38 feet across and weighing almost two tons, it resembled a mixture of the two symbols for man and woman, a circle with a cross and a circle with an arrow, laid on its side, representing androgyny perhaps? It too was festooned with Vari\*Lites, again a mix of S4s and 2Cs some of the former being used to light the silvery interior of the logo's framework. With the logo hung at perhaps 15° to the vertical this group of lamps worked to great effect, the very bright 2Cs casting the band into stark relief when appropriate and being well placed to sweep up into the audience for the frequent interplays between them and the stage.

Roy Bennett's rigs often feature heavy use of strobes and this was no exception - 16 of LSD's so-called 'Fridge units' and four Terrastros mounted in a block and fitted with a Molemag colour changer were dotted around the truss, floor and even two down in the pit alongside the monitors. Although having great impact when used alone, I thought these units most effective when working in conjunction with both the Vari\*Lites and the Golden Scans as they went through fast colour changes - the flashing seeming to give added punch to what would otherwise be standard bump cues. Inevitably, the most frequently used colour was at the mauve end of the spectrum, however its use was not gratuitous; often its role would be to soften another main wash colour, a vivid saturated sky blue, for example, which alone would be quite harsh, was used on several occasions. Even when Prince performed his classic Purple Rain, the close to ultraviolet state produced by the Vari\*Lites interplayed with a rich ruby red and an almost vulgar amber. Despite the enormous reservoir of lights available there was no hesitation in iris down two of the six Super Troupers front of house and lighting Prince with only them and the 5kW

fresnels as wash when the song demanded it. In fact, one of the more interesting moments was immediately after Purple Rain, during one of Prince's ballads, as he sat centre stage at his blue baby grand piano. The Troupers appeared to trombone back producing a soft-edged red beam just large enough to wash singer and piano whilst key light for him came from just two VL2Cs directly above in blue.

Justin Collie operated the conventional rig and the Goldenscans from front of house on a Whole Hog whilst Mac Mosier ran the Vari\*Lite Artisan from the side of stage. Apparently, they were originally both at the side of stage along with the sound engineer, at Prince's behest, but when Justin pointed out he was unable to monitor the performance of the followspot operators and chastise them when sloppy, he was permitted to go back to front of house. With there already being a camera man and four GE projectors out there to fill the 20' x 15' screens either side of stage, there appeared little logic in the qualifying reason behind the original desk positioning that, "fans would have a less restricted view", admirable though this sentiment may be.

No doubt this desk position was one of the reasons for the problems that I alluded to in the beginning of the review that the sound company ShowCo were having at the start of the tour. Unfortunately time did not permit a discussion with the sound engineer, suffice to say at the show in Sheffield the Prism System performed admirably. The show I saw was an extra night due to public demand. Unfortunately not quite enough demand as it turned out as it was not fully sold, which resulted in about 1,000 empty seats at the far end of the hall. This did inevitably produce some slap back, but only noticeable in the ballads and even then not intrusive. The gentlemen who spent the night behind the cameraman reporting the quality of the house sound back to stage via intercom, has obviously established a good rapport with the sound engineer. Both deserved a

pat on the back for their efforts.

On a separate note, Coca Cola are sponsoring the tour, and as part of their package they are permitted to hang a promotional device over the mix position out in the hall. Designed by Jonathan Park and built by Brilliant Stages, the device is the segmented frame of a globe approximately two metres in diameter, containing both a Coca Cola logo and the Prince name logo. All are fitted with 'Non Neon' in differing colours and the whole is surmounted by eight Tigerscans, supplied by SpotCo (who also provided the Goldenscan 3s for the tour) which project, among other things, rotating gobos of the Coca Cola logo onto the crowd. Notable as a very effective and mildly entertaining piece of advertising between support and main act, the Tigerscans were also used during the show by Justin Collie, easily plumbing their DMX line into his 'Hog for an audience ballyhoo during the first encore '1999'.

Steve Moles

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# THE ITALIAN COLLECTION

A series of L+SI fact sheets giving information about leading Italian manufacturers of entertainment lighting and their products. Previous issues have covered FLY, FAL, Coemar and Clay Paky. Successive editions will provide similar facts on Lampo, La Novalite and TAS.

## Griven

**Directors:** Luigi and Silvio Pederzani.

**Background:** Established in 1990, Griven made a big impact in the discotheque market from its very first Rimini Show at which it introduced a range of effects projectors using segmented mirrors to generate animated beam effects. The brothers Pederzani gained their experience as sub-contractors to other manufacturers in their area.

Centrepieces have since become a Griven speciality and most of their units incorporate in-built animation, so there are no control complications - just bolt them to the ceiling and you are in business. Since then their markets have expanded rapidly, with increased sales in the region of 80% per annum in the last two years despite the recession. In common with many such Italian lighting manufacturers Griven also make a range of theatre luminaires.

**Company philosophy:** Expansion through an increasing range of 'ready to go' new products, which are practical in design, cost-effective and simple to operate.

**Selected product:** **Helios** is a new centrepiece, launched at SIB this year, based on a single HMI575 or 1200 source which uses a combination of partially silvered dichroic colours and tilting true mirrors, to give eight main animated beams. Other static mirrors and small reflective discs provide the possibility of generating multifarious additional beams and effects. The different combinations are preprogrammed in on-board memory which can be triggered by audio input, or

controlled via a single analogue control channel. Described as 'the sun at the centre of Griven's universe', the Helios may be mounted in any position.

**Recent releases:** **Manta** is based on a single HMI575 from which five main beams are directed, by tilting mirrors and mirror discs, to a secondary series of fixed discs. The various effects thus possible are changed by audio trigger, or from external control. Automatic colour change is another feature and there is a blackout control.

**Smile** is a similar format but uses the 850W Roundlux lamp which generates a cone shaped beam, five tilt mirrors, and five fixed mirrors plus colour change provide the animation. **Kite** is an automatic effects projector, which uses a quadrant mirror and four motors to create four separate oscillating beams triggered by music. The beams from the HMI575 lamp are shaped by gobos which change automatically, whereas the colour change is music driven.

**Spotlight 2000** is the latest addition to Griven's range called Spot Teatro. This lightweight fitting, available as a fresnel or PC spot uses the 2000W GY16 lamp an 'endless screw' focusing system to provide a beam diameter range from 10-59 degs.

**Other products:** *Lighting effects:* **Cyclope** the only thing in common with the mythical name

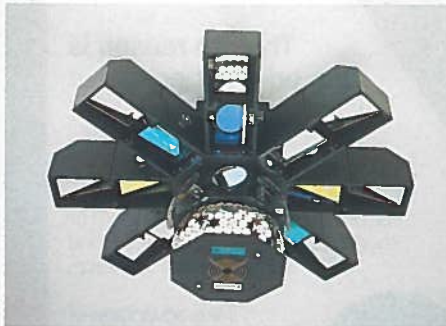
of this centrepiece is its single HMI575 or 1200 lamp. Otherwise, it gives out eight colour-changing pencil beams which can be deflected by tilting mirrors onto secondary static reflectors, or directly as eight moving 'legs'.

**Centron** uses a single 650W GY9.5 light source is otherwise an 8-beam centrepiece with effects similar to the Manta. **Spot 8** is a compact 1000W seven dichroic colour changer, plus open white, as is **Colour Changer Spot**, which is a four colour, plus white version. Dedicated controllers are available for these two models. **Flash Dance**, **Rock Fan** and **Can Can** are a range of compact effects projectors with lamp options as follows: 36V 400W A1/239, SN250, or MSR400. All are available with optional strobe effect, or colour change only triggered from music source.

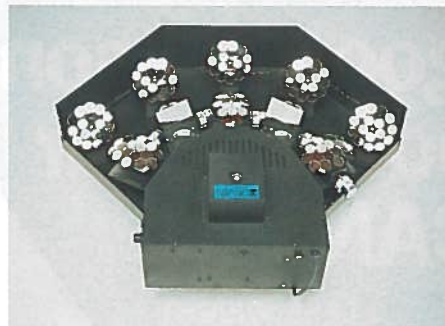
**Flash Dance** uses an eight segment mirror to generate eight expanding and contracting beams which also rotate as one; **Rock Fan** is the six, flat beam, version; **Can Can** the 16 beam model. **Crown**, another compact projector, gives concentric rings of counter-rotating circles of multi-pointed pinbeams which are activated by music oscillation and panned through 45 degs by mirror. A1/236 or MSR400 models are available with, or without, strobing option.

**Goblin** has a music-activated scanning mirror, colour change and gobos in its 1000W GX9.5 version, while strobe and blackout are added to the HMI575 discharge lamp model. **Twin** and **Supertwin** both produce two high intensity beams from a single 575/1200MSR source, deflected off a pair of animating mirrors in a laser simulation effect. **Twin** yields cone shaped scanned beams, while **Supertwin** uses additional mirror discs to give double-rotating rays as an additional effect.

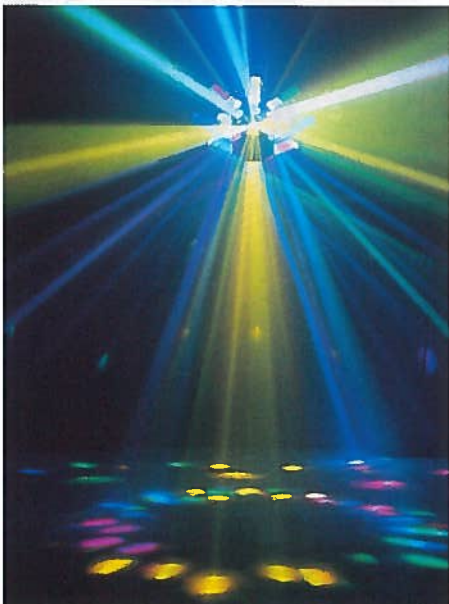
**Tricorno** consists of three hoops, each of five dichroic colours, to release sweeping, colour-changing beams in three-dimensions. A choice of lamps is available and a rotating version is also on offer. **Shark**, just to be different, uses two light sources, either 400W A1/239 halogen or 800W DXX tungsten, to create a fan of multi-coloured, flat beams which are



Helios.



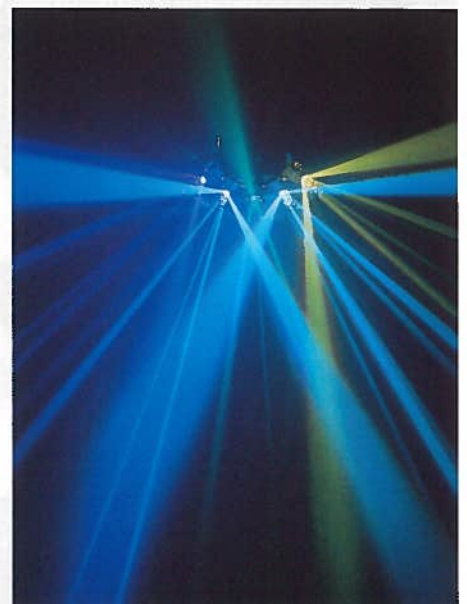
Mantra.



Helios in action.



Kite on the move.



Mantra in motion.

animated in a horizontal plane. **Tex** also produces a fixed, fan-shaped beam, from a single compact 650/1000W linear source, in a compact lantern with gel frame.

**Mistery** uses the same housing with a 1000W tungsten, GX9.5 lamp, for use as a static gobo projector and with a kit of four patterns. **Aries**, looking more like *Jaws* than *Shark*, generates a double row of beams from a single A1/239 halogen source, which then pass through ten coloured lenses, and scan and cross in music animation. **Frisby** is a low-cost fan light, using an 800W tungsten lamp with gel facility. **Maitre** uses the same body, but the Roundlux 800W lamp generates cones, or tunnels, of light which may be coloured. **Rotomaitre** enables rotation of these cones.

**Spotlights:** Griven supply a range of beam lanterns; Par 36, 56 and 64 versions are available in spun housings. **Spot Teatro**, is a family of halogen focusing luminaires with fresnel and PC options. Different methods are offered for beam adjustment, from the conventional slider, to 'endless screw'. Beam diameter ranges from 10-57 degs in the mini GR 211/2 which takes a T18/25 lamp, to 10-59 degs in GR 221/2/3, and the same in GR224/5 which takes the 650/1000T11/19 bubble. The big brother is GR227/8, the Spotlight 2000 covered earlier.

**Inseguipersona** are a family of followspots, from 1000/2000W GX9.5 and GY16 type light sources to HMI575 and MSR1200 discharge lamps. A five colour semaphore unit is available for all models and a mechanical dowsler is an option on the discharge types.

**Other items:** **Sky Rose** is an exterior beam projector which projects a cone of focused beams, which rotate 360 degs around their axis. In addition the fitting can scan through

170 degs. All these moves are remotely programmable as to speed and beam excursion required. The blackout also provides a strobing facility. Suitable for HMI lamps from 575W, 1200W to 2500W. **Wood** are a 400W backlight UV projector, or 20W and 40W UV strip fittings.

Griven also offer a smoke machine, a 80kg capacity pantograph hoist, lantern stands and a single channel analog remote control.

For details on the latest product from Griven, the Tracer 4000, see this month's news pages.

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Luigi Pederzani, Griven's managing director.

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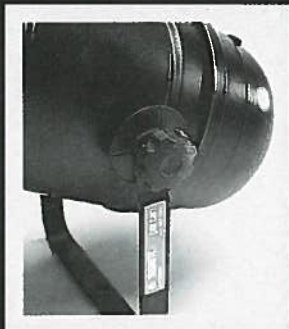
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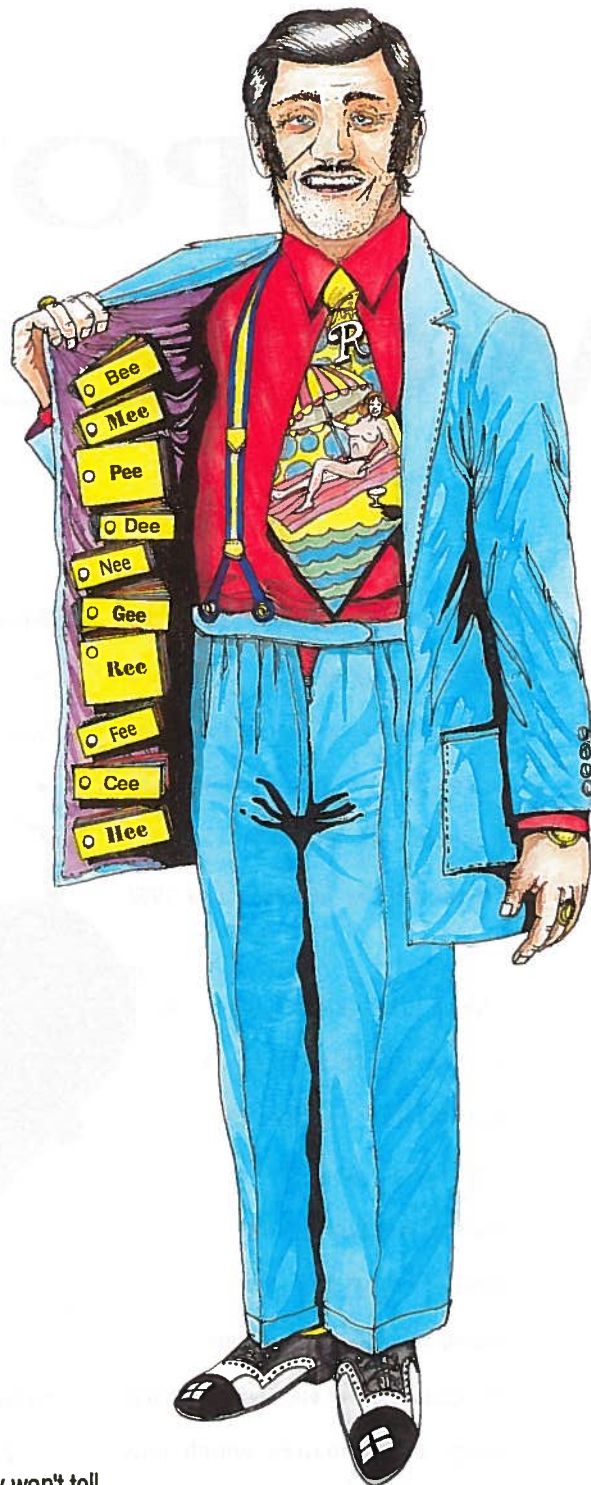
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# BENEATH THE WAXWORKS SOMETHING STIRS

## Tony Gottelier takes a ride at Madame Tussauds

That stalwart of a million schoolboy outings, the Chamber of Horrors at Madame Tussauds no longer cuts the mustard with the TV-pumped, computer-literate, home video, Sega playing modern generation. Nevertheless, over the 200 years since it was first established, many new and attractive features have been added to ensure that Mme T maintains her role as the doyenne of London's tourist attractions, where she routinely tops the pole with over two million visitors every year.

From Planetarium to Laserium, the waxworks' owners have not been slow to recognize the need to stimulate their audience beyond the rigid formality of the rather static wax figures of the original museum. As the result, in recent years they have become experts in their own right in the production of animatronic figures with such new attractions as Rock Circus and Windsor Royal Station, though these are away from the original Marylebone Road site.

In many ways the success of Tussauds made it the original prototype for other modern heritage museums, now proving extremely popular with visitors all over Europe to the point where every City has to have one. Such competition, the arrival of computer-generated imaging and the imminence of blockbuster movies like Jurassic Park, with its extremely realistic special animatronic effects, provided the pressure for the next radical move at Wax HQ. "The project was designed to provide added-value to the whole



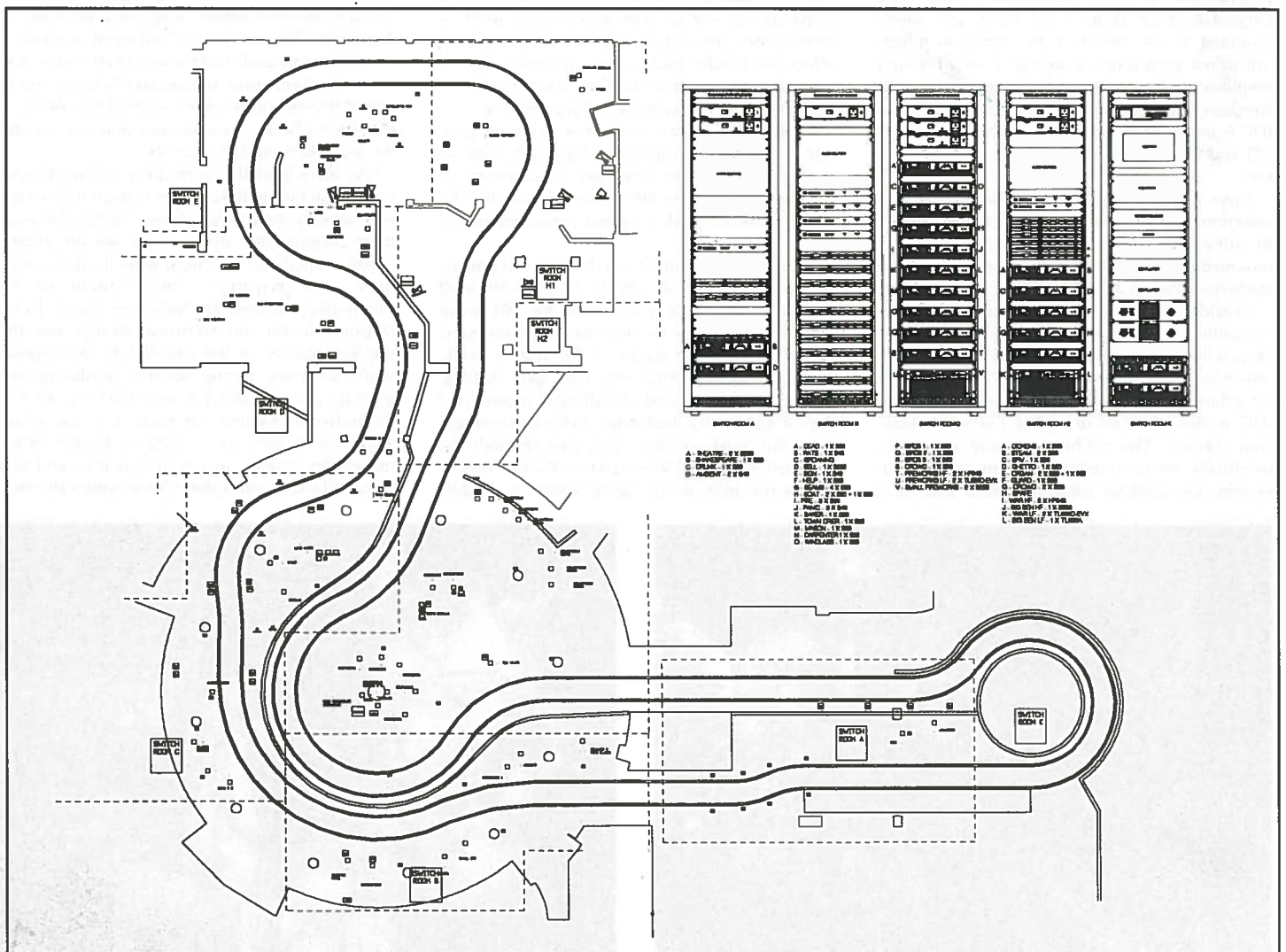
Phil Pike, Tussauds head of AV.

tour, as the climax to a visit," says Phil Pike, Mme T's head of AV, which must be one of the most interesting jobs in the business right now. "It's not a stand-alone profit centre; the idea was always to provide added excitement to the trip without any extra cost." It had to be relevant and in a current context, while being fun and informative at the same time. So five years ago the internal decision was taken to create a '400 Years of London

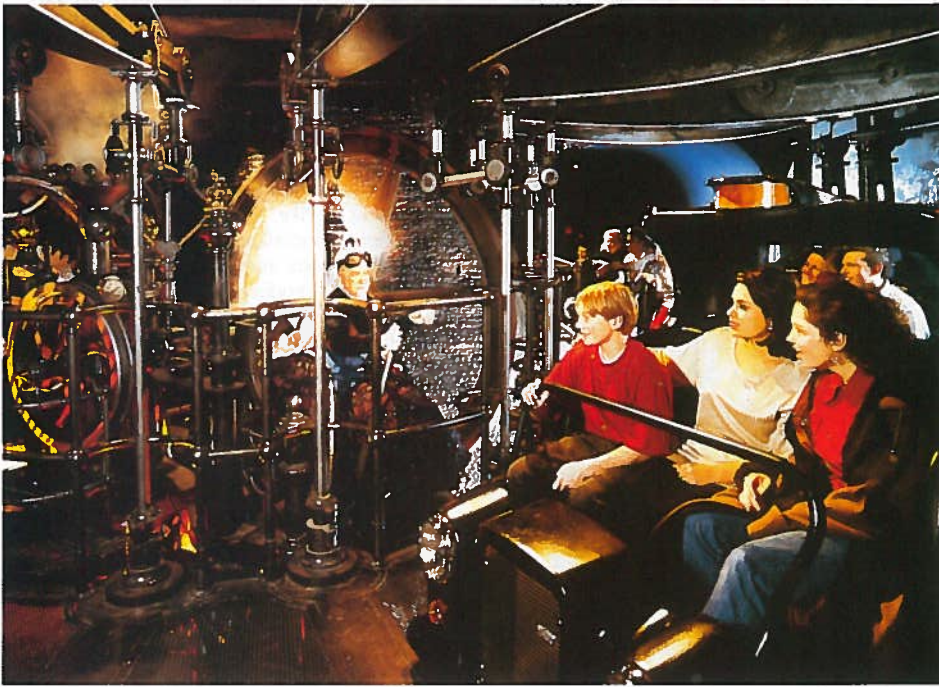
Experience', though it was originally seen as a walk-through, finishing at the exit to the street, according to Pike. "It developed from there. We asked John Sunderland to put together a concept, but then we took the whole project in house and managed and produced it ourselves." It isn't clear when the scheme turned into Mme T's most ambitious project to date - a dark ride which cost an estimated £10 million to complete. Possibly, when it was found that enough room could be created under the site to implement a 'people mover'.

Five years on, and a year on site, and the ride called 'The Spirit of London' occupies the old storage space underneath the amphitheatre of the Planetarium and the basement of the new office block at the back, which had extra floors added to accommodate the displaced area. This means that at one point in the travel the track turns quite steeply downwards as it descends one level under the offices, before climbing upwards again at its culmination. In all, the attraction occupies 1,500 square metres of space, roughly the size of a soccer pitch.

Although Phil Pike, who started out as a production electrician before moving to the Hippodrome during Peter Stringfellow's reign, already had the experience of Rock City under his belt, this must have been quite a daunting project. With typical self-effacement, he makes light of it, apparently taking it all in his stride. "With all these venues now in the Group, including Alton



The Spirit of London ride layout, with control rack configuration courtesy of Shuttlesound.



Visitors travel by taxi through the 19th Century and the noise and steam of the Industrial Revolution.

Towers, nothing fazes me any more," he intimidated.

The ride starts on the ground floor of Tussauds' with a pre-show queuing area based around a fantastic library, where the books get larger and larger as visitors approach the loading dock. Here, you clamber into one of 87 'time-taxis', truncated black cabs which are fitted with lap-bars and a boot full of audio equipment. This consists of an Interactive Device Controller, from San Diego-based RA Gray, a CD ROM unit, shock mounted in low density foam rubber to inhibit vibration problems, feeding a small Quad amplifier to the on-board Electrovoice EV S-40 speakers, a power supply and some relays. The IDC is programmed to select audio tracks on the CD and turn on and off the various lights on the taxi.

There is also an input for an optional language selection. The sequence of these activities is cued to infra-red optical switches from reflectors mounted directly over the track - the one at the start concealed in a lantern.

Should the ride stop, the re-synchronization of the audio track is controlled by the IDC. The amp takes a line level audio signal from the CD ROM, which first passes through a stereo potentiometer for volume control. If there is a problem with the IDC, or the CD ROM drive, the Taxi's 'For Hire' sign flashes. The on-board sound system is essentially for commentary and music, external systems are used for surround sound and local

effects.

Kevin Cutter, RA Gray's project manager comments: "Solid-state audio playback would normally be the first choice for on-board applications of this sort. However, programme length and fidelity requirements placed digital stores well outside the project's budgetary constraints. Another solution had to be found. We chose the CD ROM because the device itself is quite compact and, unlike most CD players, it is capable of serial communication with a micro-processor and, therefore, our IDC unit. It offers good audio quality and a playback time of up to 90 minutes." (Richard Gray recently sold his company to Communications Company Inc.)

Another IDC input is the maintenance port, which enables interrogation of the system status of each car by lap-top computer. In addition, an operator can monitor the controller's function by riding in the car with a lap-top connected to this socket.

So let's take the trip in words: Infra-red sensing was selected for its ability to read through theatrical smoke, and the need for this arises almost immediately the ride starts, as passengers swing through the pages of the history book, simulated by three High End Trackspots 'leafing' in the roof to the sound of rustling of paper - and then straight into a fog tunnel. As the cab emerges from the 'mists of time' you pass through the Elizabethan era and Shakespeare's Globe Theatre, where his animatronic figure writes at a table,

slipping into the 17th century and the great plague. Immediately, musty smells (aromas were supplied by Dale AC), shivering, screeching rats and the groaning of the dying, sick children dance a 'ring of roses' in a very effective Peppers Ghost treatment. Then past the death cart and the plague doctor and out of the frying pan into the fire, the Great Fire, that is. The temperature rises, the smoke gets acrid, timbers crack, the baker's wife screams for help from her window in Pudding Lane, past an open fire by Technifex and on to the baker denying responsibility for the conflagration to the Lord Mayor, as they sit on board a boat on the Thames. On past a Town Cryer proclaiming the reconstruction of the City, fade to black, from which you emerge to witness the sights and sounds of Wren rebuilding St. Paul's Cathedral. The figure of Wren is one of the most successful animatronic figures on the ride.

Nothing much happened in London in the 18th century so 'fast-forward' to one of the other impressively attractive figures which has captured the public imagination, this time Nelson. A figure built by Flints, with his single mechanical eye, he keeps a watching brief over Trafalgar Square as pigeons fly, by video projection, and faux fireworks, made from Eurotec optical fibre, explode. And you fly by, now apparently at eye-level, in the 'airborne' cab, feeling wind in the face, and on into the noisy, steamy atmosphere of the industrial revolution, courtesy of Rosco 'Pencil' foggers, where the mechanical effects were designed by Peter Kemp (who seems to be everywhere again these days).

From Victoria and Dickens' hard times to Churchill and the blitz, and another chance for JEM to generate some atmosphere. On to the swinging sixties of Twiggy and Marsha Hunt with two Opikinetics Solar 250 liquid projections for a touch of the psychedelic, and miles and miles of Tapelight. The sites, sounds and smells of modern London, a carousel, the Houses of Parliament, and assorted animatronic figures finally bring you to rest at the exit dock where a travelator awaits. If that seems hectic, five minutes and one second has elapsed from start to finish.

"We were briefed to allow for 1,200 people per hour," Phil Pike told me, when I suggested that the ride could be a great deal slower. "In fact, because three people often share a cab, we are getting 1,900 through, so we could slow it down and it may well happen." Phil's team of 16 multi-disciplined technicians have been responsible for the technical design and the implementation of the installation throughout, with Tussauds' Group Studios producing the overall project design and making all the animatronic figures. In fact, it is the close proximity of the cars to all these figures which makes this journey as exciting as it is, and that wouldn't work unless the models were extremely



Twiggy heralds the completion of a 400-year journey.



Bird's eye view of Nelson atop his column.



**Big Ben miles and miles Tapelight.**



**One of the most successful animations, Sir Christopher Wren rebuilding St. Pauls Cathedral.**



**Lord Mayor escaping the Great Fire by boat.**



**The main control centre.**



**Ring of Roses: The Plague of 1664.**

good.

Phil Pike and his crew started programming the figures last December and found Audiofile, the hard disc recording and editing system, very useful for audio programming purposes, as it enabled editing of sound to action in one hit. In fact, Tussauds believe they are way ahead of Disney in the animatronics and figure-making department, though they don't supply to others which seems a bit of a pity really. 32 of the 72 figures are audio-animatronic and so required lip synching to digital sound bites.

Tussauds is well known for its skills with cloning in wax, but when it comes to animated figures the treatment is different. It starts out with a sculpted wax figure, but then an 'artificial skin' is cast in acrylic to introduce the flexibility of movement necessary to create realistic animation. Live models are computer-mapped to generate the movements by pneumatic servos, or mechanical feedback devices, resident inside the skin. So there are both analog and digitally controlled movements.

A good example of this science is the figure of the Archivist in the library pre-show area, for whom the script reads as follows: "... an Archivist perched on a high stool crouching over a desk piled with paper. He is frowning whilst trying to notate history, his quill moves fast across the page. Both lips have mumbling and lip synch for a 'shush' to his dog (also an animation). He blinks. Full head movement to look towards the passengers in the cabs, and to glance at the dog. Left hand clutches the ledger but occasionally the fingers stretch out. Right hand moves across the page and the quill moves in his fingers."

Most figures may contain 16 to 18 digital movements and 10 to 12 analogues, but Wren, for example made 32 and 18. Now, look at the movement analysis just for the head of the Archivist figure: nod, digital; tilt, digital; turn, analog; jaw, analog; top lip, digital; bottom lip, digital; eyes left/right, digital; blink, digital.

As far as lighting is concerned which, aside from special effects, is very discreetly hidden, Pike called in the help of three outside lighting designers: Mark Henderson, for the beginning

including the fog tunnel, and the finale including the 60s. David Hurst, did the Plague, Fire and Nelson areas and Steve Wentworth, the Elizabethan, Georgian and Victorian eras. Again, other than special effects, most conventionals are from Strand via LHS, mostly Quartets, with a generous sprinkling of Thomas Birdies (with short snouts made especially for the job), Howie Battens, Times Square MR75s and, of course, the ubiquitous candles, supplied by Lighting Technology. Ripple effects, gobos and other animation wheels are all by DHA Lighting. The dimmers throughout are Zero 88 Betapacks.

The control system for all aspects, lighting, SFX, sound and animatronics, went to RA Gray. Three main equipment rooms were established, corresponding to the three main zones of the ride where the equipment sits in racks. In fact, there are now five control rooms, plus the main control centre from which a decision to stop the ride in an emergency is made. This has only happened so far when a traveller has decided, for reasons better known to himself, to push up the lap-bar in his car and get out mid-ride. In such an event they are quickly back in business. Phil used Autolight extensively for listing all the equipment and the dim and non-dim circuits. In fact his maintenance documentation, used extensively as a crib for this article, is really excellent.

The sound system, designed and supplied by Shuttlesound in collaboration with Phil Pike, is based around the Amcron Macro-tech amplifier with its intelligent PIP card system. Five audio racks were set up, each contained a Scenesetters Animation sound store for the special effects, one or more Amcron MPX-6 PIP controllers, the appropriate number of White Instruments 4700-2 1/3 octave EQs from SSE, the two channel version used so that the unit can double as a crossover and the amplifiers and sends to the speakers, which are a mixture of Owi 900s and EV models S-40, S-80, S-200 and TL606D (with HP9040 horn and DH1A driver), depending on the application outside. All racks have EMO switchers.

The way it works is that the main music source in each area sends time-code to the racks to trigger the solid-state spot effects. These effects were

recorded with a flat EQ in a recording studio and stored into the Scenesetters' EPROMS from there. Shuttle then EQ'd the system in situ, that is with the speakers placed inside the various figures and within the props of the ride itself. Then it was EQ'd flat using pink-noise, to balance out the effect of speakers buried inside other objects. There is also a PA system, of course, supplied by Envo-tech.

The video equipment was provided by Metro Video and Lightstore did some of the AV installation work. Most of the scenery was by Terry Murphy, the Fire set was made at the Alton Towers prop workshop, and other participating companies were Team 4 and Show Contracts. Sloanes did the electrical installation.

If you have kids, and even if you haven't, I can thoroughly recommend a re-visit to the revitalized Tussauds. Who knows, you might even meet an animatronic Phil Pike. Judging by the difficulty of reaching him by telephone experienced by this office, it's about the only way you will!



**Audio control rack.**





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# THE EXTERMINATOR

## Ken Dibble reviews the Sabine FBX-900 Feedback Exterminator

This is another review which very much strikes a familiar chord as, back in 1971, I conceived a virtually identical animal, constructed a prototype and went as far as applying for a provisional patent on the idea. Unfortunately however, whilst my 4-band set of manually tunable, variable Q-notch filters worked well as far as it went, I could not get an automatic detection and self-tuning circuit to work in any way, shape or form using the technology then available, and so abandoned the whole idea. Now, Sabine Musical Manufacturing Inc of Gainesville, Florida, have come up with the very thing I was struggling with some 20 years ago and have shoe-horned it into a 1U rack package just 16cm deep!

### Overview

There is no question that feedback and howlround have been the bane of every sound engineer's life ever since microphones and loudspeakers were invented. OK, the advent of modern multi-way loudspeaker systems, constant directivity horns, active crossover and equalisation techniques, and the headroom expansion available from today's mixers and power amplifiers, coupled with the greater dissemination of the knowledge and understanding of the physics of sound reproduction, have all contributed to reducing the scale of the problem. Today, for example, a 10kW rig can be used in a room which would previously have a 50W PA amplifier and two 4 x 10" column loudspeakers on the verge of feedback all day long! But still we want more gain: we still try to push the laws of physics to their limits and still feedback is the big, big, bogy that plagues us all. This is where the FBX-900 comes in.

In essence the FBX-900 is an automatic 9-band digital notch filter which detects the merest hint of sustained oscillation, assigns a filter and notches it out. The principle is not dissimilar from the way in which a graphic equaliser might be used to do



Sabine's FBX-900 feedback exterminator.

the same job manually except that the filter bandwidth - typically 1/10 octave - is much more narrow and much deeper, producing more effective suppression of the feedback frequency with less degradation in the overall system response or perceived quality. Being automatic, it is not subject to trial and error before the right frequency band is found and is far quicker than a manual solution - 0.4 seconds is typical and one second is a maximum, depending on the amplitude of the feedback frequency in relation to the programme content.

### Operation

The FBX-900 is a single channel, 9-band device with balanced ins and outs on XLRs which are duplicated on unbalanced two-pole jacks, and is provided with a hard-wire bypass facility in the event of failure of the unit. A simplified system schematic is shown Fig #1 below. It would normally be wired upstream of the graphic equaliser, but before any active crossover device, or alternatively can be inserted into a desk channel or sub-group as a dedicated processor. It operates from a 27-0-27V AC supply from an external transformer, which for the UK market, is housed

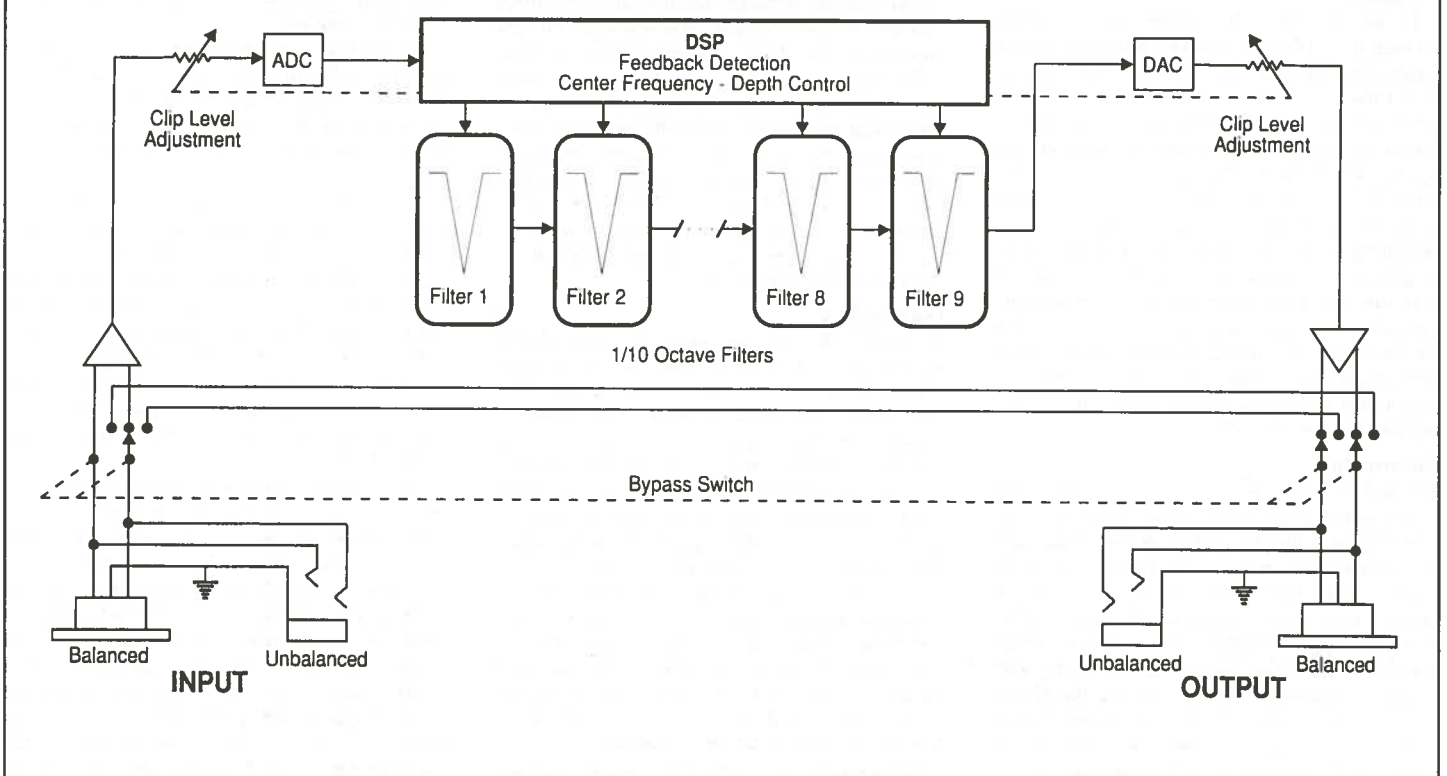
in a 13A adapter plug. There are no other connections and the unit could not have been made more simple to install or operate.

Before the FBX-900 can be used a selection must be made as to which filters are to be 'fixed' and which 'active'. Once assigned, a fixed filter will be held in a non-volatile memory until the unit is re-set - even when switched off, whilst an active filter will track the variable feedback frequencies which occur as the microphone-to-loudspeaker path is varied as performers move about. The unit comes factory set with six fixed filters and three active but this can be changed to any combination between all fixed and all active in a matter of seconds, without removing the cover.

Before making any attempt to assign the filters the sound system should be set up with the FBX-900 in 'bypass' mode and any graphic equalisers used only for room correction or to achieve the desired system response - no attempt should be made at this stage to compensate for feedback modes.

The FBX-900 should then be set to its 'active' state and the 'clip level' control adjusted so that the -6dB LED on the bargraph metering is mostly

### SIMPLIFIED BLOCK DIAGRAM



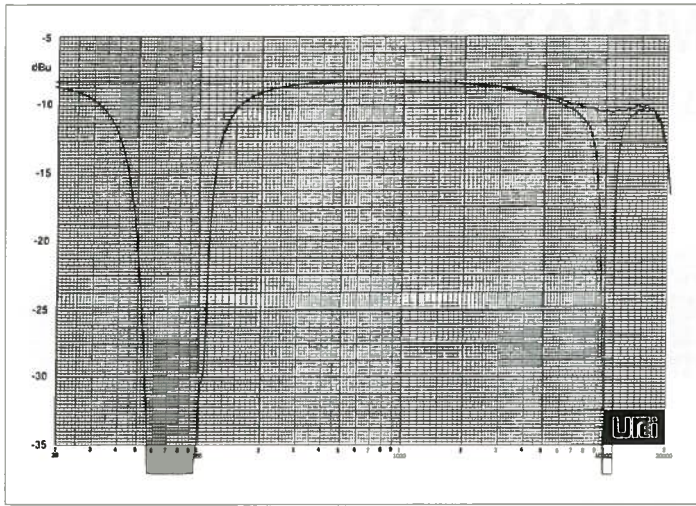


Fig #2 - frequency response and combined filter responses.

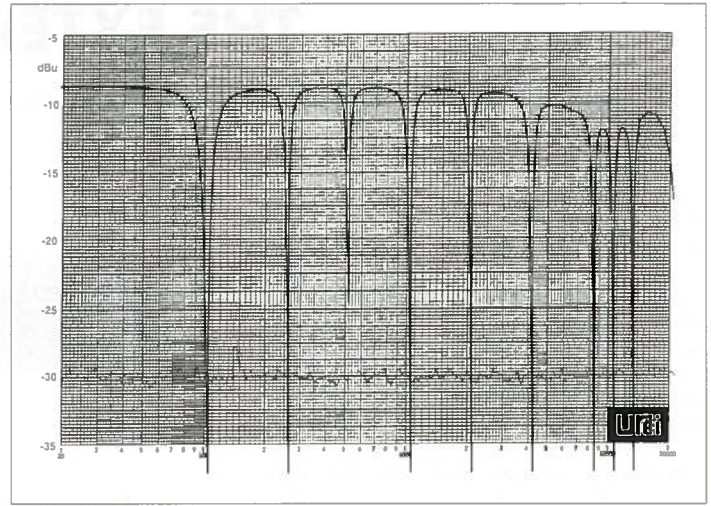


Fig #3 - individual filter responses at prescribed frequencies.

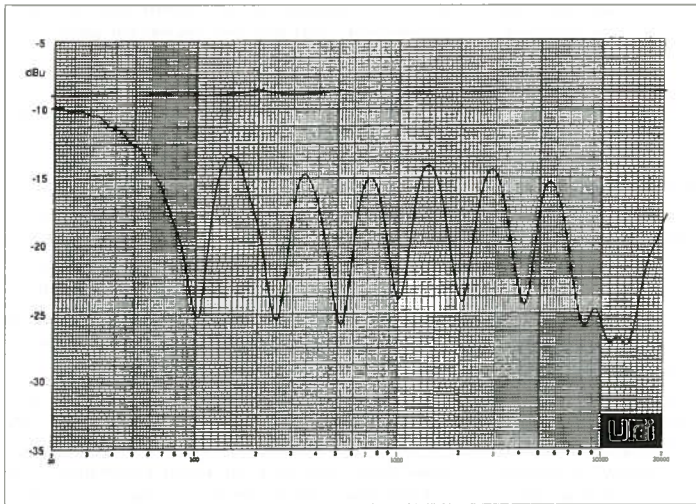


Fig #4 - comparison to 31-band 1/3rd octave graphic equaliser.

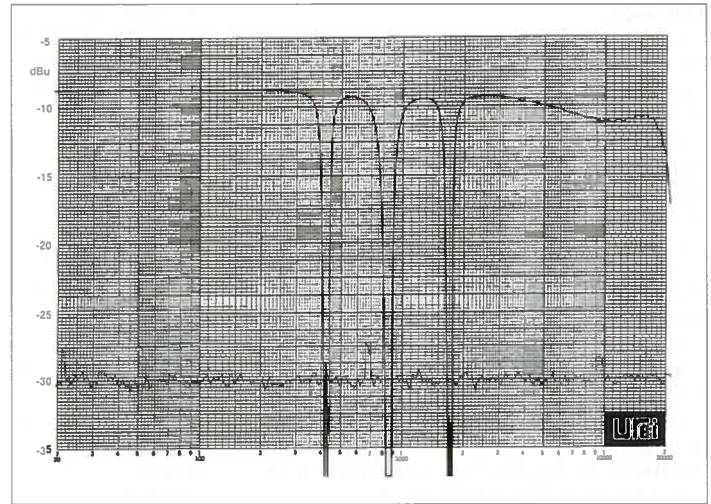


Fig #5 - 3 x 3 combined filters at minimum spacing.

lit with the clip indicator just flickering on programme peaks. This will ensure the best balance between headroom and signal-to-noise ratio. This done, the memories need to be cleared by holding the re-set button in until all nine filter status LEDs are extinguished. This takes about four seconds, during which time the fixed filters will flash three times to show how the unit is currently configured.

To set the filters the system gain is simply increased until the first feedback drone is reached, whereupon the first status LED will flash to show that a filter has been assigned and the feedback howl will be eliminated. The gain is then further advanced until the second filter is engaged, and so on, until all fixed filters and one of the active filters have been set. The system gain is then reduced by a small amount so that it is not operating on the limit, and that is all there is to it. It takes only a couple of tries to become familiar with the procedure, after which the whole thing can be set in a matter of seconds. It's probably one of the most user-friendly pieces of nouveau technology I have come across for some time - a prima-facie case of the 'nothing more is necessary, nothing less will do' adage.

#### Construction

The unit is constructed in a simple, no-frills, matt black stove enamelled, steel case with all connections at the rear and the power switch, just two operating controls and the display LEDs at the front. Inside the build quality is excellent, comprising a mother-board which carries all the input and output amplifiers, the controls, power supplies and most of the analogue circuitry, with a plug-in piggy-back board carrying the digital components and which is crammed with dedicated microchips looking more like a computer than a piece of audio equipment. It is a

very simple and uncluttered realisation of what is in essence a highly complex and sophisticated piece of equipment.

#### On Test

Firstly we took it out on a gig with my band and used it on our foldback system. We use a single foldback mix and the system comprises a pair of Bose 802s, 600 watts of amplification and a 1/3rd octave graphic. Although we have found the 802s superior to most compact loudspeakers for this application, we are nevertheless always working at the limits of feedback as the band move about the stage. Using the FBX-900 there was a substantial improvement in foldback quality and I would guess we were able to operate about 6dB higher than usual without having to constantly ride the foldback gain controls. It was a godsend! So having determined that it works in practice it was time to check it out technically to find out what is happening.

#### Lab Results

A good starting point - especially with digital equipment - is to look at things like noise floor, clipping levels and the signal-to-noise ratio. The unweighted self noise level was measured at -62dB generally, with a slight increase when the clip level control is at its minimum gain setting - i.e. the opposite of what one would normally expect. Clipping levels using the unbalanced connections are +22dBu input for +20dBu output at minimum gain, -10dBu for -12dBu at the 12 o'clock detent and -26dBu for -30dBu at full clockwise rotation. Thus, at the minimum gain setting the dynamic range is  $-62 + 20 = 82\text{dB}$ . The manufacturer's rating is 85dB using the balanced inputs - which would equate to something like 79dB unbalanced. So the review sample is performing rather better than specified.

Although the gain control is labelled 'clipping

level', it was noted that in fact waveform distortion occurs about 3dB before onset of clipping and I have taken the latter as my point of measurement. The clipping LED is however illuminated at 6dB before onset of waveform distortion and about 9dB below actual clipping, so there is sufficient headroom available to enable me to feel happy with the manufacturer's recommendations regarding the setting of the 'clipping level' control as earlier reported.

The next test was to look for false triggering of the filter detectors. This was done by feeding broad-band random pink noise with a 6dB crest factor through the unit at fluctuating operating levels, to see if any of the filters were assigned. They were not.

The only hint of false triggering occurs if there is any amount of 50Hz mains noise on the system, in which case a filter is assigned to clean it up, and if any significant second harmonic components are present, it will also assign a second filter at 100Hz. Probably the same would occur at 60Hz/120Hz in the USA. Although not its intended purpose, this is a very effective way of removing mains-borne system noise, although it then leaves only seven filters available for feedback control.

The next step was to determine the frequency response characteristics of the unit. Clearly a sine-wave sweep would only serve to engage successive fixed filters whilst any 'active' filters would sequentially track the stimulating signal as it swept through the range and preventing the response curve being measured. So for test purposes all nine filters were programmed as 'fixed' and a very slow sweep rate was used so that all nine filters would be shunted as close together as possible at one end of the spectrum, thus enabling the rest of the audio band to be swept

without further filtering. Fig #2 shows the combined results of a forward and reverse sweep, which enables the overall frequency response characteristics to be seen.

This plot actually conveys quite a lot of additional information as it also shows the lowest and highest frequencies that the filters can be assigned, along with the effect of combining the filters to form an extremely deep notch with a very high Q factor. Note that in the forward sweep the combined notch is one octave wide between the 50Hz lower limit and 100Hz, whilst in the reverse sweep it is only 1/4 octave wide and centred on 10kHz. Going back to the frequency response curve it can be seen that this is nicely uniform from 20Hz to 3kHz, when there is a gradual roll-off to a 2dB dip at 10kHz and peaking slightly at 15kHz before rolling off quite steeply to 8dB down at 20kHz.

Finally of course, I wanted to test the accuracy and characteristics of the individual filters. To do this a series of nine single frequency sine wave signals, accurate to 1Hz resolution, were passed through the device with the intention of causing the filters to be assigned at pre-determined points. It was found however that a degree of 'hunting' resulted with more than one filter sometimes being assigned to the same stimulus - probably due to residual harmonics once the fundamental frequency had been suppressed. This was overcome by the introduction of a pink noise conditioning signal some 22dB below the sine wave amplitude, which cured the problem completely, and also prevented the first two filters from assigning themselves to the mains hum!

Fig #3 shows the resultant plot with the filters assigned to 100Hz, 250Hz, 500Hz, 1kHz, 4kHz, 8kHz 10kHz and 12.5kHz, and it can be seen that indeed, only the spot frequencies are being notched, leaving the programme spectral

distribution otherwise unaffected. The lower plot shows the amplitude of the conditioning signal for comparison purposes.

As a means of comparison Fig #4 shows an identical plot under exactly the same conditions, but measured on a dBx 1513 x31-band 1/3 octave graphic equaliser. The upper plot is with the filters engaged and set at their centre detent positions and the lower plot is with the same filters as used for the FBX-900 test set at -15dB. The massive amount of programme degradation due to interaction of the filters is clear to see. Note particularly that whereas the FBX-900 is capable of realising the 8kHz, 10kHz and 12.5kHz notches as three discrete filters, the graphic has combined these into a single large suck-out extending from about 6kHz to 20kHz. I think this comparison shows beyond any possible doubt the superiority of narrow band filtering for feedback regulation and that the traditional approach using a graphic equaliser is not the right answer.

It's often found that having cured one feedback frequency another immediately rears its head alongside the first. So in order to establish how close together the FBX-900 filters can be set, they were set in groups of three using the minimum spacing that would register on the adjacent filter assign LEDs. At 400Hz this turned out to be 410Hz and 420Hz, at 800Hz it was 820Hz and 840Hz and at 1.6kHz it was 1640Hz and 1680Hz. The resultant plot is shown at Fig #5, again with the broad-band conditioning signal superimposed. Note the depth and very high Q factor of the combined triple filter.

#### Summary

What a fascinating piece of kit to play with and it does absolutely everything the manufacturers claim it will! As I said, having played about with this idea before, I can well appreciate the level of technical difficulty in developing a detector


system which is as stable and predictable as the FBX-900. These filters do not respond to fluctuating programme material or even to 6dB crest pink noise - which has got to be a fairly severe test - yet they lock-on immediately to the first hint of howlround. I am most impressed and have very much enjoyed this opportunity of writing what we believe to be the first UK review of this product.

**Shuttlesound are the importers and trade suppliers of the Sabine SBX-900. It is also available to the end-user direct from Canford Audio.**

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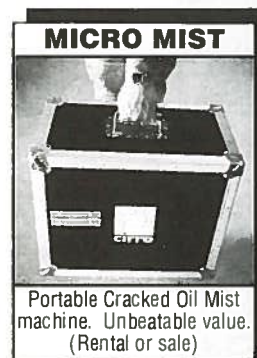
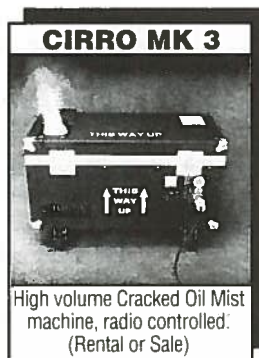
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Victoria Room, Earls Court 2, London SW5  
during the PLASA Light & Sound Show

PROVISIONAL PROGRAMME

## CONTROL TRANSMISSION

ARE WE STUCK IN AN 8-BIT TIMEWARP

Chair: Derek Gilbert, Glantre Engineering.

Panellists: Adam Bennette, Arri; Philip Nye, DHA; Paul Mardon, Pulsar;  
Steve Terry, Production Arts; Marco Van Beek, Vari-Lite.

## GREEN, TEMPERAMENTAL AND SPIKEY

ALL YOU WANTED TO KNOW  
ABOUT DISCHARGE LAMPS BUT WERE AFRAID TO ASK

Chair: John Watt.

Panellists: Don Hindle, CCT Lighting; Eddie Ruffell, Lee Filters,  
Rocyn Williams, Sylvania, Roger Van Den Plas, Philips

## TECHNICAL TRAINING FOR THE ENTERTAINMENT INDUSTRY

Chair: John Faulkner

Panellists: Tony Bond, National Theatre; Roger Fox; Joe Aveline, AETTI.

## SOUND INSTALLS AND BSI

HAVE WE NOW GOT A STANDARD TO WORK TO?

Chair: Tim Frost.

Panellists: Mark Burgin, Shuttlesound; Alex Garner, Tannoy; Ken Dibble, Ken Dibble Associates;  
Ivor Green, Creative Technikal Services; Vic Dobbs, Glantre Engineering.

## SOUND CONTROL

OUT OF THE STUDIO AND ONTO THE ROAD

Chair: Phil Pike, Madame Tussauds

Panellists: Wladyslay Wyganski, Outboard Electronics;  
Mick Brophy, Amek; Roland Hemming, Theatre Projects.

## VIDEO LIVE

Panellists: Malcolm Mellows, Melville Presentation Services;  
David Crump, ScreenCo; Graham Burgess, Sony Jumbotron.

## AUTOMATED LIGHTING - THE NEXT MOVE

Chair: Tony Gottelier, Wynne Willson Gottelier.

Panellists: David Hersey, DHA; Jim Douglas, Unusual Automation;  
Ralph Dahlberg, AVAB; Andrew Bridge, LD; Daniele Canuti, FLY.

## ROBERT NESBITT INTERVIEW

Chair: Joe Aveline.

Graham Walne interviews Robert Nesbitt for the ABTT Archaeology Committee.

## COLOUR - WILL DICHROICS EVER REPLACE GEL?

Chair: Michael Hall, Rosco.

Panellists: Donald Cameron, OCLI Optical Coatings; Jim Rees, Balzers;  
Eddie Ruffell, Lee Filters; Durham Marengi.

## TIMETABLE

| MONDAY<br>13TH SEPTEMBER           | TUESDAY<br>14TH SEPTEMBER            | WEDNESDAY<br>15TH SEPTEMBER      |
|------------------------------------|--------------------------------------|----------------------------------|
| 11.30 AM ~ CONTROL<br>TRANSMISSION | 11.30 AM ~ SOUND INSTALLS<br>AND BSI | 11.30 AM ~ AUTOMATED<br>LIGHTING |
| 14.30 PM ~ DISCHARGE LAMPS         | 14.30 PM ~ SOUND CONTROL             | 13.15 PM ~ ROBERT NESBITT        |
| 16.15 PM ~ ABTT TRAINING           | 16.15 PM ~ LIVE VIDEO                | 14.30 PM ~ DICHROICS V GEL       |

# BOOKING INFORMATION

The information contained in this programme is correct at the time of going to press. Although the organisers will endeavour to present the seminars as scheduled, they reserve the right to alter the programme without notice. For the latest information on the full speaker line-up, please contact the PLASA office on (0323) 410335

**ENTRANCE TO THE PLASA LIGHT & SOUND SHOW SEMINARS IS BY TICKET ONLY, SPECIFIC TO EACH SEMINAR, AND THESE ARE ON SALE NOW.**

**The Seminar Fee is £10.00 plus VAT per seminar (£11.75)**

Those booking six or more sessions will be entitled to one of those sessions free. You may also register as a company rather than as an individual and use admission tickets as you please across your representatives.

Please note that as the seminar room at Earls Court 2 is small, the maximum number of tickets available for each session is 75.

**BOOK YOUR PLACES AT THE PLASA/L+SI  
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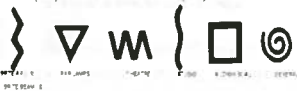
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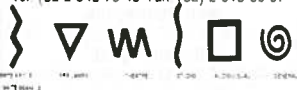
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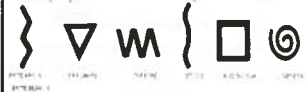


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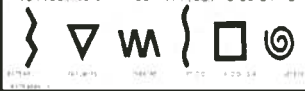
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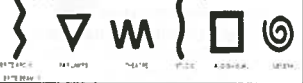
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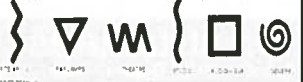
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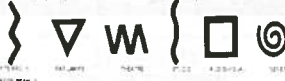
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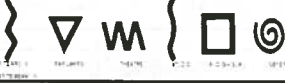
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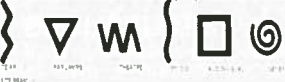
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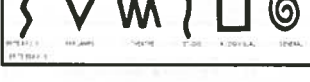
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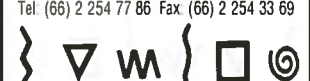
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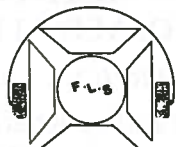
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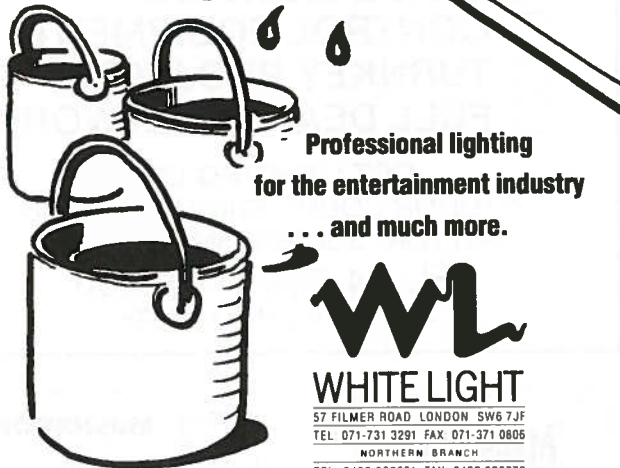


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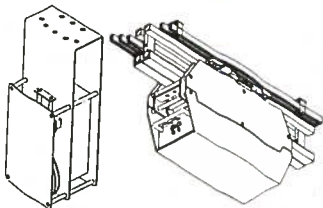
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# VIEWPOINT

## Mervin Stokes on New into Old at the Douglas Gaiety

Designed by Frank Matcham, the Gaiety Theatre, Isle of Man has survived almost as an act of defiance with very little alteration, and is now recognised as one of the finest examples of his work. There are a great many individual features which together make the Gaiety 'a very special and exciting performance space. Undeniably the mastery of Matcham's architecture is the essential nucleus, but in reality there is much much more. The theatre, insulated from the whim of fashion by the Irish Sea, has never been subjected to any major changes in the name of modernisation and it is the inheritance of some many original features which make this theatre so very special.

Within the auditorium are great treasures including the Breathtaking Act Drop painted by Victorian scenic artist William Hemsley. This drop, with its exuberant tromp l'oeil curtains and exotic Eastern scene is not only the sole surviving working drop in the British Isles, it is also the only known surviving example of Hemsley's work.

In addition Matcham gave the Gaiety a superb working stage which displays many features that had undergone over 100 years of evolution to arrive at the zenith about the time the Gaiety was being built. Under the theatre's stage are to be found grave traps, demon traps, bridges and sloats, and a now unique example of the famous Corsican Trap invented by actor manager Charles Keane in 1856.

The auditorium itself is a perfect statement of the social values and mores that existed at the turn of the century. The main foyer boasts two three-sided box offices with a serving hatch on each face. Each seating area within the theatre, from the expensive fauteuils to the wooden-benched amphitheatre, boasted its own exit and entrance, bars and decoration, the demarcation lines within the auditorium being marked by substantial wooden barriers - for in 1900 the audience patronising the Gaiety could do so without fear of being socially compromised by meeting someone outside their own social class.

The auditorium itself is decorated with rich and opulent plasterwork by De Jong, further enriched by the very liberal use of gold leaf which, when analysed during recent renovation, revealed that it was 23 $\frac{2}{3}$  carat - almost pure gold - with a present day replacement value in the region of £750,000. The plaster-work is relieved by a superb series of fresco panels by Binns of Halifax depicting the four seasons and various muses, and a stained glass rose window in the main ceiling that has at its eye a sunburner by Tollerton of Leeds.

When I took up the reins at the Gaiety it was obvious that this rare performance space had to be preserved and the theatre returned after many years of under-use to its rightful place amongst



**Mervin Stokes became house manager of the Gaiety Theatre in 1970. During the first five years of his career in theatre his time was divided between the Gaiety and managing the 2,500-seater Crescent Cinema, also on Douglas Promenade. Taking over the reins at the Gaiety in 1983 he was instrumental in launching a major appeal to restore the theatre to its original splendour in time for its centenary in the year 2000. He lectures extensively on Victorian theatres, their restoration and conservation.**

Britain's leading theatres. Firstly, a new awareness for theatre on the island had to be established by widening the type and mix of production and by making sure that the shows presented were of the highest standard possible. Secondly, we had to modernise and renovate the theatre facilities on both sides of the curtain whilst never losing sight of the fact that the island possesses a unique and historic building whose character and charm must be preserved and maintained for future generations to enjoy.

Backstage the problem was not difficult to solve. The dressing room suite was just plain and dirty and so the decision to strip the rooms, update them and install new lighting and showers without losing the layout of the old staircases and corridors was taken without a qualm. The old hemp flying system was also removed with much soul-searching as its very necessary replacement with a double-purchase counterweight system blends and sits unconcernedly amidst the Victorian timbers of the fly galleries and the forks.

The area in which we had to tread most carefully was front of house and in the auditorium. We were determined that the Gaiety would not be disfigured by ill thought-out intrusions of lanterns,

front-of-house lighting bars and speaker cabinets which spoil so many of Britain's old theatre stock.

The first and most obtrusive problem to be tackled was the bank of front of house lanterns which were suspended on bars around the upper tier and the Gallery slips. This arrangement not only obscured De Jong's fine plasterwork and all that gold leaf but also spoiled sightlines from the first row of the slips. An interim measure to extend the hanging bar to the full extremity of the upper circle tier resulted in the removal of all the lanterns concerned, receiving the slips' sightlines and rendering the lanterns invisible to a seated audience looking towards the proscenium. The second phase is to construct a lighting gantry immediately behind the point where the main ceiling breaks to rise into the higher and plainer level above the upper circle. At this point only the lenses on the lamps will be visible to the audience, the tier fronts will be cleared of all obstruction and access for focusing, and servicing will be greatly enhanced through a new door inserted in the ceiling wall above the amphitheatre.

In the early seventies a very large and intrusive lighting box had been inserted at the rear of the dress circle and this at a stroke provided a soundproof box which successfully insulated the technical staff from anything that was said on stage. It also provided a safe haven for the collection of all manner of rubbish and obsolete equipment, unbalanced the auditorium and completely obscured a very fine vaulted ceiling. In a moment of desperation the box was swept away to reveal that, at some point, an extra row had been added to the rear of the circle, thus narrowing what was undoubtedly Matcham's Circle promenade. Closing our eyes to lost revenue we removed this row and restored the Promenade Barrier and in the extra space of the original promenade constructed a low operator's bench, thus restoring the circle to its original appearance, revealing the vaulted ceiling and rendering the lighting and sound control invisible to theatre patrons.

In this way we are trying to restore and enhance this very special theatre and overcome the problems of incorporating modern technology within a building that was never designed to accept it. The Gaiety will celebrate its centenary in the year 2000 and by that time all the original wallpapers will have been reprinted and re-hung and original carpets re-woven and laid. We will then be able to present to the Manx nation, and to the world, a building which not only replicates the one known to our forefathers 100 years before, but also one which quietly and unobtrusively contains all the technology required to run a modern theatre well into the 21st century.

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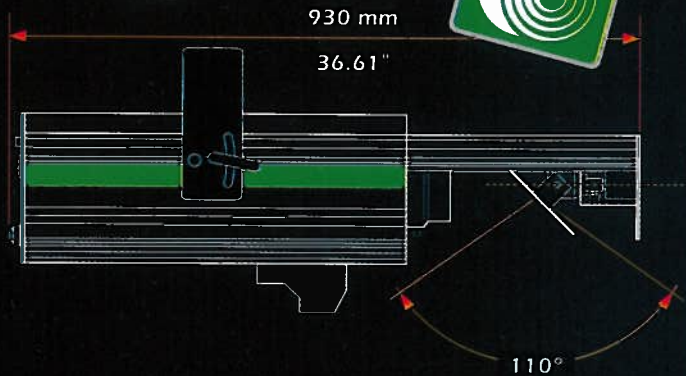
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# the ultimate warrior

# samurai light



- 12 colours internal colour changer (11 dichroics+white)
- roto colour effect (colours in continuous rotation) at 3 speeds (slow, medium, fast)
- multicolour effect
- 12 interchangeable gobos
- adjustable strobing effect
- black-out
- programmable chase effect
- built-in mechanical dimmer to control the light output from 0 to 100%
- fading between projectors
- motorized iris diaphragm
- beam movement on X and Y axis achieved by micro-stepper motors
- DMX 512 input via 3 pin cannon (8 channels)
- 0/+10V input via 8 pin locking-din (6 channels)
- dip-switches for address number projector
- self-test and signal reception indicator incorporated
- digital signal for lamp on/off function including disable option
- safety device for voltage disconnection during lamp replacement
- can be operated in any position
- forced ventilation
- protection cover for deflecting mirror
- protection range IP20
- high quality optical condenser
- fixed focus 155 mm (2 high definition optical lenses with anti-reflective coating)

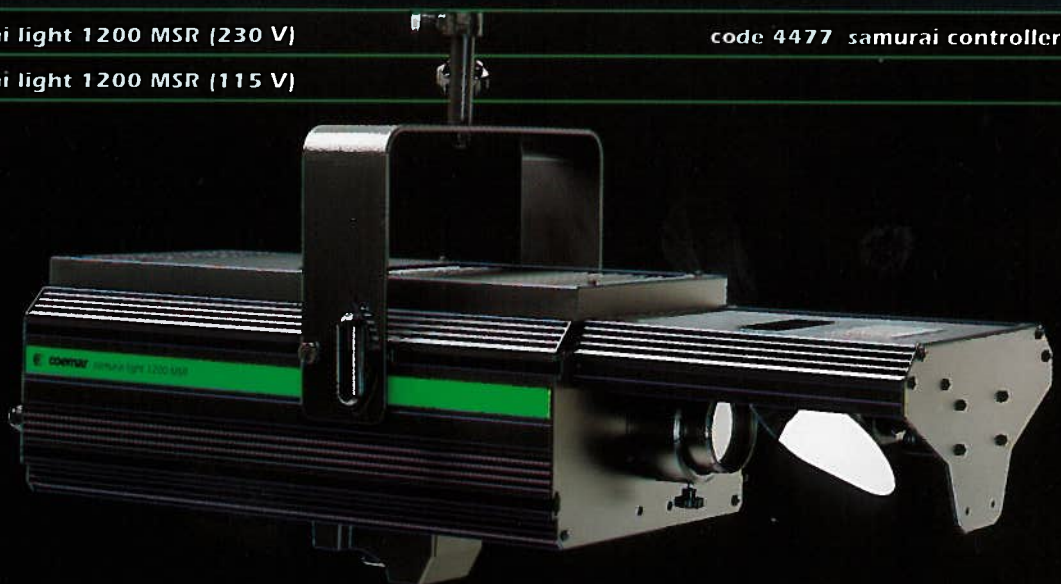


- beam angles: 6.8° - 9.5° - 12° available with the supplied lenses
- external millimetric lamp focusing
- typical throw distance: 4-30 mt
- weight: 23 kg/50.6 Lbs
- external ballast available single and for 19" rack use (4 Samurai light 1200 MSR)
- ballast weight: 15.5 kg/34, 1 Lbs (230V) - 29.5 Kg/ 64.9 Lbs (115V)
- G 22 ceramic lamp holder
- long life Philips 1200 MSR lamp (750 h), high efficiency and luminous flux
- power requirement 9 A at 230V, 17 A at 115V
- cable in compliance with the safety norms IEC 331, IEC 332 3C, CEI 20 35 2 core 1,5ø+earth
- mains 115/230V +/-10% 50/60 HZ (on application)

code 9202 samurai light 1200 MSR (230 V)

code 4477 samurai controller

code 9202/1 samurai light 1200 MSR (115 V)



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professional projectors  
for lighting effects

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fax (+376) 780657



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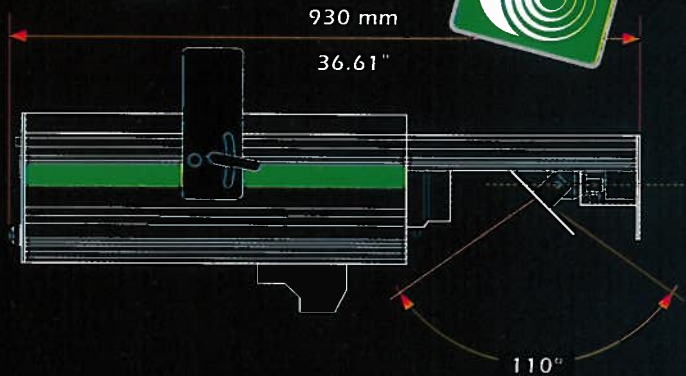
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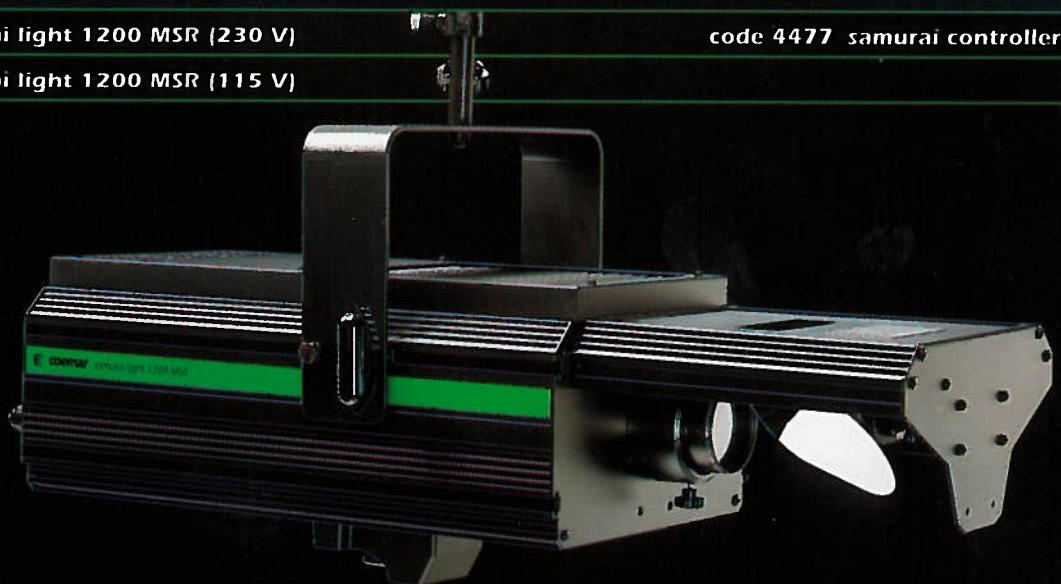


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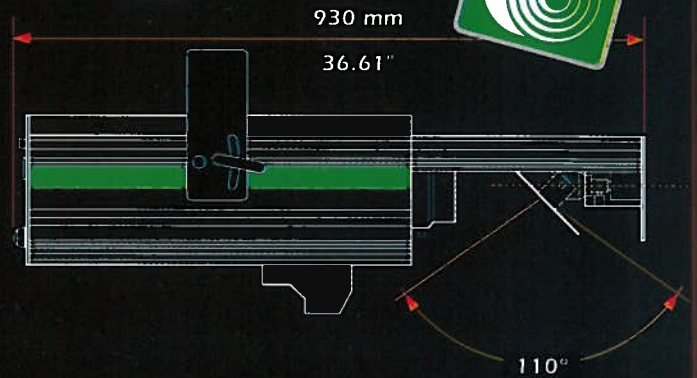
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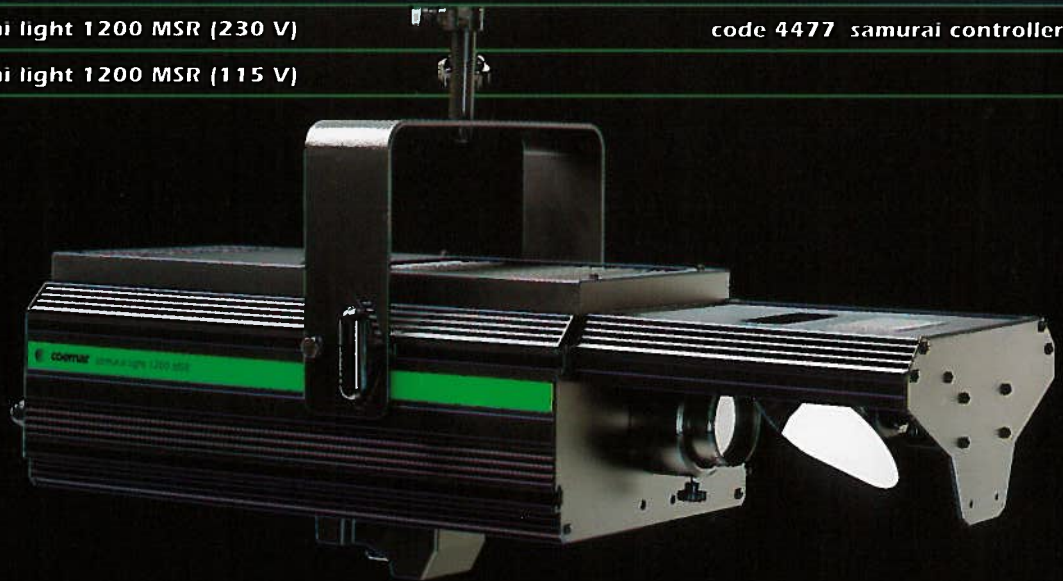


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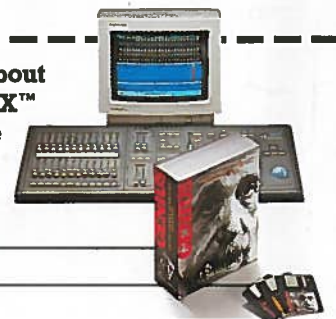
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